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14. ABSTRACT

The Final Report documents the collection of field screening and MI sampling of sub-slab soil at building footprints within Load Line1 and other building locations at the Ravenna Army Ammunition Plant.

15. SUBJECT TERMS

RVAAP; Work Plan; Sub-Slab Sampling; Load Line 1; RVAAP-08

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Final
Sampling and Analysis of Soils Below Floor Slabs at RVAAP-08 Load Line 1 and Other Building Locations

Ravenna Army Ammunition Plant
8451 St. Route 5
Ravenna, OH 44266-9297

Contract No. W912QR-04-D-0025
Delivery Order No. 0006

Prepared for:
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September 17, 2010

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Acronyms and Abbreviations

%D	Percent Difference
ADR	Automatic Data Review
bgs	Below ground surface
BRACD	Base Realignment and Closure Division
CLIN	Contract Line Item
CUG_{adj}	Cleanup Goal, adjusted
CUG_{IROD}	Cleanup Goal from IROD
DNT	Dinitrotoluene
FWCUG	Facility-Wide Cleanup Goal
HMX	Octohydro-1,3,5,7-tetranitro-1,3,5,7-tetraocine
GPS	Global Positioning System
IROD	Interim Record of Decision
LCG5	Louisville Chemical Guidance, Version 5
LCS	Laboratory Control Sample
LUC	Land Use Control
MARC	Multiple Award Remediation Contract
MDL	Method Detection Limit
MI	Multi-Increment
MKM	MKM Engineers, Inc.
MRL	Method Reporting Limit
MS/MSD	Matrix Spike/Matrix Spike Duplicate
OHARNG	Ohio Army National Guard
Ohio EPA	Ohio Environmental Protection Agency
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control

RDX	Royal Demolition Explosive, also hexahydro-1,3,5-trinitro-1,3,5-triazine
RL	Reporting Limit
RPD	Relative Percent Difference
RSD	Relative Standard Deviation
RSL	Regional Screening Level
RVAAP	Ravenna Army Ammunition Plant
SOW	Scope of Work
SVOC	Semivolatile Organic Compound
TAL	Target Analytical List
TCLP	Toxicity Characteristic Leaching Procedure
TNT	Trinitrotoluene, also 2,4,6-trinitrotoluene
URS	URS Group, Inc.
USACE	United States Army Corps of Engineers
USEPA	US Environmental Protection Agency
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound

URS Group, Inc. (URS) was contracted by the United States Army Corps of Engineers (USACE) to sample soils below floor slabs at Load Lines 2, 3, and 4 and to excavate and dispose of contaminated soils at the Ravenna Army Ammunition Plant (RVAAP) funded under their Multiple Award Remediation Contract (MARC), Delivery Order 0006. As part of the Scope of Work (SOW) for Task Order 0006, a Work Plan to address all SOW activities was required. The Final Work Plan (URS, 2008) was approved by the Ohio Environmental Protection Agency (Ohio EPA) on June 9, 2008. Field screening and multi-increment (MI) sampling was completed at 105 buildings at Load Lines 2, 3, and 4 during 2008 (URS, 2009a; 2009c).

Modification No. 2 to Delivery Order 0006 was issued by the USACE on August 28, 2008. The modification contained a task to prepare a Work Plan Amendment to address sampling rationales to support sub-slab sampling at the following additional buildings:

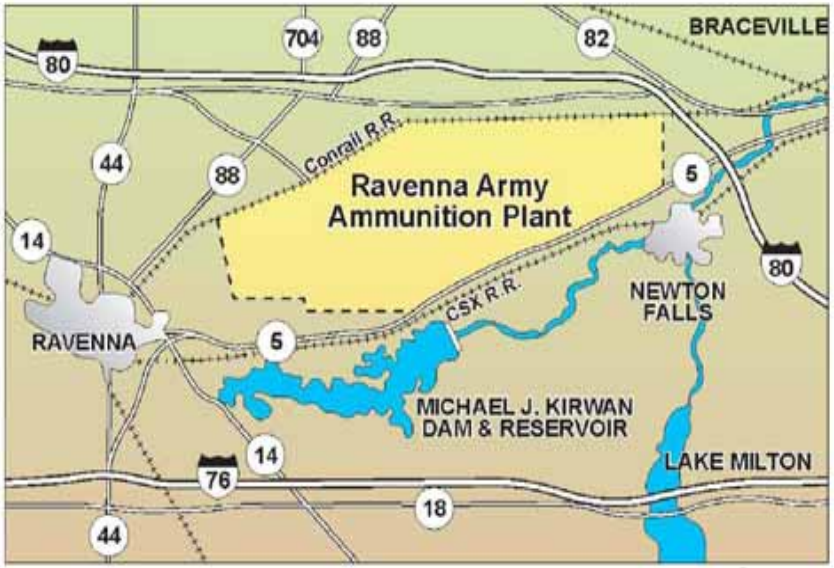
- Load Line 1 (RVAAP-08)
- Buildings F-15 and F-16 (RVAAP-46)
- Building EB-803 (RVAAP-10, Load Line 3)
- Buildings G-1, G-1A, and G-3 (RVAAP-11, Load Line 4)

Figures 1-1 and 1-2 show the general location of RVAAP and the load line areas within the facility.

The URS SOW included tasks to evaluate potential contamination below the floor slabs and to excavate and transport contaminated earth fill materials above cleanup goals to a licensed disposal facility. The Work Plan Addendum was approved by the Ohio Environmental Protection Agency (Ohio EPA) on August 3, 2009 (URS, 2009b).

The removal of the floor slabs and any associated foundation walls to grade at the additional buildings was completed by MKM Engineers, Inc. (MKM) under a contract from the Base Realignment and Closure Division (BRACD). Floor slab removal by the BRACD contractor was completed during May 2009. Additional cover was applied at a number of high potential building footprints within 2 days of slab removal, in anticipation of Work Plan Amendment approval and subsequent sampling. Plastic cover was applied at building footprints CB-4, CB-4A, CA-6, CA-6A, CB-4VP1, CB-4AVP1, CB-10VP1, CB-10VP2, CB-10VP3, CA-28, and CA-28A. Additional plastic covering was applied within and outside footprints wherever staining was observed.

This report addresses the post-slab removal field screening, confirmatory sampling, and data evaluation at 43 buildings located at Load Lines 1, 3, and 4 and buildings F-15 and F-16. This work was completed in accordance with the Work Plan Addendum #1 approved by the Ohio EPA on August 3, 2009 (URS, 2009b).



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ORIENTATION OF RVAAP

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RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

RVAAP LOCATION MAP

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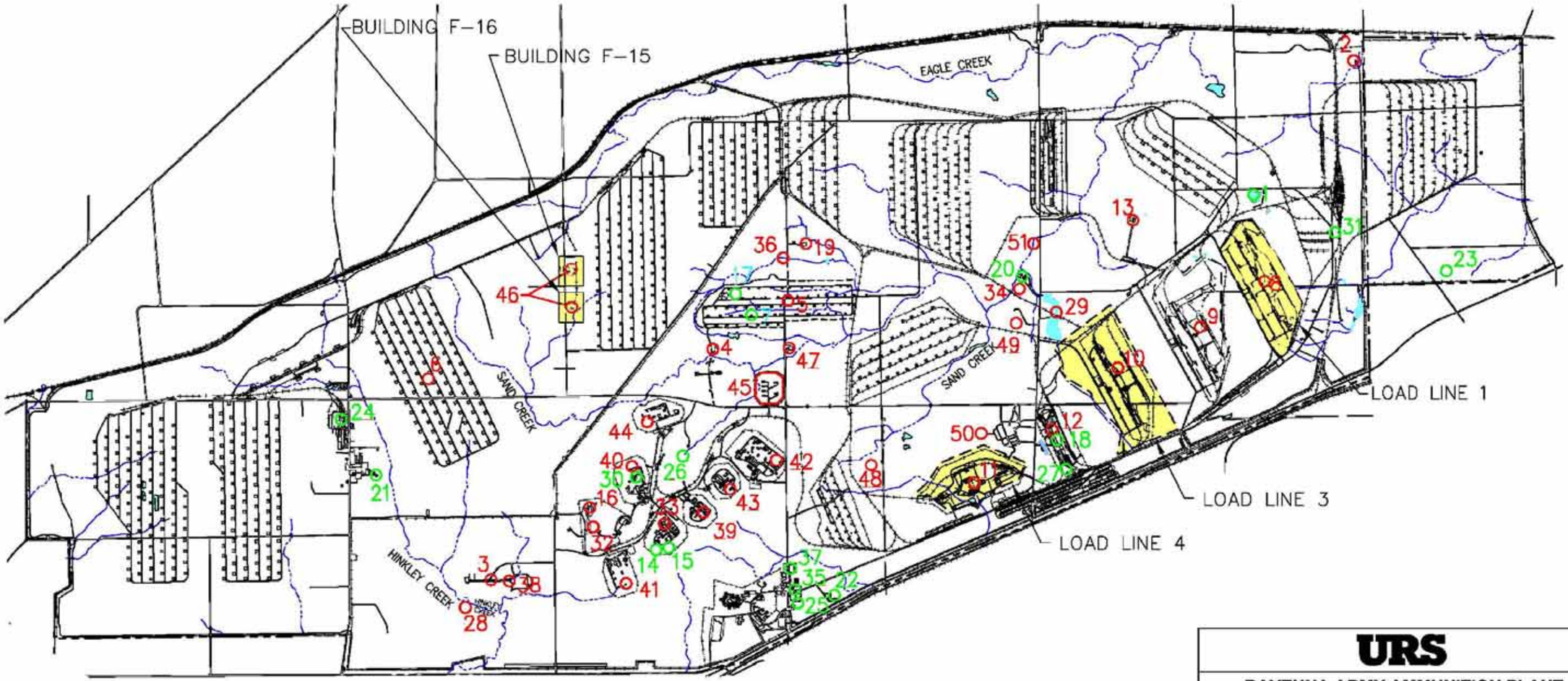
Legend

1 ..... RAMSDELL QUARRY LANDFILL
2 ..... ERIE BURNING GROUNDS
3 ..... DEMOLITIONS AREA #1
4 ..... DEMOLITIONS AREA #2
5 ..... WINKLEPECK BURNING GROUNDS
6 ..... C BLOCK QUARRY
7 ..... BUILDING 1601 HAZARDOUS WASTE STORAGE
8 ..... LOAD LINE 1 AND DILUTION/SETTLING POND
9 ..... LOAD LINE 2 AND DILUTION/SETTLING POND
10 ..... LOAD LINE 3 AND DILUTION/SETTLING POND
11 ..... LOAD LINE 4 AND DILUTION/SETTLING POND
12 ..... LOAD LINE 12 AND DILUTION/SETTLING POND
13 ..... BUILDING 1200 AND DILUTION/SETTLING POND
14 ..... LOAD LINE 6, EVAPORATION UNIT
15 ..... LOAD LINE 6, TREATMENT PLANT
16 ..... QUARRY LANDFILL/FORMER FUZE AND BOOSTER BURNING PITS
17 ..... DEACTIVATION FURNACE
18 ..... LOAD LINE 12 PINK WASTEWATER TREATMENT
19 ..... LANDFILL NORTH OF WINKLEPECK BURNING GROUND
20 ..... SAND CREEK SEWAGE TREATMENT PLANT
21 ..... DEPOT SEWAGE TREATMENT PLANT
22 ..... GEORGE ROAD SEWAGE TREATMENT PLANT
23 ..... UNIT TRAINING SITE WASTE OIL TANK
24 ..... RESERVE UNIT MAINTENANCE AREA WASTE OIL TANK
25 ..... BUILDING 1034 MOTOR POOL WASTE OIL TANK
26 ..... FUZE BOOSTER AREA SETTLING TANKS
27 ..... BUILDING 854 PCB STORAGE
28 ..... MUSTARD AGENT BURIAL SITE
29 ..... UPPER AND LOWER COBB'S POND COMPLEX
30 ..... LOAD LINE 7 PINK WASTEWATER TREATMENT PLANT
31 ..... ORE PILE RETENTION POND
32 ..... 40– AND 60–MM FIRING RANGE
33 ..... FIRESTONE TEST FACILITY
34 ..... SAND CREEK DISPOSAL ROAD LANDFILL
35 ..... BUILDING 1037 LAUNDRY WASTEWATER SUMP
36 ..... PISTOL RANGE
37 ..... PESTICIDE STORAGE BUILDING T–4452
38 ..... NACA TEST AREA
39 ..... LOAD LINE 5/FUZE LINE 1
40 ..... LOAD LINE 7/BOOSTER LINE 1
41 ..... LOAD LINE 8/BOOSTER LINE 2
42 ..... LOAD LINE 9/DETONATOR LINE
43 ..... LOAD LINE 10/PERCUSSION ELEMENT
44 ..... LOAD LINE 11/ARTILLERY PRIMER
45 ..... WET STORAGE AREA
46 ..... BUILDINGS F–15 AND F–16
47 ..... BUILDING T–5301 DECONTAMINATION
48 ..... ANCHOR TEST AREA
49 ..... CENTRAL BURN PITS
50 ..... ATLAS SCRAP YARD
51 ..... DUMP ALONG PARIS–WINDHAM ROAD
..... CERCLA
..... RCRA
..... OTHER REGULATORY
..... SWAMP

..... FENCE LINE
..... PROPERTY BOUNDARY
..... STREAM OR CREEK
..... BUILDING
..... ASPHALT ROAD
..... RAILROAD TRACKS
..... POND
..... SURVEY CONTROL POINT
..... AOC BOUNDARY
..... UNDERSLAB SAMPLING PROJECT AOC



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MAP SOURCE:
RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

URS

RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

RAVENNA ARMY AMMUNITION PLANT FACILITY MAP

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G:\Projects\R\Ravenna AA\13812319\GIS\figures\Report\Ravenna Figure 1-2 RVAAP Plant Facility Map.dwg User:jessica.cotton Jan 25, 2010 10:22:1

This section of the report describes the purpose and objectives, sample collection, and analyses for the field screening and MI sampling efforts at the additional buildings.

2.1 PURPOSE AND OBJECTIVES

The purpose of the field investigation was to provide data at each of the 43 building footprints located at Load Lines 1, 3, 4, and buildings F-15 and F-16 to determine if any earth fill materials would require excavation. Decisions were to be made based on a comparison of field screening and MI sampling results to cleanup goals established either within the Interim Record of Decision (IROD) (Shaw, 2007) or by procedures established in the Work Plan (URS, 2008 and 2009b).

Field screening for 2,4,6-trinitrotoluene (TNT) and hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) was conducted following the slab removal for all building footprints. If there were no exceedances of the TNT or RDX cleanup values, MI sampling was completed to determine if excavation would be required beyond that already determined by the field screening effort. Any areas where TNT levels exceeded the cleanup goal during the field screening investigation were covered with plastic if they had not been covered immediately after slab removal. In accordance with the approved Work Plan, MI sampling will be conducted at these areas after excavation of the contaminated soil is completed.

Figures 2-1 through 2-4 show the locations of the former building footprints for the additional buildings.

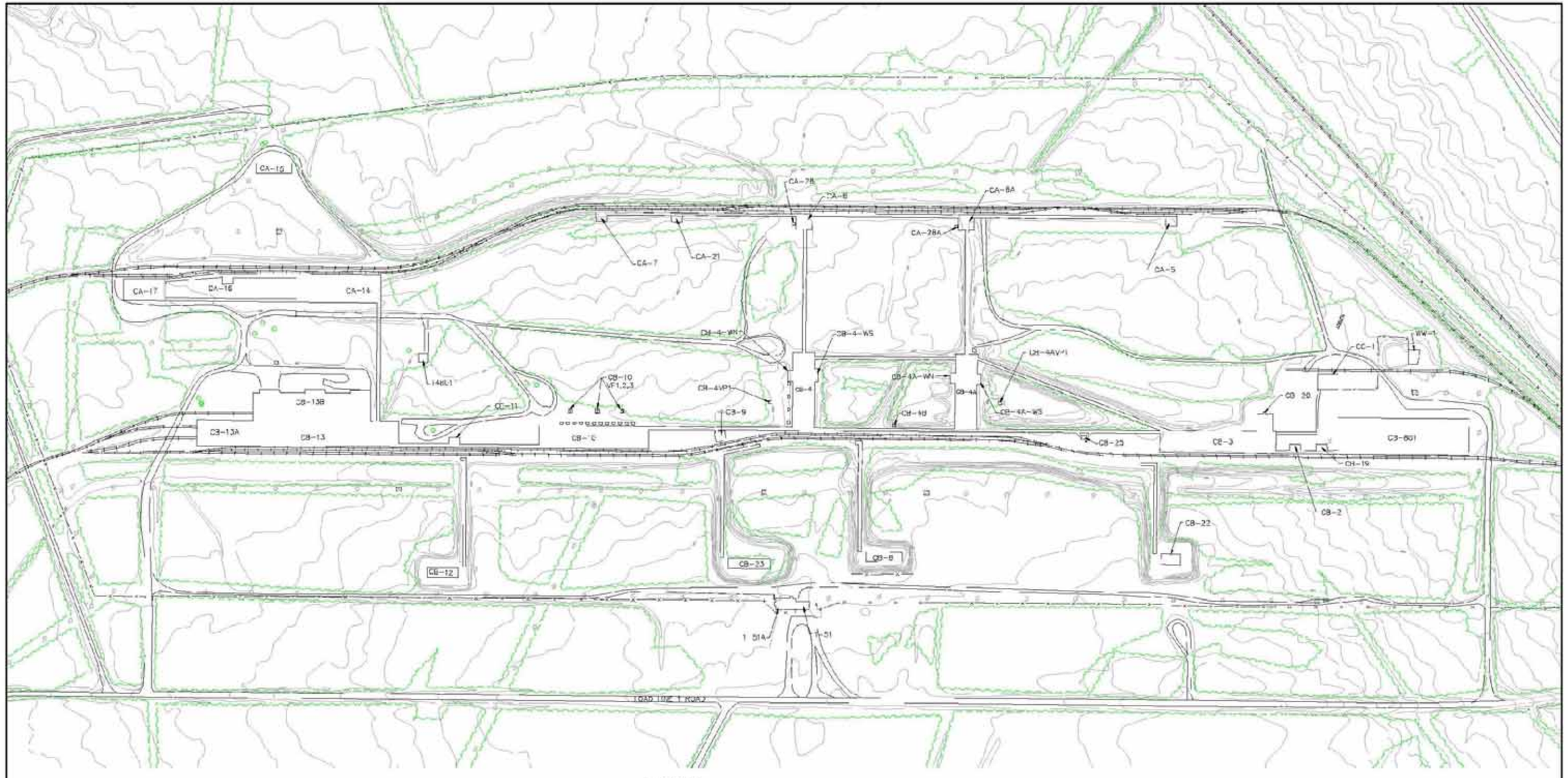
2.2 SAMPLE COLLECTION

2.2.1 Field Screening Sample Collection

The field screening was conducted in accordance with the *Facility-Wide Sampling and Analysis Plan* for the RVAAP (SAIC, 2001) and the approved Work Plan (URS, 2008 and 2009b). The additional buildings were grouped into three categories based on their potential for the presence of contamination in earth fill beneath the building floor slabs. The three categories were designated as high, medium, or low potential and a field screening sampling scheme was developed for each category. Table 2-1 summarizes the classification of each building included in the sampling.

High potential buildings were believed to have the highest potential for the presence of sub-slab contamination and were screened for RDX/TNT from multiple cores within the building footprint. Nineteen buildings at Load Line 1 and buildings F-15 and F-16 were identified as high potential. Table 2-2 lists their locations and the number of cores planned for screening.

Cores were taken down to 4 feet below ground surface (bgs) using the JMC Environmentalist's Subsoil Probe. Five discrete portions of the core were selected for field analyses: the top, three portions within the core that best represented the range of lithologies found in the core and any visual signs of impact, and the bottom. However, at several locations the 4-foot core samples could not be collected as planned due to the presence of bedrock at less than 2 feet below ground surface throughout Load Line 1. Core samples were collected every foot (until refusal) under



LEGEND

- BUILDING AND WALKWAY
- ASPHALT ROAD
- GRAVEL ROAD
- RAILROAD TRACKS
- FENCE LINE
- CONTOUR (2 FT. INTERVAL)
- CONTOUR (10 FT. INTERVAL)
- TREE OR TREELINE
- STEAM STANCHION
- OVERHEAD STEAM LINE

NOTE:
ALL BUILDING FOOTPRINTS TO BE SAMPLED

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0 75 150 300
SCALE 1" ~ 300'

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RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS
LOAD LINE 1 PLAN VIEW

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URS

RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS
LOAD LINE 3 PLAN VIEW

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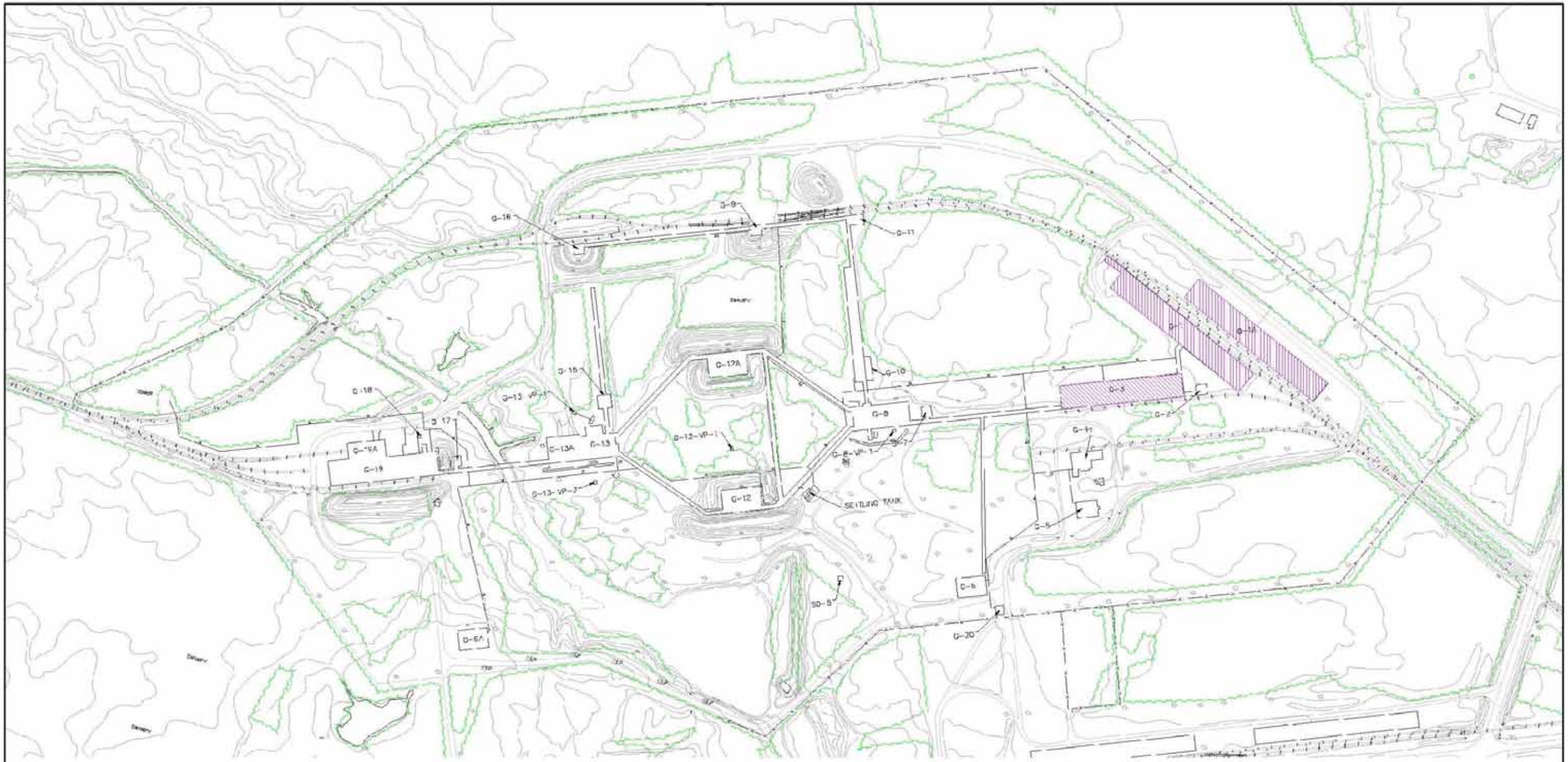

LEGEND

- BUILDING FOOTPRINT TO BE SAMPLED
- BUILDING AND WALKWAY
- ASPHALT ROAD
- GRAVEL ROAD
- RAILROAD TRACKS
- FENCE LINE
- CONTOUR (2 FT. INTERVAL)
- CONTOUR (10 FT. INTERVAL)
- TREE OR TREELINE
- STEAM STANCHION
- OVERHEAD STEAM LINE

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0 75 150 300
SCALE 1" = 300'

URS

RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS LOAD LINE 4 PLAN VIEW

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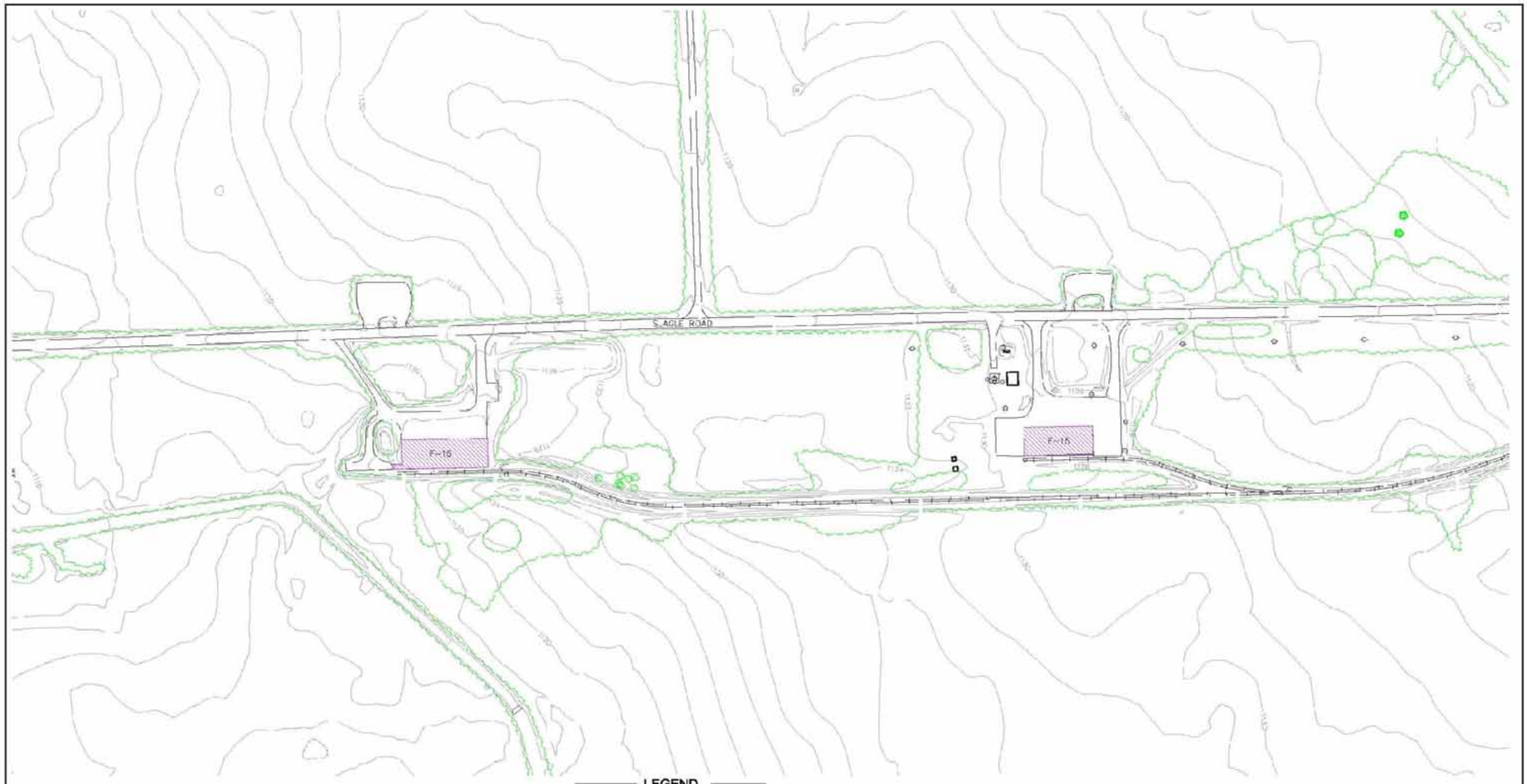

LEGEND

- BUILDING FOOTPRINT TO BE SAMPLED
- BUILDING AND WALKWAY
- ASPHALT ROAD
- GRAVEL ROAD
- RAILROAD TRACKS
- FENCE LINE
- CONTOUR (2 FT. INTERVAL)
- CONTOUR (10 FT. INTERVAL)
- TREE OR TREELINE
- STEAM STANCHION

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0 50 100 200

SCALE 1" = 200'

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RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS BUILDINGS F-15 AND F-16 PLAN VIEW

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Table 2-1
Classification of Buildings at Load Line 1 and Additional Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

High Potential for Explosives Contamination: Sampling Regime: Field Screening (4' Cores) and MI Confirmatory Sampling [1,2]	Medium Potential for Explosives Contamination Sampling Regime: 1 Field Screening Sample, MI Confirmatory Sampling	Low Potential for Explosives Contamination Sampling Regime: 1 Field Screening Sample, MI Confirmatory Sampling
CB-4 Melt Load (Propellants) (PCBs)	CB-2 Truck Maintenance (SVOCs)	CC-1 Powerhouse No. 1
CB-4A Melt Load (Propellants, PCBs, SVOCs)	CB-3 Shell Receiving (SVOCs, PCBs) [3]	CB-8 Change House
CA-6 Explosive Preparation (Propellants)	CB-4B Conveyor Drive House	CA-15 Change House
CA-6A Explosive Preparation (Propellants)	CA-5 Service	CB-20 Tool Storage
CB-4WN Washout Annex for Bldg. CB-4(Propellants)	CA-7 Service	CB-801 Inert Storage
CB-4WS Washout Annex for Bldg. CB-4 (Propellants)	CB-9 Service	1-51 Clock Alley
CB-4AWN Washout Annex for Bldg. CB-4A (Propellants)	CB-11 Service	1-51A Line Office
CB-4AWS Washout Annex for Bldg. CB-4A (Propellants)	CA-16 Service	T-4801 Boiler House
CB-10 Drill & Assembly and Munitions Rehabilitation (Propellants, PCBs)	CB-19 Electric Locomotive Service (SVOCs)	
CB-13/13A Packing & Shipping (Propellants)	CA-21 Service	*G-1 Inert Storage*
CB-13B Shipping Warehouse Annex (Propellants)	CB-25 Washout (to unknown source) [3]	*G-1A Inert Storage*
CA-14 Propellant Charge (Propellants)	CA-28 Elevator Machine House	*G-3 Receive and Paint*
CA-17 Propellant Charge Receiving (Propellants)	CA-28A Elevator Machine House	
CB-10VP1 Vacuum Pump House		
CB-10VP2 Vacuum Pump House	*EB-803 Inert Storage*	
CB-10VP3 Vacuum Pump House		
CB-4VP1 Vacuum Pump House		
CB-4AVP1 Vacuum Pump House		
F-15 Explosive and Propellant Testing (Propellants)		
F-16 Explosive and Propellant Testing (Propellants)		

(1) All confirmatory MI samples analyzed for explosives and metals. Additional analyses shown in parentheses on a building-by-building basis. Additional analyses to meet 10% full suite requirement are included in Table 2-3. Buildings not located at Load Line 1 are *italicized*.
(2) SVOCs: Semivolatile organic compounds; PCBs: Polychlorinated biphenyls
(3) Multiple field screening samples collected from this building footprint.
(4) Inspections conducted during slab removal (April 21, 2009 through June 25, 2009) indicated that buildings CA-6VP1, CA-6AVP1 are not separate buildings but were incorporated as one slab with Building CA-6 and CA-6A. Buildings CB-12, CB-22 and CB-23 were not included in the slab removal project. Their footprints have been covered with hard fill. These five building footprints have been removed from the sampling scope.

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Table 2-2
High Potential Buildings Planned for 4-Foot Core Sampling
Ravenna Army Ammunition Plant
Ravenna, Ohio

Bldg. Number	Building Type	Slab Area, sq. ft.	Number of Core Locations [(1)]	Remarks
Load Line 1 Buildings				
CB-4	Melt Load	21,288	12	Samples biased toward external scuppers, vitrified clay tile drains.
CB-4A	Melt Load	21,288	12	Samples biased toward external scuppers, vitrified clay tile drains.
CB-4VP1	Vacuum Pump House	100	1	Bias core locations toward any visual contamination.
CB-4AVP1	Vacuum Pump House	100	1	Bias core locations toward any visual contamination.
CA-6	Explosives Preparation	1,485	5	Samples biased to two drain locations.
CA-6A	Explosives Preparation	1,485	5	Samples biased to two drain locations.
CB-4WN	Washout Annex	865	2	Samples biased toward external scuppers, vitrified clay tile drains.
CB-4WS	Washout Annex	272	2	Samples biased toward external scuppers, vitrified clay tile drains.
CB-4AWN	Washout Annex	865	2	Samples biased toward external scuppers, vitrified clay tile drains.
CB-4AWS	Washout Annex	272	2	Samples biased toward external scuppers, vitrified clay tile drains.
CB-10	Drill Assembly	22,757	12	Bias two locations to drain and hole in slab.
CB-10VP1	Vacuum Pump House	138	1	Bias core locations toward any visual contamination.
CB-10VP2	Vacuum Pump House	138	1	Bias core locations toward any visual contamination.
CB-10VP3	Vacuum Pump House	138	1	Bias core locations toward any visual contamination.
CB-13/13A	Packing/Shipping	47,294	13	None
CB-13B	Shipping Annex	32,354	13	Bias four locations to rail siding and test area.
CA-14	Propellant Charge	22,300	15	Bias toward numerous perforated areas and drains.
CA-17	Propellant Charge Receiving	7,575	10	Bias toward electrical conduits on west side of slab
Additional Buildings				
F-15	Explosives and Propellant Testing	7,200	4	None
F-16	Explosives and Propellant Testing	7,200	4	None

[(1)]Core locations are shown on Figures 2-5 through 2-10. Planned core depth of 4 feet. Five field screening samples collected from each core: at the top, from three portions distributed to best represent the materials in the core, and at the bottom unless refusal due to shallow bedrock. Samples were analyzed for TNT and RDX in the field laboratory.

K:\Projects\R\Ravenna AAP\13812319\DOCs\Reports\LL1_Short_Report\Final\Table 2-2 Core Sampling.doc

these circumstances. After several sampling attempts, the most representative core (best recovery) was used for screening. All high potential building soil boring locations were mapped using a global positioning system (GPS) and are shown on Figures 2-5 through 2-10. Coordinates for the core locations are detailed in Appendix C.

Medium potential buildings were believed to have some potential for the presence of sub-slab contamination, but to a lesser extent than buildings in the high potential category. Buildings in this category were screened for RDX/TNT by collecting one discrete sample from approximately 0 to 12 inches bgs. The sample was biased toward any visual indications of contamination or, if there were none, was collected from the approximate middle of the building footprint. The soil samples were collected using a stainless steel step probe.

At two medium potential buildings (CB-25 and CB-3), additional discrete field screening samples were collected (Figure 2-11). At CB-25, three additional samples were collected from the sump and piping run to the sump. At CB-3, three additional samples were collected from the drain pipes located at the northwestern portion of the footprint.

Low potential buildings were those that were not believed to have presence of sub-slab contamination. Buildings in this group were sampled during field screening using the same methodology as for the medium potential buildings.

The samples were placed in new, sealable plastic bags and transported to the field screening laboratory in Building 1036 once they were collected.

Soil samples were collected from October 19 to November 4, 2009. Field sampling forms are included in Appendix A.

2.2.2 MI Sample Collection

The MI sampling was conducted in accordance with the *Facility-Wide Sampling and Analysis Plan* for the RVAAP (SAIC, 2001) and the approved Work Plan (URS, 2008 and 2009b). The MI sampling was completed after the field screening sampling as long as there were no exceedances of the TNT or RDX cleanup values measured by the field screening tests. Figures 2-12 through 2-15 provide the primary sample identifiers at each building footprint. Table 2-3 summarizes the MI sampling locations and designated analyses as well as sampling locations designated for Quality Assurance (QA) purposes.

The MI samples were collected from surficial earth fill or soil. The samples were aggregated from random locations within each of the designated sample areas (or decision units). In general, each building footprint was considered a single MI decision unit. Where building footprints were large (i.e., greater than approximately 10,000 square feet), multiple MIs were collected. In some cases the MI sampling units for some low potential buildings were combined based on their proximity and similarity of former use. At four locations (CA-17, CA-14, CB-4 and CB-4A), additional MI samples were collected to reduce decision unit size in an effort to be more indicative of potential releases. At the melt pour buildings, the area near the scuppers and sumps was included in an additional MI sample. At Building CA-14 and CA-17, the additional MI included the perimeter areas close to the footer or electrical conduit area.

K:\Projects\R\Ravenna AAP\13812319\DWGs\Figures\LL1-Report\Ravenna-Figure 2-5 Load Line 1-Field Screening Core Locations CB4-CB4A.dwg User: jessica_cotton Mar 05, 2010 - 1:52pm

URS

RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS

LOAD LINE 1
FIELD SCREENING CORE LOCATIONS
BUILDINGS CB-4 AND CB-4A

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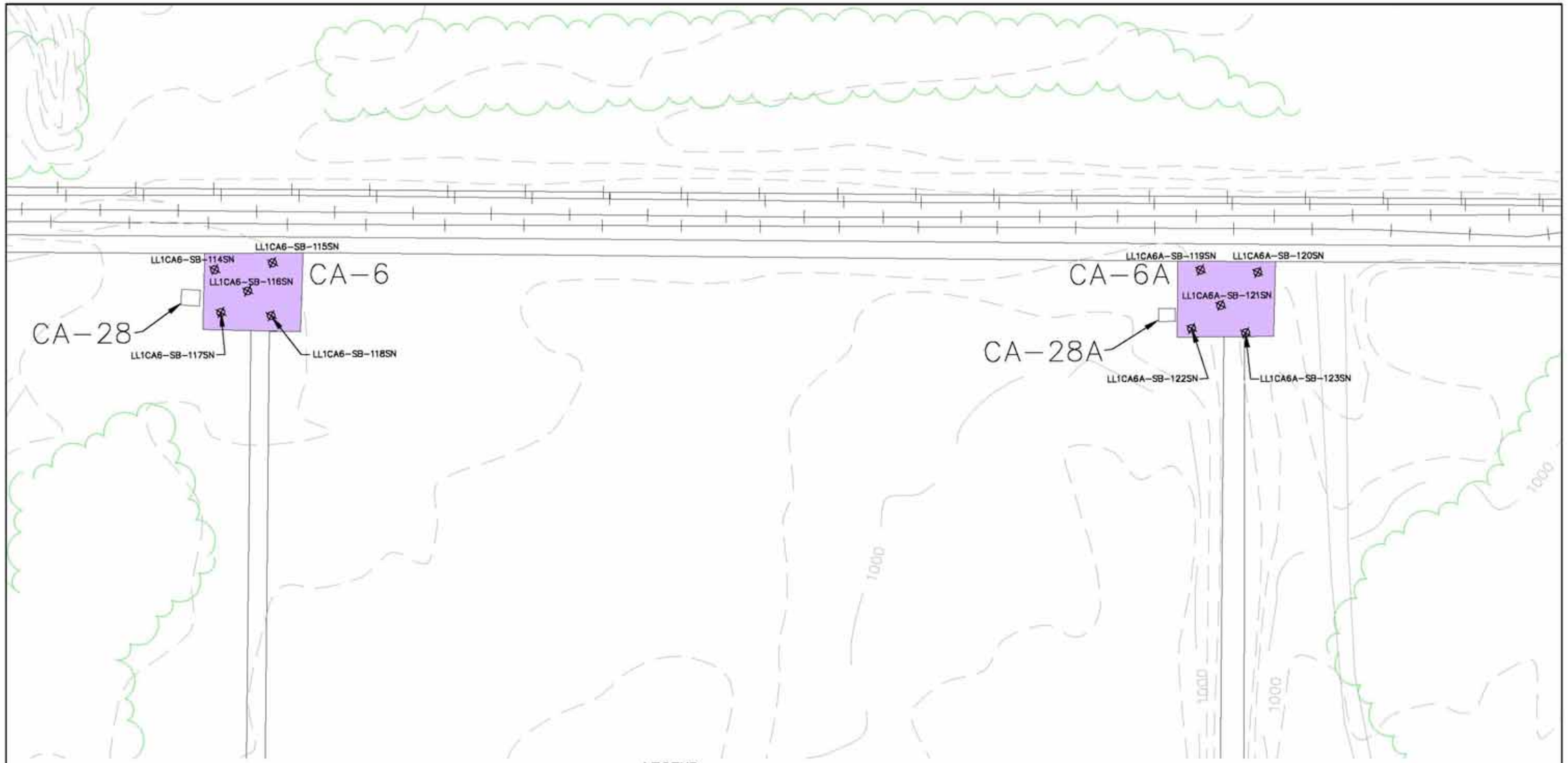
JSC	SL	13812319	01/12/10	2-5	2-9



LEGEND

- CORE LOCATION
- HIGH POTENTIAL BUILDING
- ASPHALT ROAD
- WALKWAYS
- GRAVEL ROAD
- RAILROAD TRACKS
- FENCE LINE
- CONTOUR (2 FT. INTERVAL)
- CONTOUR (10 FT. INTERVAL)
- TREE OR TREELINE

US Army Corps of Engineers

0 12.5 25 50

SCALE 1" ~ 50'

URS

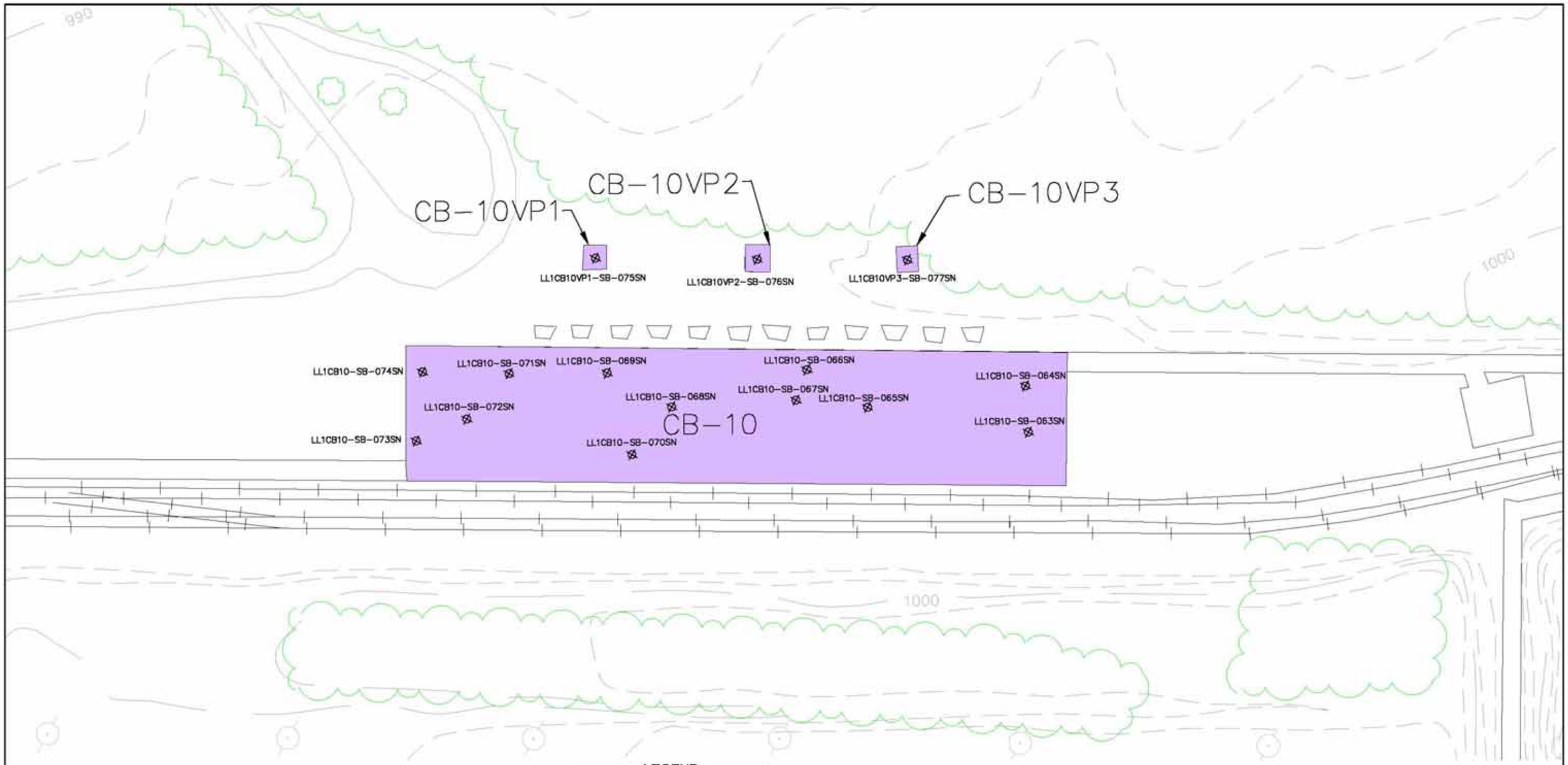
RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS

LOAD LINE 1
FIELD SCREENING CORE LOCATIONS
BUILDINGS CA-6 AND CA-6A

DRAWN BY:	CHECKED BY:	PROJECT No:	DATE:	FIGURE No:	PAGE No:
JSC	SL	13812319	01/12/10	2-6	2-10

K:\Projects\R\Ravenna AAP\13812319\DWGs\Figures\LL1-Report\Ravenna-Figure 2-6 Load Line 1-Field Screening Core Locations CA6-CA6A.dwg User: jessica_cotton Mar 05, 2010 - 1:54pm



LEGEND

- CORE LOCATION
- HIGH POTENTIAL BUILDING
- ASPHALT ROAD
- WALKWAYS
- GRAVEL ROAD
- RAILROAD TRACKS
- CONTOUR (2 FT. INTERVAL)
- CONTOUR (10 FT. INTERVAL)
- TREE OR TREELINE
- STEAM STANCHION
- VACUUM PUMP HOUSE
- VACUUM PUMP SYSTEM BAG HOUSE

US Army Corps of Engineers

0 12.5 25 50

SCALE 1" ~ 50'

K:\Projects\R\Ravenna AAP\13812319\DWGs\Figures\LL1-Report\Ravenna-Figure 2-7 Load Line 1-Field Screening Core Locations CB10.dwg User: jessica_cotton Mar 05, 2010 - 1:58pm

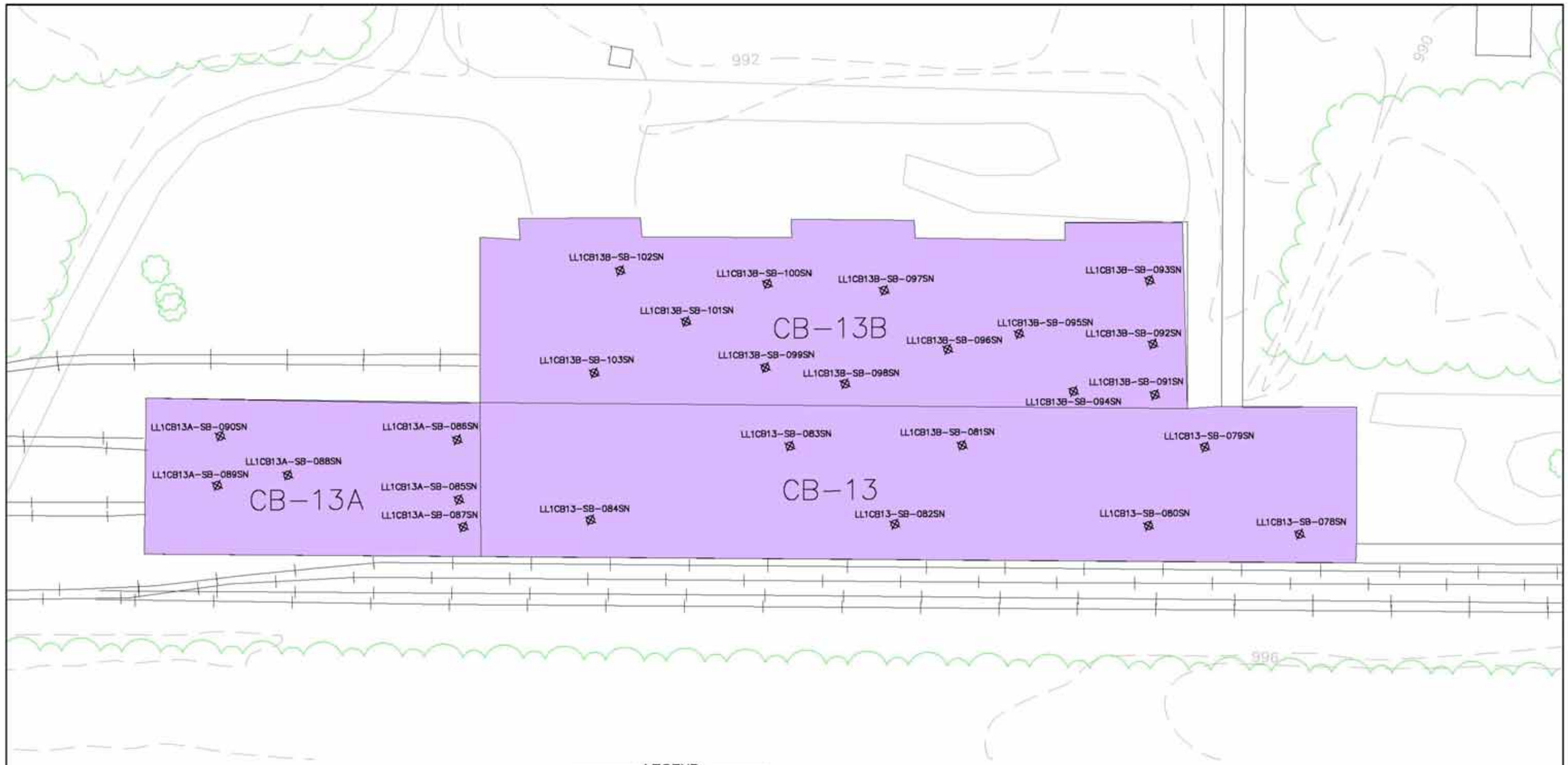
URS

RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS

LOAD LINE 1
FIELD SCREENING CORE LOCATIONS
BUILDINGS CB-10

DRAWN BY:	CHECKED BY:	PROJECT No:	DATE:	FIGURE No:	PAGE No:
JSC	SL	13812319	01/12/10	2-7	2-11



LEGEND

- CORE LOCATION
- HIGH POTENTIAL BUILDING
- ASPHALT ROAD
- WALKWAYS
- GRAVEL ROAD
- RAILROAD TRACKS
- CONTOUR (2 FT. INTERVAL)
- CONTOUR (10 FT. INTERVAL)
- TREE OR TREELINE
- SMALL SUPPORT STRUCTURE

US Army Corps of Engineers

0 12.5 25 50

SCALE 1" ~ 50'

URS

RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS

LOAD LINE 1
FIELD SCREENING CORE LOCATIONS
BUILDINGS CB-13, CB-13A AND CB-13B

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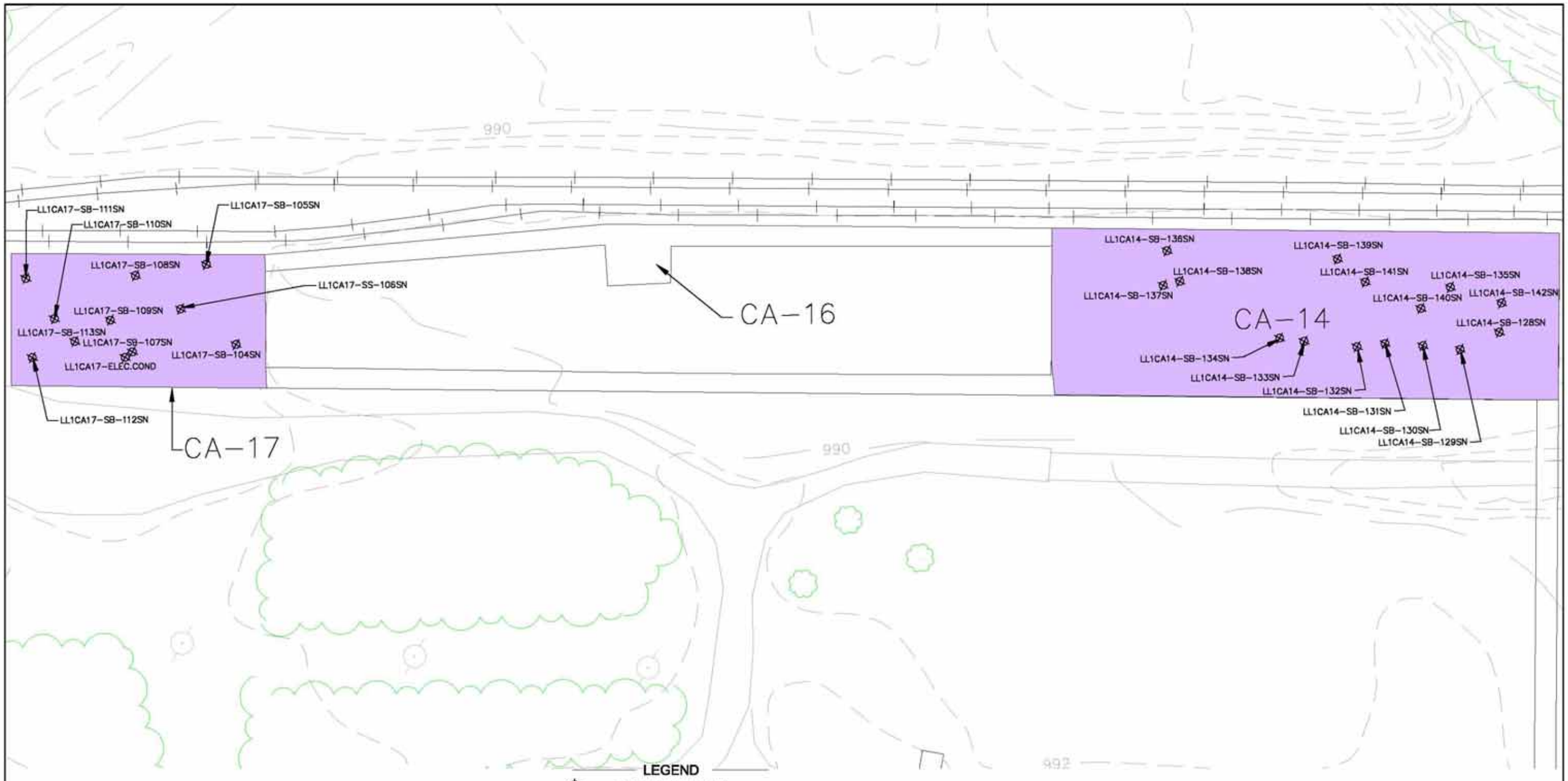
JSC	SL	13812319	01/12/10	2-8	2-12

K:\Projects\R\Ravenna AAP\13812319\DWGs\Figures\LLT-Report\Ravenna-Figure 2-8 Load Line 1-Field Screening Core Locations CB13-CB13A-CB13B.dwg User: jessica_cotton Mar 05, 2010 - 1:59pm



LEGEND

- CORE LOCATION
- HIGH POTENTIAL BUILDING
- ASPHALT ROAD
- WALKWAYS
- GRAVEL ROAD
- RAILROAD TRACKS
- CONTOUR (2 FT. INTERVAL)
- CONTOUR (10 FT. INTERVAL)
- TREE OR TREELINE
- STEAM STANCHION

US Army Corps of Engineers

0 12.5 25 50

SCALE 1" ~ 50'

K:\Projects\R\Ravenna AAP\13812319\DWGs\Figures\LL1-Report\Ravenna-Figure 2-9 Load Line 1-Field Screening Core Locations CA14-CA17.dwg User: jessica_cotton Mar 05, 2010 - 2:00pm

URS

RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS

LOAD LINE 1
FIELD SCREENING CORE LOCATIONS
BUILDINGS CA-14 AND CA-17

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JSC	SL	13812319	01/12/10	2-9	2-13

SLAGLE ROAD

F16-SB-145SN F16-SB-143SN
F-16
F16-SB-146SN F16-SB-144SN

F15-SB-147SN F15-SB-149SN
F-15
F15-SB-148SN F15-SB-150SN

LEGEND

- CORE LOCATION
- HIGH POTENTIAL BUILDING
- ASPHALT ROAD
- WALKWAYS
- GRAVEL ROAD
- RAILROAD TRACKS
- CONTOUR (2 FT. INTERVAL)
- CONTOUR (10 FT. INTERVAL)
- TREE OR TREELINE
- STEAM STANCHION
- SUPPORT BUILDING

US Army Corps of Engineers

0 50 100 200
SCALE 1" = 200'

URS

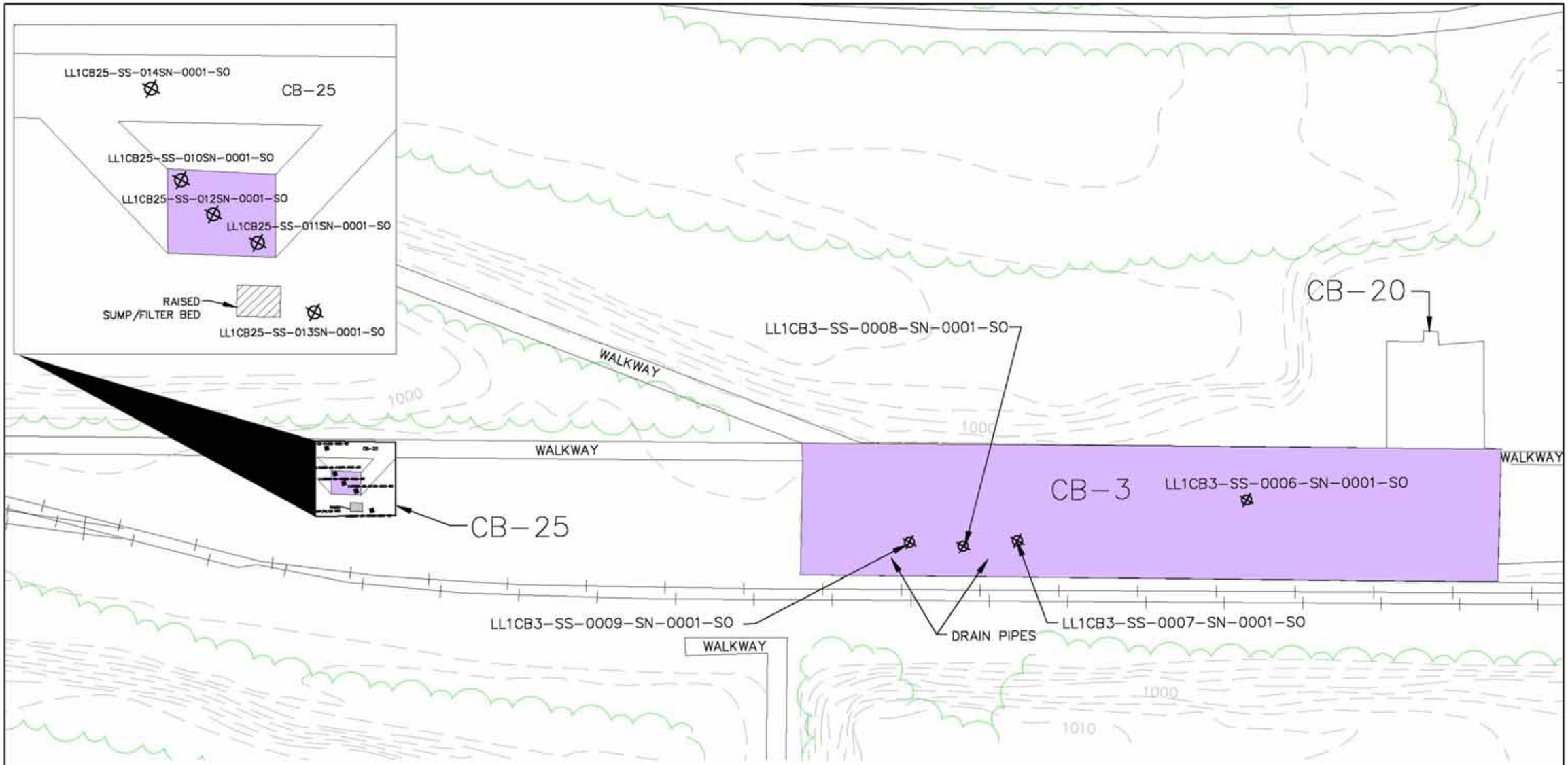
RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS

FIELD SCREENING CORE LOCATIONS
BUILDINGS F-15 AND F-16

DRAWN BY:	CHECKED BY:	PROJECT No:	DATE:	FIGURE No:	PAGE No:
JSC	SL	13812319	01/12/10	2-10	2-14

K:\Projects\R\Ravenna AAP\13812319\DWGs\Figures\LLT-Report\Ravenna-Figure 2-10 Load Line 1-Field Screening Core Locations F15-F16A.dwg User: jessica_cotton Mar 05, 2010 - 2:01pm



LEGEND

- LL1 SAMPLES
- BUILDING FOOTPRINT TO BE SAMPLED
- ASPHALT ROAD/WALKWAY
- GRAVEL ROAD
- RAILROAD TRACKS
- CONTOUR (2 FT. INTERVAL)
- CONTOUR (10 FT. INTERVAL)
- TREE OR TREELINE
- SUMP/FILTER BED

US Army Corps of Engineers

0 12.50 25 50

SCALE 1" ~ 50'

URS

RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS

ADDITIONAL DISCRETE FIELD SCREENING SAMPLES
BUILDINGS CB-3 AND CB-25

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JSC	SL	13812319	1/20/10	2-11	2-15

K:\Projects\R\Ravenna AAP\13812319\DWGs\Figures\LL1-Report\Ravenna-Figure 2-11 Additional Discrete Field Screening Samples.dwg User: jessica_cotton Mar 05, 2010 - 2:04pm

LL1SS-514M-3015-SO
LL1SS-539M-3055-SO
LL1SS-515M-3016-SO
LL1SS-516M-3017-SO
LL1SS-532M-3044-SO
LL1SS-533M-3045-SO
LL1SS-513M-3014-SO
LL1SS-540M-3056-SO
LL1SS-517M-3018-SO
LL1SS-541M-3057-SO
LL1SS-542M-3058-SO
LL1SS-521M-3025-SO
LL1SS-522M-3026-SO
LL1SS-529M-3041-SO
LL1SS-500M-3000-SO
LL1SS-525M-3036-SO
LL1SS-530M-3042-SO
LL1SS-512M-3013-SO
LL1SS-536M-3049-SO
LL1SS-503M-3003-SO
LL1SS-524M-3034-SO
LL1SS-538M-3054-SO
LL1SS-526M-3038-SO
LL1SS-505M-3005-SO
LL1SS-527M-3039-SO
LL1SS-501M-3001-SO
LL1SS-537M-3050-SO
LL1SS-518M-3022-SO
LL1SS-506M-3006-SO
LL1SS-519M-3023-SO
LL1SS-511M-3012-SO
LL1SS-523M-3027-SO
LL1SS-502M-3002-SO
LL1SS-520M-3024-SO
LL1SS-535M-3048-SO
LL1SS-534M-3046-SO
LL1SS-504M-3004-SO
LL1SS-508M-3009-SO
LL1SS-509M-3010-SO
LL1SS-507M-3008-SO
LOAD LINE 1 ROAD

LEGEND

- BUILDING AND WALKWAY
- ASPHALT ROAD
- GRAVEL ROAD
- RAILROAD TRACKS
- FENCE LINE
- STEAM STANCHION
- OVERHEAD STEAM LINE
- BUILDING FOOTPRINT
- PRIMARY MI SAMPLE

US Army Corps of Engineers

0 75 150 300
SCALE 1" ~ 300'

K:\Projects\R\Ravenna AAP\13812319\DWGs\Figures\LL1-Report\Ravenna-Figure 2-12 LOAD LINE 1-MI Sampling Locations.dwg User: jessica_cotton Mar 05, 2010 - 2:16pm

URS

RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS
LOAD LINE 1 MI SAMPLING LOCATIONS

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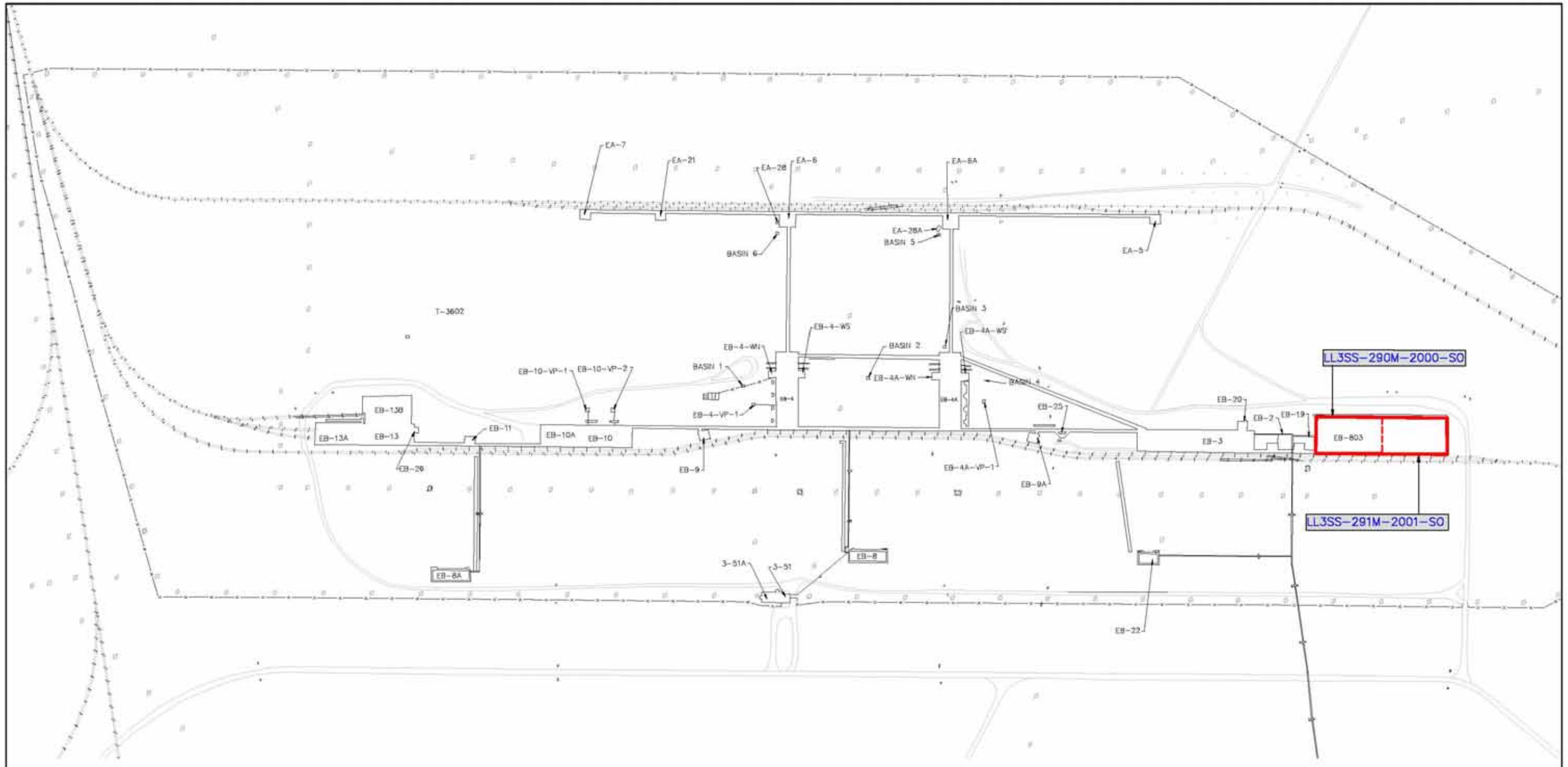
JSC	BP	13812319	01/12/10	2-12	2-16



LEGEND

- BUILDING AND WALKWAY
- ASPHALT ROAD
- GRAVEL ROAD
- RAILROAD TRACKS
- FENCE LINE
- STEAM STANCHION
- OVERHEAD STEAM LINE
- BUILDING FOOTPRINT
- PRIMARY MI SAMPLE

US Army Corps of Engineers

0 75 150 300

SCALE 1" ~ 300'

URS

RAVENNA ARMY AMMUNITION PLANT

RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS LOAD LINE 3 MI SAMPLING LOCATIONS

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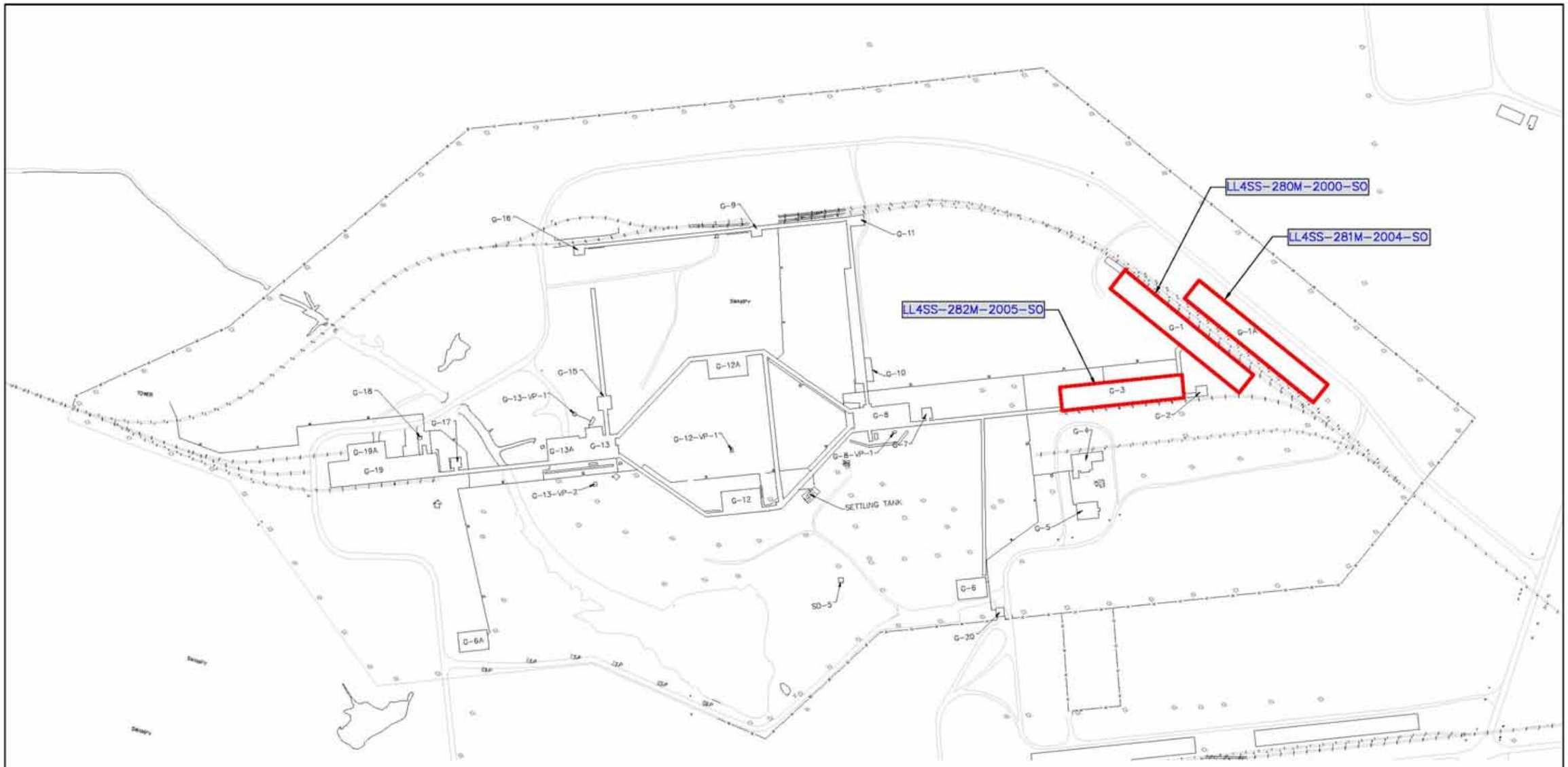
JSC	BP	13812319	01/12/10	2-13	2-17

K:\Projects\R\Ravenna AAP\13812319\DWGs\Figures\LLT-Report\Ravenna-Figure 2-13 LOAD LINE 3-MI Sampling Locations.dwg User: jessica_cotton Mar 05, 2010 - 2:17pm



LEGEND

- BUILDING AND WALKWAY
- ASPHALT ROAD
- GRAVEL ROAD
- RAILROAD TRACKS
- FENCE LINE
- STEAM STANCHION
- OVERHEAD STEAM LINE
- BUILDING FOOTPRINT
- PRIMARY MI SAMPLE

US Army Corps of Engineers

0 75 150 300

SCALE 1" ~ 300'

N

URS

RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS
LOAD LINE 4 MI SAMPLING LOCATIONS

DRAWN BY:	CHECKED BY:	PROJECT No:	DATE:	FIGURE No:	PAGE No:
JSC	BP	13812319	01/12/10	2-14	2-18

K:\Projects\R\Ravenna AAP\13812319\DWGs\Figures\LL1-Report\Ravenna-Figure 2-14 LOAD LINE 4-MI Sampling Locations.dwg User: jessica_cotton Mar 05, 2010 - 2:19pm

SLAGLE ROAD

F16SS-008M-0504-SO

F-16

F15SS-012M-0500-SO

F-15

LEGEND

- BUILDING AND WALKWAY
- ASPHALT ROAD
- GRAVEL ROAD
- RAILROAD TRACKS
- FENCE LINE
- STEAM STANCHION
- OVERHEAD STEAM LINE
- BUILDING FOOTPRINT
- PRIMARY MI SAMPLE

US Army Corps of Engineers

0 25 50 100

SCALE 1" ~ 100'

N

URS

RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS
BUILDINGS F-15 AND F-16
MI SAMPLING LOCATIONS

DRAWN BY:	CHECKED BY:	PROJECT No:	DATE:	FIGURE No:	PAGE No:
JSC	BP	13812319	01/12/10	2-15	2-19

K:\Projects\R\Ravenna AAP\13812319\DWGs\Figures\LLT-Report\Ravenna-Figure 2-15 BUILDINGS 15 and 16 MI Sampling Locations.dwg User: jessica_cotton Mar 05, 2010 - 2:20pm

Table 2-3
MI Sampling Summary - Load Line 1 and Additional Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Description					Sq. Ft.			Analyses Required						
Sample Type	Building	Date	Time	Building Utilization	Slab Area	MI Area	Sample ID	EXPL	PROP	MET[1]	SVOCs	PCBs	PEST	VOC
Load Line 1	1-51	10/20/2009	1545	Clock Alley	1092	3132	LL1SS-509M-3010-SO	X		X				
	1-51A			Line Office	2040									
	CC-1	10/19/2009	1615	Power House No.1	3158	3158	LL1SS-500M-3000-SO	X		X				
	CB-2	10/20/2009	1105	Truck Maintenance	665	665	LL1SS-504M-3004-SO	X		X	X			
	CB-3	10/20/2009	1230	Shell Receiving Building	17050	17050	LL1SS-506M-3006-SO	X	X	X	X	X	X	
	CB-3	10/21/2009	1439	Shell Receiving Building	17050	17050	LL1SS-506D-3007-SO							X
	CB-4 (#1)	11/3/2009	930	Melt Load	21288	7096	LL1SS-520M-3024-SO	X	X	X		X		
	CB-4 (#2)	11/3/2009	950	Melt Load	21288	7096	LL1SS-521M-3025-SO	X	X	X		X		
	CB-4 (#3)	11/3/2009	1015	Melt Load	21288	7096	LL1SS-522M-3026-SO	X	X	X		X		
	CB-4A (#1)	10/26/2009	1045	Melt Load	21288	7096	LL1SS-523M-3027-SO	X	X	X	X	X	X	
QA Sample	CB-4A (#1)	10/26/2009	1045	Melt Load	21288	7096	LL1SS-523M-3028-QA	X	X	X	X	X	X	
Field MI Duplicate	CB-4A (#1)	10/26/2009	1045	Melt Load	21288	7096	LL1SS-523M-3029-SO	X	X	X	X	X	X	
Blind Duplicate	CB-4A (#1)	10/26/2009	1100	Melt Load	21288	7096	LL1SS-523M-3030-SO	X	X	X	X	X	X	
	CB-4A (#1)	10/26/2009	1040	Melt Load	21288	7096	LL1SS-523D-3031-SO							X
VOC QA Sample	CB-4A (#1)	10/26/2009	1042	Melt Load	21288	7096	LL1SS-523D-3032-QA							X
VOC Blind Dupl	CB-4A (#1)	10/26/2009	1044	Melt Load	21288	7096	LL1SS-523D-3033-SO							X
	CB-4A (#2)	10/26/2009	1115	Melt Load	21288	7096	LL1SS-524M-3034-SO	X	X	X	X	X	X	
	CB-4A (#2)	10/26/2009	1105	Melt Load	21288	7096	LL1SS-524D-3035-SO							X
	CB-4A (#3)	10/26/2009	1130	Melt Load	21288	7096	LL1SS-525M-3036-SO	X	X	X	X	X	X	
MS	CB-4A (#3)	10/26/2009	1130	Melt Load	21288	7096	LL1SS-525M-3036-MS	X	X	X	X	X	X	
MSD	CB-4A (#3)	10/26/2009	1130	Melt Load	21288	7096	LL1SS-525M-3036-MSD	X	X	X	X	X	X	
	CB-4A (#3)	10/26/2009	1145	Melt Load	21288	7096	LL1SS-525D-3037-SO							X
VOC MS	CB-4A (#3)	10/26/2009	1145	Melt Load	21288	7096	LL1SS-525D-3037-MS							X
VOC MSD	CB-4A (#3)	10/26/2009	1145	Melt Load	21288	7096	LL1SS-525D-3037-MSD							X
	CB-4VP1	11/3/2009	1055	Vacuum Pump House	100	100	LL1SS-526M-3038-SO	X		X				
	CB-4AVP1	10/27/2009	1535	Vacuum Pump House	100	100	LL1SS-527M-3039-SO	X		X				
	CB-4WN	Not Sampled[2]		Washout Annex for CB-4	865	865	LL1SS-528M-3040-SO	X	X	X				
	CB-4WS	11/3/2009	1041	Washout Annex for CB-4	272	272	LL1SS-529M-3041-SO	X	X	X				
	CB-4AWN	10/27/2009	1525	Washout Annex for CB-4A	865	865	LL1SS-530M-3042-SO	X	X	X				
	CB-4AWS	Not Sampled[2]		Washout Annex for CB-4A	272	272	LL1SS-531M-3043-SO	X	X	X				
	CB-4B	10/21/2009	1505	Conveyor Drive House	496	496	LL1SS-518M-3022-SO	X		X				
	CA-5	10/21/2009	1450	Service Building	665	665	LL1SS-517M-3018-SO	X		X				
QA Sample	CA-5	10/21/2009	1450	Service Building	665	665	LL1SS-517M-3019-QA	X		X				
Field MI Duplicate	CA-5	10/21/2009	1450	Service Building	665	665	LL1SS-517M-3020-SO	X		X				
Blind Duplicate	CA-5	10/21/2009	1530	Service Building	665	665	LL1SS-517M-3021-SO	X		X				
	CA-6	11/3/2009	1510	Explosive Preparation	1485	1553	LL1SS-532M-3044-SO	X	X	X				
	CA-28			Elevator Machine House	68									
	CA-6A	11/3/2009	1440	Explosive Preparation	1485	1553	LL1SS-533M-3045-SO	X	X	X				
	CA-28A			Elevator Machine House	68									
	T-4801	10/21/2009	1030	Boiler House	500	500	LL1SS-512M-3013-SO	X		X				
	CA-7	10/21/2009	1135	Service Building	665	665	LL1SS-515M-3016-SO	X		X				
MS	CA-7	10/21/2009	1135	Service Building	665	665	LL1SS-515M-3016-MS	X		X				
MSD	CA-7	10/21/2009	1135	Service Building	665	665	LL1SS-515M-3016-MSD	X		X				
	CB-8	10/20/2009	1520	Change House	6770	6770	LL1SS-508M-3009-SO	X		X				
	CB-9	10/20/2009	1623	Service Building	665	665	LL1SS-511M-3012-SO	X		X				
	CB-10 (#1)	10/27/2009	1635	Drill & Assembly/ Munitions Rehabilitation	22757	11379	LL1SS-534M-3046-SO	X	X	X	X	X	X	
	CB-10 (#1)	10/27/2009	1630	Drill & Assembly/ Munitions Rehabilitation	22757	11379	LL1SS-534D-3047-SO							X
	CB-10 (#2)	10/27/2009	1640	Drill & Assembly/ Munitions Rehabilitation	22757	11379	LL1SS-535M-3048-SO	X	X	X		X		
	CB-10VP1	10/27/2009	1701	Vacuum Pump House	138	414	LL1SS-536M-3049-SO	X		X				
	CB-10VP2			Vacuum Pump House	138									
	CB-10VP3			Vacuum Pump House	138									
	CB-11	10/21/2009	1522	Service Building	665	665	LL1SS-519M-3023-SO	X		X				
	CB-13/13A	11/4/2009	1400	Packing and Shipping	47294	47294	LL1SS-537M-3050-SO	X	X	X				
QA Sample	CB-13/13A	11/4/2009	1400	Packing and Shipping	47294	47294	LL1SS-537M-3051-QA	X	X	X				
Field MI Duplicate	CB-13/13A	11/4/2009	1400	Packing and Shipping	47294	47294	LL1SS-537M-3052-SO	X	X	X				
Blind Duplicate	CB-13/13A	11/4/2009	1415	Packing and Shipping	47294	47294	LL1SS-537M-3053-SO	X	X	X				
	CB-13B	11/4/2009	1500	Shipping Warehouse Annex	32354	32354	LL1SS-538M-3054-SO	X	X	X				
	CA-14 (#1)	11/4/2009	1523	Propellant Charge	22300	2230	LL1SS-539M-3055-SO	X	X	X				
	CA-14 (#2)	11/4/2009	1528	Propellant Charge	22300	20070	LL1SS-540M-3056-SO	X	X	X				
	CA-15	10/21/2009	1057	Change House	6770	6770	LL1SS-514M-3015-SO	X		X				
	CA-16	10/21/2009	1050	Service Building	665	665	LL1SS-513M-3014-SO	X		X				
	CA-17 (#1)	10/29/2009	924	Propellant Charge	7575	3788	LL1SS-541M-3057-SO	X	X	X				
	CA-17 (#2)	10/29/2009	930	Propellant Charge	7575	3788	LL1SS-542M-3058-SO	X	X	X				
MS	CA-17 (#2)	10/29/2009	930	Propellant Charge	7575	3788	LL1SS-542M-3058-MS	X	X	X				
MSD	CA-17 (#2)	10/29/2009	930	Propellant Charge	7575	3788	LL1SS-542M-3058-MSD	X	X	X				
	CB-19	10/20/2009	1040	Electric Locomotive Service	665	665	LL1SS-503M-3003-SO	X		X	X			
	CB-20	10/20/2009	1130	Tool Storage	2801	2801	LL1SS-505M-3005-SO	X		X				
	CA-21	10/21/2009	1131	Service Building	665	665	LL1SS-516M-3017-SO	X		X				
	CB-25	10/20/2009	1710	Washout	168	168	LL1SS-507M-3008-SO	X		X				
	CB-801 (#1)	10/20/2009	1020	Inert Storage	41213	20607	LL1SS-501M-3001-SO	X		X				
	CB-801 (#2)	10/20/2009	1000	Inert Storage	41213	20607	LL1SS-502M-3002-SO	X		X				
Load Line 3	EB-803 (#1)	10/21/2009	1631	Inert Storage	41213	20607	LL3SS-290M-2000-SO	X		X				
	EB-803 (#2)	10/21/2009	1640	Inert Storage	41213	20607	LL3SS-291M-2001-SO	X		X				
Bldgs.F15/16	F-15	11/4/2009	1700	Explosive & Propellant Testing	7200	7200	F15SS-012M-0500-SO	X	X	X				
QA Sample	F-15	11/4/2009	1700	Explosive & Propellant Testing	7200	7200	F15SS-012M-0501-QA	X	X	X				
Field MI Duplicate	F-15	11/4/2009	1700	Explosive & Propellant Testing	7200	7200	F15SS-012M-0502-SO	X	X	X				
Blind Duplicate	F-15	11/4/2009	1710	Explosive & Propellant Testing	7200	7200	F15SS-012M-0503-SO	X	X	X				
	F-16	11/4/2009	1737	Explosive & Propellant Testing	7200	7200	F16SS-008M-0504-SO	X	X	X				
Load Line 4	G-1	10/21/2009	1710	Inert Storage	25001	25001	LL4SS-280M-2000-SO	X		X				
QA Sample	G-1	10/21/2009	1710	Inert Storage	25001	25001	LL4SS-280M-2001-QA	X		X				
Field MI Duplicate	G-1	10/21/2009	1710	Inert Storage	25001	25001	LL4SS-280M-2002-SO	X		X				
Blind Duplicate	G-1	10/21/2009	1715	Inert Storage	25001	25001	LL4SS-280M-2003-SO	X		X				
	G-1A	10/21/2009	1800	Inert Storage	25001	25001	LL4SS-281M-2004-SO	X		X				
	G-3	10/21/2009	1810	Receive and Paint	17884	17884	LL4SS-282M-2005-SO	X		X				

Primary MI Sample
Primary VOC Discrete Sample
Quality Assurance
Field MI Duplicate
Blind Duplicate
MS/MSDs

[1] MET = TAL Metals and Hexavalent Chromium
[2] Footprint not sampled due to field screening exceedance; footprint covered with plastic..

This table mirrors the sampling table in the approved Workplan

K:\Projects\R\Ravenna AAP\13812319\DOCs\Reports\LL1_Short_Report\Final\[Table 2-3 MI Sampling.xls]Buildings

Thirty subsamples were collected at each MI location to provide a representative, repeatable approximation of the average concentration of a particular constituent within a designated area (i.e., the decision unit). The sample aliquots were collected using a small-diameter (7/8" inside diameter) step probe. The individual aliquots were obtained by pushing the step probe sampler from 0 to 12" bgs or refusal. The sub-slab materials encountered were, in many cases, represented by a large percentage of large cobbles of rock and concrete. These cobbles variably affected the sampling efforts by restricting the depth of sampling and recovery. At locations where refusal was encountered at less than 1.0 foot bgs, at least five separate attempts were made to achieve the full sample depth. In all cases, multiple attempts were taken to collect each aliquot to depth and for recovery as needed. The attempts were generally conducted within close proximity to the intended location, but the radius was expanded if refusals continued in an attempt to achieve the intended 1.0 foot bgs. The entire volume of all aliquots was aggregated into a single field sample by placing the samples in a plastic-lined bucket. The entire sample was placed in a sealable plastic bag, secured, labeled, and then double bagged to increase the probability the sample would arrive at the lab intact. The sample was delivered to the analytical laboratory where the laboratory provided MI sample preparation, consisting of air-drying, sieving, and grinding.

Samples collected for volatile organic compound (VOC) analyses were collected as discrete samples (Table 2-3). The discrete locations at selected buildings were to be selected based upon any field observations or any elevated readings noted with a photo ionization detector (PID). None of the PID readings taken at any time during the field investigation were above background (Appendix A). Since no evidence of the presence of volatiles was noted, the discrete VOC samples were collected from the approximate middle of the building footprint. The samples were collected using TerraCore® sampling kits.

Three types of duplicate samples were collected for quality control (QC) purposes: an MI duplicate, a QA laboratory sample, and a blind duplicate. The MI and QA duplicates were two separate samples comprised of 30 subsample increments from the same locations as the primary MI sample. The blind duplicate was a separate sample comprised of 30 subsample increments from different locations within the same sampling area as the primary MI sample. The blind duplicate was collected after collecting the primary, MI duplicate, and QA laboratory samples. All duplicate samples were collected at a frequency of one per ten primary samples.

Matrix spike and matrix spike duplicate sample analyses were also requested from the laboratory at a frequency of one per 20 primary samples.

Soil samples designated for QA/QC are also noted on Table 2-3.

Field sampling collection forms documenting each MI sample collected (as well as the discrete VOC samples, where collected) are included in Appendix A. Appendix B contains copies of the Chains of Custody and freight bills for these sampling events.

2.3 FIELD ANALYSES

Soil test kits were used to determine TNT and RDX concentrations in the collected samples. Analysis was in accordance with the procedures in Appendix B of Quality Assurance Project Plan Addendum within the approved Work Plan (URS, 2008).

The temporary field screening laboratory was equipped with materials to conduct the field screening operations on an as-needed basis to accommodate the sampling schedule. The work areas were covered with plastic to avoid contamination of testing process surface areas. The acetone used for the soil test extraction was stored in a storage cabinet (suitable for storing flammable materials) when not in use. The expended acetone/soil/water mix was stored in approved 5-gallon containers with containment in the testing area. The extraction mix was consolidated into an approved 55-gallon waste fluid drum on an as-needed basis. The drum and all containers were appropriately labeled and staged for disposal.

Analyses were conducted from October 20, 2009 through November 4, 2009. Field screening calculations and results are included in Appendix D.

2.4 LABORATORY ANALYSES

Analytical support for the MI sampling effort was assigned to Microbac Laboratories, Inc. (Microbac) of Marietta, Ohio. The QA laboratory, contracted through the Louisville USACE, was CT Laboratories, Baraboo, Wisconsin.

The analytical laboratory dried, processed, and analyzed each sample for explosives and metals (U.S. Environmental Protection Agency's Target Analyte List (TAL) metals and hexavalent chromium). At selected buildings, analyses for propellants, VOCs, semivolatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs) were also done. These additional parameters were based on the historical operations at an individual building and whether those operations would be indicative of contamination other than explosives or metals based on a review of historical data collected outside the building footprints. The additional analyses are indicated on Table 2-1. In accordance with the *Facility-Wide Sampling and Analysis Plan* (SAIC, 2001), 10% of the samples collected were analyzed for these additional parameters and pesticides (i.e., the full analytical suite).

This section provides details of the field screening and MI sampling results analyzed by the field and fixed laboratories. The field screening test results are presented in chronological order in Appendix D. Appendix E contains the data for all analyses completed by the fixed laboratory.

3.1 FIELD SCREENING RESULTS

3.1.1 Low Potential Buildings

No explosives were detected in any of the field screening samples from the 11 low potential buildings (at Load Lines 1 and 4).

3.1.2 Medium Potential Buildings

Explosives analyzed via field screening were detected at two of the 13 medium potential buildings at Load Line 1 (Buildings CB-25 and CA-7). RDX was not detected at either building. There were no detections of TNT or RDX at Building EB-803 (Load Line 3). Table 3-1 summarizes field screening explosives detections at the medium potential buildings.

Table 3-1
Medium Potential Building Field Screening Results – Detections Only
Ravenna Army Ammunition Plant
Ravenna, Ohio

Building/Description	Sample ID	TNT, mg/kg (CUG_{adj}: 878 mg/kg)[1]	RDX, mg/kg (CUG_{IROD}: 838 mg/kg)[1]
CB-25/Washout	LL1CB25-SS-012SN-0001-SO	3.6	ND[2]
CA-7/Service	LL1CA7-SS-022SN-0001-SO	21.5	ND

[1] CUG_{adj} for TNT as described in URS (2009b) adjusted from the IROD cleanup goal; CUG_{IROD} for RDX from the IROD (Shaw, 2007).

[2] ND: Nondetect result. The detection limit for RDX is 0.8 mg/kg.

[3] All samples collected from approximately 0 to 12 inches bgs.

3.1.3 High Potential Buildings

Explosives were detected in field screening samples collected from 20 of the 21 footprints of buildings designated as high potential buildings. Building CB-10VP1 was the only high potential building with no explosive detections. The detected TNT concentrations ranged from 0.7 to 4,520 mg/kg; RDX concentrations ranged from 0.8 mg/kg to 72.7 mg/kg. The highest concentrations were detected at the washout annexes. Table 3-2 summarizes field screening explosives results for the high potential buildings.

Table 3-2
High Potential Building Field Screening Results – Detections Only
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	TNT, mg/kg (CUG_{adj}: 878 mg/kg)	RDX, mg/kg (CUG_{IROD}: 838 mg/kg)
Load Line 1		
Building CA-6:		
LL1CA6-SB-115SN-0001-SO	ND	1.0
LL1CA6-SB-118SN-0001-SO	11	ND
Building CA-6A:		
LL1CA6A-SB-119SN-0003-SO	2.7	ND
LL1CA6A-SB-120SN-0003-SO	277	ND
LL1CA6A-SB-121SN-0003-SO	0.8	ND
LL1CA6A-SB-121SN-0003-SO-DUP	0.9	ND
LL1CA6A-SB-121SN-0004-SO	1.4	ND
Building CA-14:		
LL1CA14-SB-128SN-0005-SO	ND	1.2
LL1CA14-SB-129SN-0004-SO	1.2	ND
LL1CA14-SB-133SN-0001-SO	ND	1.1
LL1CA14-SB-135SN-0003-SO	0.7	ND
LL1CA14-SB-137SN-0001-SO	ND	1.4
LL1CA14-SB-137SN-0002-SO	1.9	ND
LL1CA14-SB-140SN-0001-SO	ND	10
LL1CA14-SB-140SN-0004-SO	0.8	ND
LL1CA14-SB-142SN-0001-SO	ND	1.8
Building CA-17:		
LL1CA17-SB-105SN-0002-SO	ND	3.6
LL1CA17-SB-105SN-0003-SO	ND	6.4
LL1CA17-SB-105SN-0004-SO	ND	1.1
LL1CA17-SB-106SN-0002-SO	ND	0.9
LL1CA17-SB-108SN-0001-SO	ND	7.0
LL1CA17-SB-108SN-0002-SO	ND	1.8
LL1CA17-SB-108SN-0003-SO	ND	1.2
LL1CA17-SB-108SN-0004-SO	ND	1.2
LL1CA17-SB-109SN-0002-SO	ND	1.2
LL1CA17-SB-109SN-0003-SO	ND	0.9
LL1CA17-SB-111SN-0001-SO	ND	1.1
LL1CA17-SB-111SN-0002-SO	ND	1.8
LL1CA17-SB-113SN-0003-SO	ND	1.6
Building CB-4:		
LL1CB4-SB-050SN-0002-SO	3.8	ND
LL1CB4-SB-051SN-0002-SO	ND	0.9
LL1CB4-SB-057SN-0001-SO	5.6	1.5
LL1CB4-SB-057SN-0002-SO	1.4	ND

Sample ID	TNT, mg/kg (CUG_{adj}: 878 mg/kg)	RDX, mg/kg (CUG_{IROD}: 838 mg/kg)
LL1CB4-SB-058SN-0002-SO	ND	1.0
LL1CB4-SB-058SN-0003-SO	9.8	ND
LL1CB4-SB-059SN-0001-SO	7.3	ND
LL1CB4-SB-059SN-0001-SO-DUP	13	ND
LL1CB4-SB-059SN-0003-SO	342	1.4
LL1CB4-SB-059SN-0004-SO	19	1.0
Building CB-4 Washouts:		
LL1CB4WN-SB-060SN-0002-SO	2.4	3.4
LL1CB4WN-SB-060SN-0003-SO	11	4.7
LL1CB4WN-SB-061SN-0003-SO	19	ND
LL1CB4WN-SB-061SN-0004-SO	ND	5.8
LL1CB4WN-SB-061SN-0005-SO	**2,630**	5.9
LL1CB4WS-SB-046SN-0003-SO	1.2	ND
LL1CB4WS-SB-046SN-0005-SO	7.9	ND
LL1CB4WS-SB-047SN-0001-SO	0.9	ND
LL1CB4WS-SB-047SN-0003-SO DL2	173	3.1
LL1CB4WS-SB-047SN-0004-SO	7.4	4.1
Building CB-4VP1:		
LL1CB4VP1-SB-062SN-0001-SO	ND	2.9
Building CB-4A:		
LL1CB4A-SB-042SN-0001-SO	1.8	ND
LL1CB4A-SB-042SN-0002-SO	1.0	ND
LL1CB4A-SB-042SN-0003-SO	0.8	ND
LL1CB4A-SB-042SN-0004-SO	0.8	ND
LL1CB4A-SB-043SN-0001-SO	7.6	29.1
LL1CB4A-SB-043SN-0002-SO	ND	4.1
LL1CB4A-SB-043SN-0003-SO	ND	1.0
LL1CB4A-SB-043SN-0004-SO	3.7	0.8
LL1CB4A-SB-043SN-0004-SO-DUP	3.0	1.1
Building CB-4A Washouts:		
LL1CB4AWN-SB-044SN-0001-SO	1.9	ND
LL1CB4AWS-SB-030SN-0003-SO DL	432	72.7
LL1CB4AWS-SB-031SN-0001-SO	ND	2.9
LL1CB4AWS-SB-031SN-0002-SO DL3	33	1.4
LL1CB4AWS-SB-031SN-0003-SO DL2	**4,520**	8.7
Building CB-4AVPI:		
LL1CB4AVP1-SB-029SN-0003-SO	ND	0.8
Building CB-10:		
LL1CB10-SB-067SN-0001-SO	ND	1.4
LL1CB10-SB-071SN-0002-SO	ND	1.5
LL1CB10-SB-071SN-0002-SO-DUP	ND	1.5
LL1CB10-SB-073SN-0004-SO	ND	2.2
Building CB-10 Vacuum Pump Houses:		
LL1CB10VP2-SB-076SN-0001-SO	5.8	ND
LL1CB10VP2-SB-076SN-0003-SO	0.9	ND
LL1CB10VP3-SB-077SN-0001-SO	ND	0.8

Sample ID	TNT, mg/kg (CUG_{adj}: 878 mg/kg)	RDX, mg/kg (CUG_{IROD}: 838 mg/kg)
Buildings CB-13/-13A/-13B:		
LL1CB13-SB-078SN-0005-SO	ND	1.0
LL1CB13-SB-081SN-0004-SO-DUP	ND	0.9
LL1CB13-SB-081SN-0005-SO	ND	0.8
LL1CB13-SB-082SN-0002-SO	ND	0.9
LL1CB13-SB-082SN-0003-SO	ND	0.9
LL1CB13-SB-082SN-0004-SO	ND	1.2
LL1CB13A-SB-089SN-0004-SO	1.6	ND
LL1CB13A-SB-089SN-0004-SO-DUP	1.3	ND
LL1CB13A-SB-089SN-0005-SO	2.6	ND
LL1CB13B-SB-092SN-0004-SO	0.8	ND
LL1CB13B-SB-094SN-0003-SO	0.8	ND
LL1CB13B-SB-095SN-0002-SO	1.3	ND
LL1CB13B-SB-096SN-0005-SO	1.5	ND
LL1CB13B-SB-099SN-0005-SO	5.4	ND
F-15/F-16 Buildings		
F15-SB-148SN-0001-SO	ND	1.7
F16-SB-144SN-0001-SO	3.0	ND
F16-SB-145SN-0003-SO	1.5	ND

Bold indicates cleanup goal exceedance.

ND: Nondetect result. The detection limit for TNT is 0.7 mg/kg; the detection limit for RDX is 0.8 mg/kg.

3.2 MI DATA VERIFICATION

Data verification of the MI analytical data was conducted in accordance with Part II of the *Facility-Wide Sampling and Analysis Plan,* i.e., the Quality Assurance Project Plan (QAPP) (SAIC, 2001), the addendum to the QAPP in the approved Work Plan (URS, 2008), and the *Louisville Chemistry Guideline*, *Version 5* (LCG5) (USACE, 2002). The verification was conducted in two stages using both an automated data review application and a manual review process. The Automated Data Review (ADR) software application was obtained from Laboratory Data Consultants, Inc. upon authorization from USACE and was used for the first stage of data verification. The ADR software evaluated the analytical data provided in laboratory electronic deliverable files by comparing project-specific method quality objectives for the following elements and applying data qualifiers as appropriate:

- Cooler temperature,
- Holding times (extraction and analysis),
- Units of measure and detection limits,
- Analyte lists,
- Method blank, trip blank, and equipment blank results,
- Laboratory data qualifiers,
- Laboratory Control Sample (LCS) results,
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) results,
- Lab duplicate sample results,
- Field duplicate sample results,
- Surrogate recoveries (where applicable),
- Initial Calibrations, and
- Initial and Continuing Calibration Verification standards,

Subsequent to the automated review, URS chemists performed the second stage of data verification: confirming that data qualifiers were applied appropriately and manually evaluating information not checked by ADR. The information reviewed in this second stage included:

- Chain-of-Custody and sample login documents,
- Any nonconformances or analytical problems noted in the report narratives,
- Concentration of spikes relative to the parent sample concentrations,
- Concentration of duplicate samples relative to the sample reporting limits,
- Initial and Continuing Calibration Blank results,
- Method Reporting Limit (MRL) standard recoveries,
- Second column confirmation analyses, and
- Sample dilutions.

Based on the ADR and manual reviews, some sample results were qualified as estimated due to minor exceedances of various QC criteria (e.g., holding time, LCS recovery limits, MS/MSD recovery or precision limits, duplicate precision limits, initial or continuing calibration criteria,

etc.). These results are flagged "J" or "UJ" (estimated) and are considered useable for meeting project objectives.

A number of QC nonconformances were severe enough to warrant the qualification of associated results as unuseable (flagged "R"). In all cases, excessively low responses or recoveries for specific analytes in calibration verification standards, MS/MSDs, or MRL standards indicated that the presence or absence of the analyte could not be confirmed for results reported as nondetect. Specifically, soil sample results for the following parameters were rejected due to a QC criteria failure:

Parameter Group	Number of Data Points	Number of Rejections	Description of QC Failure(s)	Percent Rejected
Volatile Organics	210	0	None.	0.0%
Semivolatile Organics	594	13	MS/MSD recoveries <10% for 2-, 3-, and 4-nitroaniline, 4-nitrophenol, and hexachlorocyclopentadiene. MRL standard recoveries <50% for hexachlorocyclopentadiene.	2.2%
Explosives	912	57	Initial and/or continuing calibration verification %D exceeds method criteria for tetryl. MRL standard recoveries <65% for tetryl.	6.25%
Propellants	55	0	None.	0.0%
Pesticides	147	2	MS/MSD recoveries <10% for 4,4'-DDD and 4,4'-DDT.	1.4%
PCBs	77	0	None.	0.0%
Metals	1368	35	MRL standard recoveries for silver <65%.	2.6%
TOTAL DATA POINTS	3363	107		3.2%

Summaries of detected chemicals are presented in Tables 3-3 through 3-5. Analytical data tables for all analyses are included in Appendix E.

3.2.1 Accuracy and Precision

The method quality objectives for accuracy and precision of laboratory analytical data are specified in the Facility-Wide QAPP and LCG5. Analytical accuracy is expressed as the percent recovery of an analyte that has been added to a blank sample or environmental sample at a known concentration before analysis. Accuracy was determined through the use of MS and LCS analyses. The percent recovery for each spiked analyte was calculated to establish the accuracy of the analysis performed compared to the method quality objectives. Analytical precision was

Table 3-3
Chemicals Detected in Multi-Increment Soil Samples
Low Potential Buildings, Load Line 1 and 4
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	1-51, 1-51A LL1SS-509M-3010-SO 10/20/2009	CA-15 LL1SS-514M-3015-SO 10/21/2009	CB-8 LL1SS-508M-3009-SO 10/20/2009	CB-20 LL1SS-505M-3005-SO 10/20/2009	CB-801 (#1) LL1SS-501M-3001-SO 10/20/2009	CB-801 (#2) LL1SS-502M-3002-SO 10/20/2009	CC-1 LL1SS-500M-3000-SO 10/19/2009	T-4801 LL1SS-512M-3013-SO 10/21/2009
Metals	Aluminum	mg/kg	**5270**	**6460**	**3830**	**4360**	**10900**	**10100**	**5690**	**11300**
	Antimony	mg/kg	**0.297**	**0.269**	**0.26**	**0.308**	**0.449**	**0.229**	**0.669**	**0.523**
	Arsenic	mg/kg	**9.45**	**10.4**	**9.38**	**11.5**	**8.67**	**7.48**	**8.72**	**9.68**
	Barium	mg/kg	**40.9**	**44.4**	**37.3**	**27.7**	**102**	**85.7**	**57**	**76.7**
	Beryllium	mg/kg	**0.393**	**0.461**	**0.264**	**0.249**	**1.01**	**0.63**	**0.474**	**0.765**
	Cadmium	mg/kg	**0.835**	**0.892**	**0.791**	**0.833**	**0.944**	**0.87**	**1.48**	**1.19**
	Calcium	mg/kg	**9840**	**7700**	**7820**	**4570**	**28800**	**4370**	**17600**	**9100**
	Chromium	mg/kg	**10.1 J**	**17.6 J**	**10.5 J**	**12.7 J**	**20.4 J**	**16.6 J**	**23.2 J**	**18.1 J**
	Cobalt	mg/kg	**3.59 J**	**4.35 J**	**2.87 J**	**4.33 J**	**5.32**	**7.13 J**	**3.39 J**	**5.95 J**
	Copper	mg/kg	**14.2**	**14.8**	**9.37**	**18**	**15.5**	**10.3**	**22.9**	**18.9**
	Iron	mg/kg	**14700 J**	**15300 J**	**11200 J**	**14900 J**	**19400 J**	**18100 J**	**20400**	**23100 J**
	Lead	mg/kg	**18.1 J**	**33.6 J**	**36.8 J**	**12.2 J**	**45.2 J**	**16.7 J**	**116 J**	**23.2 J**
	Magnesium	mg/kg	**2150 J**	**2160 J**	**1440 J**	**2130 J**	**4460 J**	**2110 J**	**3240 J**	**3730 J**
	Manganese	mg/kg	**395 J**	**404 J**	**327 J**	**339 J**	**621 J**	**475 J**	**546**	**470 J**
	Mercury	mg/kg	**0.0116 J**	**0.0167 J**	**0.0126 J**	**0.0157 J**	**0.0182 J**	**0.0246 J**	**0.118**	**0.0667 J**
	Nickel	mg/kg	**15.4**	**21.9**	**15.3**	**19.6**	**23.8**	**51.7**	**36.2**	**19**
	Potassium	mg/kg	**458**	**582**	**404**	**435**	**890**	**621**	**630**	**631**
	Selenium	mg/kg	**0.213 J**	**0.282 J**	**0.274 J**	**0.197 J**	**0.389 J**	**0.343 J**	**0.317 J**	**0.358 J**
	Silver	mg/kg	**0.175 J**	0.179 U	0.192 U	0.184 U	0.193 U	0.18 U	0.177 U	0.185 U
	Sodium	mg/kg	**51**	**43.7**	**38.3**	**23.6**	**151**	**71**	**72.6**	**79.8**
	Thallium	mg/kg	**0.0858 J**	**0.122 J**	**0.078 J**	**0.104 J**	**0.115 J**	**0.129 J**	**0.114 J**	**0.125 J**
	Vanadium	mg/kg	**10 J**	**12.4 J**	**7.94 J**	**9.58 J**	**14.7 J**	**19 J**	**12.1 J**	**19.7 J**
	Zinc	mg/kg	**79.2**	**66.8**	**61.7**	**61.4**	**52.8**	**50.6**	**140**	**139**

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.

Bold = Detected Concentrations

Table 3-3
Chemicals Detected in Multi-Increment Soil Samples
Low Potential Buildings, Load Line 1 and 4
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	G-1 LL4SS-280M-2000-SO 10/21/2009	G-1 LL4SS-280M-2002-SO MI Duplicate	G-1 LL4SS-280M-2003-SO Blind Duplicate	G-1A LL4SS-281M-2004-SO 10/21/2009	G-3 LL4SS-282M-2005-SO 10/21/2009
Metals	Aluminum	mg/kg	**10200**	**10400**	**9150**	**8950**	**9410**
	Antimony	mg/kg	**0.321**	**0.323**	**0.307**	**0.374**	**0.472**
	Arsenic	mg/kg	**14.4 J**	**12.9 J**	**11.5 J**	**15.5 J**	**13.9 J**
	Barium	mg/kg	**46.4 J**	**49.6 J**	**44.8 J**	**45.6 J**	**45.4 J**
	Beryllium	mg/kg	**0.448**	**0.471**	**0.436**	**0.444**	**0.423**
	Cadmium	mg/kg	**1.09 J**	**1.06 J**	**1.07 J**	**1.1 J**	**1.07 J**
	Calcium	mg/kg	**4130 J**	**5700 J**	**4300 J**	**6860 J**	**8100 J**
	Chromium	mg/kg	**20.5**	**20.9**	**22.1**	**18.8**	**17.3**
	Cobalt	mg/kg	**5.41**	**5.27**	**5.67**	**5.06**	**4.52**
	Copper	mg/kg	**22.3**	**21**	**22.9**	**23.5**	**22.2**
	Iron	mg/kg	**21600 J**	**21600 J**	**21300 J**	**21200 J**	**20600 J**
	Lead	mg/kg	**23.4 J**	**19.5 J**	**19.7 J**	**27 J**	**22.7 J**
	Magnesium	mg/kg	**3250 J**	**3220 J**	**3100 J**	**3200 J**	**3620 J**
	Manganese	mg/kg	**363**	**387**	**420**	**416**	**389**
	Mercury	mg/kg	**0.0234 J**	**0.0378 J**	**0.0222 J**	**0.0183 J**	**0.024 J**
	Nickel	mg/kg	**21.5**	**24.2**	**18.1**	**20.7**	**26.6**
	Potassium	mg/kg	**1280 J**	**1250 J**	**1090 J**	**1170 J**	**1110 J**
	Selenium	mg/kg	**0.295 J**	**0.288 J**	**0.21 J**	**0.289 J**	**0.305 J**
	Silver	mg/kg	**R**	**R**	**R**	**R**	**R**
	Sodium	mg/kg	**64.8**	**74**	**60**	**58.1**	**54**
	Thallium	mg/kg	**0.146**	**0.154**	**0.128**	**0.15**	**0.155**
	Vanadium	mg/kg	**18.9**	**18.7**	**17.2**	**16.9**	**18.1**
	Zinc	mg/kg	**79.9**	**76**	**82.3**	**84.9**	**84.2**

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.

Bold = Detected Concentrations

Table 3-4
Chemicals Detected in Multi-Increment Soil Samples
Medium Potential Buildings, Load Line 1 and 3
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	CA-5 LL1SS-517M-3018-SO 10/21/2009	CA-5 LL1SS-517M-3020-SO MI Duplicate	CA-5 LL1SS-517M-3021-SO Blind Duplicate	CA-7 LL1SS-515M-3016-SO 10/21/2009	CA-16 LL1SS-513M-3014-SO 10/21/2009	CA-21 LL1SS-516M-3017-SO 10/21/2009	CB-2 LL1SS-504M-3004-SO 10/20/2009	CB-3 LL1SS-506M-3006-SO 10/20/2009	CB-4B LL1SS-518M-3022-SO 10/21/2009
Explosives	2,4,6-Trinitrotoluene	mg/kg	**4.71 J**	**0.327 J**	0.0989 U	**5.04 J**	0.0987 U	**0.611**	0.097 U	0.0967 U	0.0996 U
	2-Amino-4,6-dinitrotoluene	mg/kg	0.0988 U	0.0977 U	0.0989 U	**0.665**	0.0987 U	0.0987 U	0.097 U	0.0967 U	0.0996 U
	4-Amino-2,6-dinitrotoluene	mg/kg	0.0988 U	0.0977 U	0.0989 U	**0.903**	0.0987 U	0.0987 U	0.097 U	0.0967 U	0.0996 U
	HMX	mg/kg	0.0988 U	0.0977 U	0.0989 U	0.0981 U	0.0987 U	0.0987 U	0.097 U	0.0967 U	0.0996 U
	RDX	mg/kg	0.0988 U	0.0977 U	0.0989 U	0.0981 U	0.0987 U	0.0987 U	0.097 U	0.0967 U	0.0996 U
Metals	Aluminum	mg/kg	**5220**	**5830**	**5370**	**7850**	**8840**	**7110**	**5920**	**3340**	**4670**
	Antimony	mg/kg	**0.363**	**0.284**	**0.281**	**0.375**	**0.301**	**0.355**	**2.74**	**0.284**	**0.45**
	Arsenic	mg/kg	**9.51 J**	**12.9 J**	**10.5 J**	**8.96**	**10.6**	**9.07**	**12.7**	**9.02**	**6.56 J**
	Barium	mg/kg	**32**	**38**	**35**	**59.8**	**65.1**	**55.7**	**48.4**	**19.9**	**46.3**
	Beryllium	mg/kg	**0.308**	**0.352**	**0.381**	**0.509**	**0.544**	**0.446**	**0.35**	**0.205**	**0.404**
	Cadmium	mg/kg	**0.831**	**0.904**	**0.83**	**0.997**	**1.19**	**0.943**	**1.17**	**0.741**	**1.18**
	Calcium	mg/kg	**3980**	**3830**	**6230**	**3650**	**3870**	**3200**	**5200**	**2560**	**5810**
	Chromium	mg/kg	**16.9 J**	**14.2 J**	**14.5 J**	**15 J**	**16.6 J**	**13.6 J**	**13.6 J**	**11.9 J**	**24.5 J**
	Cobalt	mg/kg	**4.43 J**	**4.9 J**	**4.95 J**	**5.98 J**	**6.63 J**	**5.57 J**	**4.18 J**	**3.11 J**	**3.24 J**
	Copper	mg/kg	**16.3**	**16.4**	**16**	**13.2**	**18.8**	**12.6**	**18.7**	**13.8**	**22**
	Iron	mg/kg	**15600 J**	**16300 J**	**14700 J**	**19800 J**	**22500 J**	**18000 J**	**16100 J**	**12800 J**	**12900 J**
	Lead	mg/kg	**15.6 J**	**16.6 J**	**17.2 J**	**23 J**	**23.8 J**	**34.3 J**	**49 J**	**17 J**	**140 J**
	Magnesium	mg/kg	**2090 J**	**2180 J**	**2300 J**	**2060 J**	**2540 J**	**1830 J**	**2300 J**	**1390 J**	**1690 J**
	Manganese	mg/kg	**353 J**	**386 J**	**392 J**	**472 J**	**454 J**	**414 J**	**385 J**	**263 J**	**450 J**
	Mercury	mg/kg	**0.0162 J**	**0.0131 J**	**0.0203 J**	**0.0186 J**	**0.0182 J**	**0.0242 J**	**0.0181 J**	0.00971 U	**0.0378 J**
	Nickel	mg/kg	**14.7**	**15.4**	**13.8**	**17.5**	**21.2**	**18.8**	**20.7**	**14.7**	**21.3**
	Potassium	mg/kg	**406**	**453**	**410**	**563**	**595**	**511**	**571**	**347**	**381**
	Selenium	mg/kg	**0.25 J**	**0.223 J**	**0.252 J**	**0.314 J**	**0.352 J**	**0.344 J**	**0.281 J**	**0.212 J**	**0.256 J**
	Silver	mg/kg	0.178 U	0.177 U	0.179 U	0.189 U	0.177 U	0.185 U	0.174 U	0.185 U	0.173 U
	Sodium	mg/kg	**23.1**	**28.5**	**34.1**	**26.6**	**27.1**	**32.7**	**40**	**17.8 J**	**36**
	Thallium	mg/kg	**0.164**	**0.123**	**0.122**	**0.109 J**	**0.13 J**	**0.131 J**	**0.126 J**	**0.101 J**	**0.0864**
	Vanadium	mg/kg	**11.1 J**	**12 J**	**10.6 J**	**16.1 J**	**17.6 J**	**14.9 J**	**11.7 J**	**7.59 J**	**9.62 J**
	Zinc	mg/kg	**68.3**	**70.6**	**65.7**	**54.2**	**63.6**	**46.4**	**78.6**	**55.1**	**71**

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.

Bold = Detected concentration.

Table 3-4
Chemicals Detected in Multi-Increment Soil Samples
Medium Potential Buildings, Load Line 1 and 3
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	CB-9 LL1SS-511M-3012-SO 10/20/2009	CB-11 LL1SS-519M-3023-SO 10/21/2009	CB-19 LL1SS-503M-3003-SO 10/20/2009	CB-25 LL1SS-507M-3008-SO 10/20/2009	EB-803 (#1) LL3SS-290M-2000-SO 10/21/2009	EB-803 (#2) LL3SS-291M-2001-SO 10/21/2009
Explosives	2,4,6-Trinitrotoluene	mg/kg	0.0995 U	0.0978 U	0.0963 U	**1.74**	0.0976 U	0.0986 U
	2-Amino-4,6-dinitrotoluene	mg/kg	0.0995 U	0.0978 U	0.0963 U	0.097 U	0.0976 U	0.0986 U
	4-Amino-2,6-dinitrotoluene	mg/kg	0.0995 U	0.0978 U	0.0963 U	**0.264**	0.0976 U	0.0986 U
	HMX	mg/kg	0.0995 U	0.0978 U	0.0963 U	**0.298**	0.0976 U	0.0986 U
	RDX	mg/kg	0.0995 U	0.0978 U	0.0963 U	**2.62**	0.0976 U	0.0986 U
Metals	Aluminum	mg/kg	**4730**	**4140**	**5260**	**4120**	**7980**	**9450**
	Antimony	mg/kg	**0.27**	**0.24**	**0.313**	**0.234**	**0.818**	**0.673**
	Arsenic	mg/kg	**9.31**	**8.08 J**	**10.8**	**7.78**	**10.9 J**	**8.12 J**
	Barium	mg/kg	**27.7**	**21.3 J**	**32.7**	**23.4**	**55.7 J**	**61.9 J**
	Beryllium	mg/kg	**0.269**	**0.216**	**0.302**	**0.251**	**0.454**	**0.464**
	Cadmium	mg/kg	**0.813**	**0.716 J**	**0.914**	**0.945**	**0.817 J**	**0.773 J**
	Calcium	mg/kg	**3790**	**1390 J**	**4690**	**6550**	**18000 J**	**9270 J**
	Chromium	mg/kg	**13.4 J**	**14.9**	**15.4 J**	**13.1 J**	**15.8**	**15.2**
	Cobalt	mg/kg	**3.96 J**	**3.33**	**4.21 J**	**3.87 J**	**4.46**	**4.74**
	Copper	mg/kg	**14**	**14.3**	**19.3**	**13.2**	**17.7**	**14**
	Iron	mg/kg	**14600 J**	**13300 J**	**16900 J**	**15700 J**	**16200 J**	**16800 J**
	Lead	mg/kg	**14.1 J**	**9.88 J**	**17.7 J**	**34.6 J**	**15.7 J**	**14.3 J**
	Magnesium	mg/kg	**1920 J**	**1430 J**	**2190 J**	**2830 J**	**2950 J**	**2450 J**
	Manganese	mg/kg	**339 J**	**251**	**362 J**	**309 J**	**520**	**474**
	Mercury	mg/kg	0.00963 U	0.00945 U	**0.0165 J**	0.00991 U	**0.0111 J**	**0.0185 J**
	Nickel	mg/kg	**18.8**	**15.9**	**20**	**16**	**23.8**	**13.1**
	Potassium	mg/kg	**434**	**409 J**	**512**	**579**	**975 J**	**930 J**
	Selenium	mg/kg	**0.143 J**	**0.142 J**	**0.24 J**	**0.137 J**	**0.204 J**	**0.322 J**
	Silver	mg/kg	0.169 U	**R**	0.175 U	0.188 U	**0.281 J**	**R**
	Sodium	mg/kg	**23.7**	**18.9**	**28.7**	**30.9**	**102**	**103**
	Thallium	mg/kg	**0.1 J**	**0.0982**	**0.11 J**	**0.0891 J**	**0.117**	**0.108**
	Vanadium	mg/kg	**10.3 J**	**9.03**	**11.3 J**	**9.53 J**	**14.4**	**17.5**
	Zinc	mg/kg	**51.1**	**49.4**	**71.9**	**77.8**	**68.6**	**54.1**

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.
J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.
R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.
Bold = Detected concentration.

Table 3-4
Chemicals Detected in Multi-Increment Soil Samples
Medium Potential Buildings, Load Line 1 and 3
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	CB-2 LL1SS-504M-3004-SO 10/20/2009	CB-3 LL1SS-506M-3006-SO 10/20/2009	CB-19 LL1SS-503M-3003-SO 10/20/2009
SVOCs	2,4-Dinitrotoluene	ug/kg	**361 J**	95.2 UJ	88.4 UJ
	2,6-Dinitrotoluene	ug/kg	**159 J**	95.2 UJ	88.4 UJ
	Benzo(a)anthracene	ug/kg	**100 J**	95.2 UJ	**99.1 J**
	Benzo(a)pyrene	ug/kg	**98.4 J**	95.2 UJ	88.4 UJ
	Benzo(b)fluoranthene	ug/kg	**97.4 J**	95.2 UJ	88.4 UJ
	Benzo(k)fluoranthene	ug/kg	**109 J**	95.2 UJ	**98.2 J**
	Chrysene	ug/kg	**122 J**	95.2 UJ	**103 J**
	Fluoranthene	ug/kg	**221 J**	95.2 UJ	**221 J**
	Phenanthrene	ug/kg	87.8 UJ	95.2 UJ	**106 J**
	Pyrene	ug/kg	**163 J**	95.2 UJ	**165 J**
PCBs	Aroclor-1254	ug/kg	**--**	**251**	**--**

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

Bold = Detected concentration.

Table 3-5
Chemicals Detected in Multi-Increment Soil Samples
High Potential Buildings, Load Line 1 and Buildings F-15/16
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	CA-6, CA-28 LL1SS-532M-3044-SO 11/03/2009	CA-6A, CA-28A LL1SS-533M-3045-SO 11/03/2009	CA-14 (#1) LL1SS-539M-3055-SO 11/04/2009	CA-14 (#2) LL1SS-540M-3056-SO 11/04/2009	CA-17 (#1) LL1SS-541M-3057-SO 10/29/2009	CA-17 (#2) LL1SS-542M-3058-SO 10/29/2009	CB-4 (#1) LL1SS-520M-3024-SO 11/03/2009	CB-4 (#2) LL1SS-521M-3025-SO 11/03/2009
Expl. / Propellants	1,3,5-Trinitrobenzene	mg/kg	0.0999 U	0.1 U	0.1 U	0.1 U	0.0993 U	0.0985 U	0.0998 U	0.0998 U
	2,4,6-Trinitrotoluene	mg/kg	**1.51**	**0.31**	0.1 U	0.1 U	0.0993 U	0.0985 U	0.0998 U	0.0998 U
	2-Amino-4,6-dinitrotoluene	mg/kg	0.0999 U	0.1 U	0.1 U	0.1 U	0.0993 U	0.0985 U	0.0998 U	0.0998 U
	4-Amino-2,6-dinitrotoluene	mg/kg	0.0999 U	0.1 U	0.1 U	0.1 U	0.0993 U	0.0985 U	0.0998 U	0.0998 U
	HMX	mg/kg	0.0999 U	0.1 U	0.1 U	0.1 U	0.0993 U	0.0985 U	0.0998 U	0.0998 U
	RDX	mg/kg	0.0999 U	0.1 U	0.1 U	0.1 U	0.0993 U	0.0985 U	0.0998 U	0.0998 U
	Nitrocellulose	mg/kg	2.5 U	2.5 U	**18.6**	**7.02**	**15.8 J**	**12.7 J**	2.5 U	2.49 U
Metals	Aluminum	mg/kg	**6280 J**	**5280 J**	**8910 J**	**9200 J**	**8790**	**9940**	**3060 J**	**2850 J**
	Antimony	mg/kg	**0.405 J**	**0.283 J**	**0.27 J**	**0.303 J**	**0.272**	**0.275**	**0.153 J**	**0.11 J**
	Arsenic	mg/kg	**8.76 J**	**9.88 J**	**10.2 J**	**10.1 J**	**7.77**	**8.6**	**5.98 J**	**4.66 J**
	Barium	mg/kg	**39 J**	**30.8 J**	**70 J**	**65 J**	**71.9**	**66.4**	**24 J**	**18 J**
	Beryllium	mg/kg	**0.342**	**0.291**	**0.569**	**0.527**	**0.532**	**0.574**	**0.194**	**0.178**
	Cadmium	mg/kg	**0.868**	**0.871**	**1.16**	**1.16**	**1.58**	**1.11**	**0.612**	**0.556**
	Calcium	mg/kg	**3980**	**3760**	**14400**	**10800**	**7290**	**8110**	**2930**	**2500**
	Chromium	mg/kg	**15.9 J**	**16.7 J**	**16.1 J**	**16.4 J**	**16.5**	**16.7**	**16.1 J**	**21.5 J**
	Cobalt	mg/kg	**4.47**	**4.14**	**5.04**	**5.54**	**7.23**	**7.78**	**2.85**	**2.66**
	Copper	mg/kg	**17.7**	**17.2**	**18.2**	**16.6**	**19.8 J**	**14.3 J**	**10.7**	**46.5**
	Iron	mg/kg	**16900 J**	**16300 J**	**19000 J**	**21000 J**	**18100**	**20900**	**11100 J**	**11000 J**
	Lead	mg/kg	**15.8**	**14.3**	**39.6**	**31**	**50.8 J**	**33.1 J**	**21.9**	**9.84**
	Magnesium	mg/kg	**2100 J**	**2080 J**	**2840 J**	**2640 J**	**2000 J**	**2230 J**	**931 J**	**825 J**
	Manganese	mg/kg	**373 J**	**321 J**	**475 J**	**396 J**	**961**	**1040**	**291 J**	**245 J**
	Mercury	mg/kg	**0.0194 J**	**0.0182 J**	**0.0349 J**	**0.0312 J**	**0.0358 J**	**0.0262 J**	**0.0239 J**	**0.0187 J**
	Nickel	mg/kg	**19.9 J**	**20.1 J**	**21.4 J**	**18.2 J**	**18.7 J**	**15.9 J**	**11.6 J**	**11.4 J**
	Potassium	mg/kg	**520 J**	**524 J**	**945 J**	**870 J**	**672**	**740**	**340 J**	**317 J**
	Selenium	mg/kg	**0.279 J**	**0.266 J**	**0.424 J**	**0.296 J**	**0.32 J**	**0.306 J**	**0.215 J**	**0.164 J**
	Silver	mg/kg	**R**	**R**	**R**	**R**	**R**	**R**	**R**	**R**
	Sodium	mg/kg	**31.8**	**27.8**	**117**	**88.2**	**93.8**	**67.1**	**23.3**	**17.6 J**
	Thallium	mg/kg	**0.104 J**	**0.114 J**	**0.105 J**	**0.102 J**	**0.146 J**	**0.147 J**	**0.0533 J**	**0.0398 J**
	Vanadium	mg/kg	**12.9 J**	**11.1 J**	**16.1 J**	**17.5 J**	**18 J**	**20.7 J**	**7.74 J**	**7.49 J**
	Zinc	mg/kg	**59.9 J**	**66.6 J**	**67.3 J**	**62.5 J**	**83.4 J**	**59.5 J**	**52 J**	**42.3 J**

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.

-- = Not analyzed in this sample.

Bold = Detected concentration.

Table 3-5
Chemicals Detected in Multi-Increment Soil Samples
High Potential Buildings, Load Line 1 and Buildings F-15/16
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	CB-4 (#3) LL1SS-522M-3026-SO 11/03/2009	CB-4VP1 LL1SS-526M-3038-SO 11/03/2009	CB-4WS LL1SS-529M-3041-SO 11/03/2009	CB-4A (#1) LL1SS-523M-3027-SO 10/26/2009	CB-4A (#1) LL1SS-523M-3029-SO MI Duplicate	CB-4A (#1) LL1SS-523M-3030-SO Blind Duplicate	CB-4A (#2) LL1SS-524M-3034-SO 10/26/2009	CB-4A (#3) LL1SS-525M-3036-SO 10/26/2009
Expl. / Propellants	1,3,5-Trinitrobenzene	mg/kg	**0.465**	0.0998 U	0.0999 U	0.0988 U	0.0992 U	0.0987 U	**2.16**	0.0993 U
	2,4,6-Trinitrotoluene	mg/kg	**11**	0.0998 U	**25.5**	0.0988 U	0.0992 U	0.0987 U	**158**	0.0993 U
	2-Amino-4,6-dinitrotoluene	mg/kg	0.1 U	0.0998 U	0.0999 U	0.0988 U	0.0992 U	0.0987 U	**0.853**	0.0993 U
	4-Amino-2,6-dinitrotoluene	mg/kg	**0.344**	0.0998 U	0.0999 U	0.0988 U	0.0992 U	0.0987 U	**1.48**	0.0993 U
	HMX	mg/kg	0.1 U	0.0998 U	0.0999 U	0.0988 U	0.0992 U	0.0987 U	**6.8**	0.0993 U
	RDX	mg/kg	0.1 U	0.0998 U	0.0999 U	0.0988 U	0.0992 U	0.0987 U	**60.3**	0.0993 U
	Nitrocellulose	mg/kg	**4.0 J**	--	**8.32**	2.48 U	2.48 U	2.49 U	**41.3**	2.49 U
Metals	Aluminum	mg/kg	**4900 J**	**8280 J**	**3550 J**	**2940**	**3010**	**2770**	**3530**	**2780**
	Antimony	mg/kg	**0.271 J**	**0.262 J**	**0.203 J**	**0.136**	**0.151**	**0.164**	**0.211**	**0.24**
	Arsenic	mg/kg	**6.79 J**	**9.46 J**	**5.45 J**	**5.4 J**	**6.64 J**	**6.04 J**	**6.96 J**	**5.9 J**
	Barium	mg/kg	**34.1 J**	**55.6 J**	**29 J**	**22.7**	**23.9**	**21.7**	**27.2**	**24.4**
	Beryllium	mg/kg	**0.256**	**0.476**	**0.212**	**0.198**	**0.198**	**0.183**	**0.262**	**0.211**
	Cadmium	mg/kg	**0.782**	**1.45**	**0.85**	**0.729**	**0.691**	**0.611**	**0.952**	**0.749**
	Calcium	mg/kg	**4880**	**9520**	**3290**	**4390**	**4950**	**4610**	**5140**	**3830**
	Chromium	mg/kg	**17.3 J**	**18 J**	**18.6 J**	**17.9**	**14.1**	**13**	**14**	**16.3**
	Cobalt	mg/kg	**3.32**	**6.19**	**3.05**	**2.58**	**2.57**	**2.49**	**2.58**	**2.92**
	Copper	mg/kg	**12.6**	**17.2**	**20.7**	**11.1 J**	**9.71 J**	**9.3 J**	**11.8 J**	**10.9 J**
	Iron	mg/kg	**13100 J**	**20100 J**	**12000 J**	**12900**	**12800**	**11300**	**15700**	**13600**
	Lead	mg/kg	**32.5**	**57.8**	**28.5**	**19.7 J**	**22.6 J**	**20.4 J**	**28.5 J**	**16.1 J**
	Magnesium	mg/kg	**1330 J**	**3530 J**	**1070 J**	**1090 J**	**1230 J**	**1060 J**	**1250 J**	**1130 J**
	Manganese	mg/kg	**278 J**	**514 J**	**291 J**	**431**	**431**	**401**	**519**	**450**
	Mercury	mg/kg	**0.0314 J**	**0.117**	**0.0302 J**	**0.025 J**	**0.0179 J**	**0.0202 J**	**0.0163 J**	0.00978 U
	Nickel	mg/kg	**22 J**	**20.8 J**	**12.7 J**	**10.2 J**	**11.8 J**	**13.8 J**	**12.5 J**	**12.2 J**
	Potassium	mg/kg	**505 J**	**809 J**	**386 J**	**424**	**420**	**418**	**473**	**361**
	Selenium	mg/kg	**0.43 J**	**0.397 J**	**0.155 J**	0.0986 U	0.0926 U	0.0968 U	**0.104 J**	0.0983 UJ
	Silver	mg/kg	**0.184 J**	**R**	**R**	**R**	**R**	**R**	**R**	**R**
	Sodium	mg/kg	**32.2**	**45.7**	**21**	**25.7**	**26.9**	**27.1**	**32.7**	**19.4**
	Thallium	mg/kg	**0.0819 J**	**0.127 J**	**0.0516 J**	**0.106 J**	**0.0704 J**	**0.0585 J**	**0.0685 J**	**0.0604 J**
	Vanadium	mg/kg	**10.3 J**	**17 J**	**8.57 J**	**8.25 J**	**8.04 J**	**7.5 J**	**9.67 J**	**8.36 J**
	Zinc	mg/kg	**49.9 J**	**77 J**	**66.4 J**	**51.7**	**57.2**	**54.8**	**76.7**	**51.6**

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R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.
-- = Not analyzed in this sample.
Bold = Detected concentration.

Table 3-5
Chemicals Detected in Multi-Increment Soil Samples
High Potential Buildings, Load Line 1 and Buildings F-15/16
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	CB-4AVP1 LL1SS-527M-3039-SO 10/27/2009	CB-4AWN LL1SS-530M-3042-SO 10/27/2009	CB-10 (#1) LL1SS-534M-3046-SO 10/27/2009	CB-10 (#2) LL1SS-535M-3048-SO 10/27/2009	CB-10VP1, 2, 3 LL1SS-536M-3049-SO 10/27/2009	CB-13/13A LL1SS-537M-3050-SO 11/04/2009	CB-13/13A LL1SS-537M-3052-SO MI Duplicate	CB-13/13A LL1SS-537M-3053-SO Blind Duplicate
Expl. / Propellants	1,3,5-Trinitrobenzene	mg/kg	0.0977 U	0.0968 U	0.0991 U	0.0981 U	0.0984 U	0.1 U	0.1 U	0.1 U
	2,4,6-Trinitrotoluene	mg/kg	**0.938**	0.0968 U	0.0991 U	0.0981 U	0.0984 U	0.1 U	0.1 U	0.1 U
	2-Amino-4,6-dinitrotoluene	mg/kg	0.0977 U	0.0968 U	0.0991 U	0.0981 U	0.0984 U	0.1 U	0.1 U	0.1 U
	4-Amino-2,6-dinitrotoluene	mg/kg	0.0977 U	0.0968 U	0.0991 U	0.0981 U	0.0984 U	0.1 U	0.1 U	0.1 U
	HMX	mg/kg	0.0977 U	0.0968 U	0.0991 U	0.0981 U	0.0984 U	0.1 U	0.1 U	0.1 U
	RDX	mg/kg	0.0977 U	**0.305**	0.0991 U	0.0981 U	0.0984 U	0.1 U	0.1 U	0.1 U
	Nitrocellulose	mg/kg	**14.1**	2.48 U	2.48 U	2.48 U	--	2.49 U	2.5 U	2.5 U
Metals	Aluminum	mg/kg	**12700**	**3770**	**7390**	**6360**	**8250**	**5070 J**	**5450 J**	**5160 J**
	Antimony	mg/kg	**0.445**	**0.192**	**0.273**	**0.3**	**0.371**	**0.455 J**	**0.232 J**	**0.249 J**
	Arsenic	mg/kg	**9.89**	**12.1**	**8.82**	**8.98**	**5.87**	**10.4 J**	**10.8 J**	**8.78 J**
	Barium	mg/kg	**105**	**25.3**	**37.2**	**44.2**	**56.4**	**31 J**	**30.8 J**	**30.9 J**
	Beryllium	mg/kg	**0.783**	**0.232**	**0.348**	**0.378**	**0.458**	**0.293**	**0.3**	**0.295**
	Cadmium	mg/kg	**1.5**	**0.779**	**0.927**	**0.899**	**1.11**	**0.917**	**0.947**	**0.883**
	Calcium	mg/kg	**4350**	**4440**	**4070**	**4000**	**3710**	**3100**	**3100**	**3680**
	Chromium	mg/kg	**33.9**	**12.9**	**16.4**	**15.4**	**23.5**	**14.5 J**	**15.8 J**	**15.2 J**
	Cobalt	mg/kg	**8.74**	**2.98**	**4.16**	**6.48**	**5.13**	**4.26**	**4.05**	**3.96**
	Copper	mg/kg	**17 J**	**12.1 J**	**17.5 J**	**16.3 J**	**20.8 J**	**18**	**17.8**	**17.2**
	Iron	mg/kg	**21100**	**14100**	**18300**	**17100**	**18200**	**16300 J**	**17000 J**	**15800 J**
	Lead	mg/kg	**20.2**	**14.2**	**14.1**	**24.1**	**31.8**	**13.6**	**13.7**	**12.2**
	Magnesium	mg/kg	**2020 J**	**1400 J**	**2350 J**	**1860 J**	**2010 J**	**1880 J**	**1830 J**	**1900 J**
	Manganese	mg/kg	**1040**	**388**	**330**	**558**	**467**	**356 J**	**332 J**	**338 J**
	Mercury	mg/kg	**0.0551 J**	**0.0531 J**	**0.0158 J**	**0.02 J**	**0.0295 J**	**0.0166 J**	**0.0148 J**	**0.0175 J**
	Nickel	mg/kg	**11.3**	**15.3**	**17.5**	**15.5**	**12.5**	**15.2 J**	**20.6 J**	**16.5 J**
	Potassium	mg/kg	**807**	**467**	**755**	**486**	**690**	**415 J**	**523 J**	**477 J**
	Selenium	mg/kg	**0.108 J**	**0.176 J**	**0.208**	**0.275**	0.101 U	**0.267 J**	**0.255 J**	**0.299 J**
	Silver	mg/kg	**R**	**R**	**R**	**R**	**R**	**R**	**R**	**R**
	Sodium	mg/kg	**48.7**	**23.4**	**36.1**	**28.2**	**31.5**	**20.2**	**26.2**	**28.6**
	Thallium	mg/kg	**0.0739 J**	**0.112 J**	**0.115 J**	**0.119 J**	**0.0795 J**	**0.0954 J**	**0.0923 J**	**0.081 J**
	Vanadium	mg/kg	**25.7 J**	**9.26 J**	**14.9 J**	**14.1 J**	**16.4 J**	**11 J**	**11.6 J**	**10.7 J**
	Zinc	mg/kg	**87.6**	**57.9**	**63.2**	**54.8**	**87**	**59.7 J**	**60.4 J**	**60.9 J**

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-- = Not analyzed in this sample.

Bold = Detected concentration.

Table 3-5
Chemicals Detected in Multi-Increment Soil Samples
High Potential Buildings, Load Line 1 and Buildings F-15/16
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	CB-13B LL1SS-538M-3054-SO 11/04/2009	F-15 F15SS-012M-0500-SO 11/04/2009	F-15 F15SS-012M-0502-SO MI Duplicate	F-15 F15SS-012M-0503-SO Blind Duplicate	F-16 F16SS-008M-0504-SO 11/04/2009
Expl. / Propellants	1,3,5-Trinitrobenzene	mg/kg	0.0998 U	0.0997 U	0.0998 U	0.0999 U	0.1 U
	2,4,6-Trinitrotoluene	mg/kg	0.0998 U	0.0997 U	0.0998 U	0.0999 U	0.1 U
	2-Amino-4,6-dinitrotoluene	mg/kg	0.0998 U	0.0997 U	0.0998 U	0.0999 U	0.1 U
	4-Amino-2,6-dinitrotoluene	mg/kg	0.0998 U	0.0997 U	0.0998 U	0.0999 U	0.1 U
	HMX	mg/kg	0.0998 U	0.0997 U	0.0998 U	0.0999 U	0.1 U
	RDX	mg/kg	0.0998 U	0.0997 U	0.0998 U	0.0999 U	0.1 U
	Nitrocellulose	mg/kg	**9.66**	2.5 U	**2.65 J**	**2.87 J**	2.49 U
Metals	Aluminum	mg/kg	**4350 J**	**12200 J**	**11600 J**	**11600 J**	**9410 J**
	Antimony	mg/kg	**0.293 J**	**0.444 J**	**0.278 J**	**0.441 J**	**0.423 J**
	Arsenic	mg/kg	**12 J**	**10 J**	**9.18 J**	**10 J**	**11.8**
	Barium	mg/kg	**27.7 J**	**76.1 J**	**76.7 J**	**80 J**	**58.4 J**
	Beryllium	mg/kg	**0.266**	**0.588**	**0.578**	**0.592**	**0.495**
	Cadmium	mg/kg	**0.79**	**1.03**	**1.06**	**1.09**	**0.987**
	Calcium	mg/kg	**7600**	**5690**	**5760**	**6150**	**6870**
	Chromium	mg/kg	**13.5 J**	**21.9 J**	**19.8 J**	**18.5 J**	**15.8 J**
	Cobalt	mg/kg	**3.27**	**6.83**	**6.33**	**6.58**	**6.13**
	Copper	mg/kg	**15.5**	**16.9**	**16.3**	**17.2**	**15.9**
	Iron	mg/kg	**15100 J**	**22800 J**	**22600 J**	**23200 J**	**20700 J**
	Lead	mg/kg	**12.4**	**16.9**	**18**	**19.8**	**15.2**
	Magnesium	mg/kg	**2420 J**	**3300 J**	**3190 J**	**3410 J**	**3420 J**
	Manganese	mg/kg	**351 J**	**330 J**	**340 J**	**366 J**	**340 J**
	Mercury	mg/kg	**0.0165 J**	**0.03 J**	**0.0361 J**	**0.0366 J**	**0.0224 J**
	Nickel	mg/kg	**13.5 J**	**30.6 J**	**35.5 J**	**35.3 J**	**29.6 J**
	Potassium	mg/kg	**385 J**	**981 J**	**859 J**	**848 J**	**826 J**
	Selenium	mg/kg	**0.275 J**	**0.367 J**	**0.307 J**	**0.36 J**	**0.408**
	Silver	mg/kg	**R**	**R**	**R**	**R**	**R**
	Sodium	mg/kg	**32.1**	**102**	**85.9**	**91.8**	**54.8**
	Thallium	mg/kg	**0.0822 J**	**0.143 J**	**0.143 J**	**0.155 J**	**0.137 J**
	Vanadium	mg/kg	**9.56 J**	**22 J**	**21.8 J**	**21.6 J**	**16.8 J**
	Zinc	mg/kg	**56.4 J**	**56 J**	**56.5 J**	**58.9 J**	**53.8 J**

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R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.
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Table 3-5
Chemicals Detected in Multi-Increment Soil Samples
High Potential Buildings, Load Line 1 and Buildings F-15/16
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	CB-4 (#1) LL1SS-520M-3024-SO 11/03/2009	CB-4 (#2) LL1SS-521M-3025-SO 11/03/2009	CB-4 (#3) LL1SS-522M-3026-SO 11/03/2009	CB-4A (#1) LL1SS-523M-3027-SO 10/26/2009	CB-4A (#1) LL1SS-523M-3029-SO MI Duplicate	CB-4A (#1) LL1SS-523M-3030-SO Blind Duplicate	CB-4A (#1) LL1SS-523D-3031-SO 10/26/2009	CB-4A (#1) LL1SS-523D-3033-SO Blind Duplicate
VOCs	Carbon disulfide	ug/kg	--	--	--	--	--	--	**0.496 J**	**0.907 J**
	Methylene chloride	ug/kg	--	--	--	--	--	--	**1.83 J**	**6.09**
SVOCs	Anthracene	ug/kg	--	--	--	428 UJ	432 UJ	400 UJ	--	--
	Benzo(a)anthracene	ug/kg	--	--	--	428 UJ	432 UJ	400 UJ	--	--
	Benzo(a)pyrene	ug/kg	--	--	--	428 UJ	432 UJ	400 UJ	--	--
	Benzo(b)fluoranthene	ug/kg	--	--	--	428 UJ	432 UJ	400 UJ	--	--
	Benzo(g,h,i)perylene	ug/kg	--	--	--	428 UJ	432 UJ	400 UJ	--	--
	Benzo(k)fluoranthene	ug/kg	--	--	--	428 UJ	432 UJ	400 UJ	--	--
	Carbazole	ug/kg	--	--	--	428 UJ	432 UJ	400 UJ	--	--
	Chrysene	ug/kg	--	--	--	428 UJ	432 UJ	400 UJ	--	--
	Fluoranthene	ug/kg	--	--	--	428 UJ	432 UJ	400 UJ	--	--
	Indeno(1,2,3-cd)pyrene	ug/kg	--	--	--	428 UJ	432 UJ	400 UJ	--	--
	Phenanthrene	ug/kg	--	--	--	428 UJ	432 UJ	400 UJ	--	--
	Pyrene	ug/kg	--	--	--	428 UJ	432 UJ	400 UJ	--	--
PCBs	Aroclor-1254	ug/kg	**296**	**116**	**495**	**1220**	**1280**	**1200**	--	--
	Aroclor-1260	ug/kg	**144**	**54.5**	**209**	8.62 U	7.88 U	8.23 U	--	--

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UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

-- = Not analyzed in this sample.

Bold = Detected concentration.

Table 3-5
Chemicals Detected in Multi-Increment Soil Samples
High Potential Buildings, Load Line 1 and Buildings F-15/16
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	CB-4A (#2) LL1SS-524M-3034-SO 10/26/2009	CB-4A (#2) LL1SS-524D-3035-SO 10/26/2009	CB-4A (#3) LL1SS-525M-3036-SO 10/26/2009	CB-4A (#3) LL1SS-525D-3037-SO 10/26/2009	CB-10 (#1) LL1SS-534M-3046-SO 10/27/2009	CB-10 (#1) LL1SS-534D-3047-SO 10/27/2009	CB-10 (#2) LL1SS-535M-3048-SO 10/27/2009
VOCs	Carbon disulfide	ug/kg	--	0.461 U	--	0.453 U	--	**1.26 J**	--
	Methylene chloride	ug/kg	--	0.921 U	--	0.905 U	--	**9.34**	--
SVOCs	Anthracene	ug/kg	427 UJ	--	**1080 J**	--	86.7 UJ	--	--
	Benzo(a)anthracene	ug/kg	427 UJ	--	**1870 J**	--	86.7 UJ	--	--
	Benzo(a)pyrene	ug/kg	427 UJ	--	**1400 J**	--	86.7 UJ	--	--
	Benzo(b)fluoranthene	ug/kg	427 UJ	--	**1150 J**	--	86.7 UJ	--	--
	Benzo(g,h,i)Perylene	ug/kg	427 UJ	--	**607 J**	--	86.7 UJ	--	--
	Benzo(k)fluoranthene	ug/kg	427 UJ	--	**1380 J**	--	86.7 UJ	--	--
	Carbazole	ug/kg	427 UJ	--	**666 J**	--	86.7 UJ	--	--
	Chrysene	ug/kg	427 UJ	--	**1780 J**	--	86.7 UJ	--	--
	Fluoranthene	ug/kg	427 UJ	--	**4870 J**	--	86.7 UJ	--	--
	Indeno(1,2,3-cd)pyrene	ug/kg	427 UJ	--	**684 J**	--	86.7 UJ	--	--
	Phenanthrene	ug/kg	427 UJ	--	**3850 J**	--	86.7 UJ	--	--
	Pyrene	ug/kg	427 UJ	--	**3610 J**	--	86.7 UJ	--	--
PCBs	Aroclor-1254	ug/kg	**915**	--	**788**	--	**124**	--	**333**
	Aroclor-1260	ug/kg	8.07 U	--	9.84 U	--	8.53 U	--	8.83 U

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-- = Not analyzed in this sample.

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determined through the comparison of MS/MSD pair or positive laboratory duplicate pair results. The relative percent difference (RPD) between the two results was calculated to establish the precision of the analysis performed compared to the method quality objectives. With the exception of the exceedances noted in Section 3.2, recoveries and RPDs outside of the QC control limits were minor. Overall, acceptable levels of analytical accuracy and precision were achieved.

Aggregate sample collection, preparation, and analytical precision were assessed through the analysis of two types of field duplicates. Field MI duplicates were collected from locations as close as possible to the same increment locations used to collect the primary sample, thereby assessing the precision of individual increment collection plus sample preparation, extraction/digestion, and analysis. Blind MI duplicates were collected from the same area (i.e., building footprint) as the primary sample, but collecting 30 new increment locations, thereby assessing the precision of the MI sampling protocol as applied to a given area, along with sample preparation, extraction/digestion, and analysis. Aggregate precision was determined as the RPD (a) between the primary sample and the Field MI duplicate and (b) between the primary/MI duplicate average and the blind duplicate.

Summaries of the field duplicate results and project-specific precision are presented in Tables 3-6 through 3-10 by parameter group and analyte. The tables list detected chemicals only, and RPDs are shown only when both concentrations are greater than five times the reporting limit, as required by the Facility-Wide QAPP. When one or more concentration is less than five times the reporting limit, the relative difference (the absolute difference divided by the reporting limit) is shown. Acceptable precision, according to the Facility-Wide QAPP, is demonstrated by an RPD of 50% or less, or a relative difference of 100% or less.

The field duplicate tables illustrate that precision for the majority of analytes met the project criteria. Chemicals with exceedances are noted below.

Chemical	Number of Duplicate Pairs Analyzed	Number of Duplicate Pairs Exceeding Criteria	
		MI Duplicates	Blind Duplicates
2,4,6-Trinitrotoluene	5	1	1

3.2.2 Completeness, Representativeness, and Comparability

Completeness is a measure of the amount of valid (i.e., not rejected) data obtained from a measurement system compared to the amount expected to be obtained under ideal conditions. The overall project completeness goal identified in the Facility-Wide QAPP is 90% for each parameter group. As shown in Section 3.2, the percentage of valid results for the soil analyses ranged from 94% to 100%, thus meeting the project goal.

Representativeness expresses the degree to which data accurately and precisely represent actual environmental conditions. Representativeness is a qualitative parameter that depends greatly upon the proper design of the sampling program and proper laboratory protocol. It is evaluated using holding time criteria, which reflect the length of time after sample collection that a sample

Table 3-6
Assessment of Duplicate Samples - Load Line 1 Building CB-4A (Sample #1)
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Reporting Limits	Primary CB-4A (#1) LL1SS-523D-3031-SO 10/26/2009	MI Dup. N/A	Blind Dup. CB-4A (#1) LL1SS-523D-3033-SO 10/26/2009	Average of Primary & MI Dup	RPDs (for conc >5x RL) Primary & MI Duplicate	RPDs (for conc >5x RL) Avg & Blind Dup	Relative Diff. (Conc <5xRL) Primary & MI Duplicate	Relative Diff. (Conc <5xRL) Avg & Blind Dup
VOCs, µg/kg									
Carbon disulfide	5.00	0.496 J		0.907 J	0.496 J			NA	8%
Methylene chloride	5.00	1.83 J		6.09	1.83 J			NA	85%
					Average:	NA	NA	NA	47%

Parameter	Reporting Limits	Primary CB-4A (#1) LL1SS-523M-3027-SO 10/26/2009	MI Dup. LL1SS-523M-3029-SO 10/26/2009	Blind Dup. CB-4A (#1) LL1SS-523M-3030-SO 10/26/2009	Average of Primary & MI Dup	RPDs (for conc >5x RL) Primary & MI Duplicate	RPDs (for conc >5x RL) Avg & Blind Dup	Relative Diff. (Conc <5xRL) Primary & MI Duplicate	Relative Diff. (Conc <5xRL) Avg & Blind Dup
PCBs, µg/kg									
Aroclor-1254	33	**1220**	**1280**	**1280**	**1250**	5%	2%		
					Average:	5%	2%	NA	NA
Pesticides, µg/kg									
No Detections									
					Average:	NA	NA	NA	NA
Explosives/Propellants, mg/kg									
No Detections									
					Average:	NA	NA	NA	NA
Metals, mg/kg									
Aluminum	20	**2940**	**3010**	**2770**	**2975**	2%	7%		
Antimony	0.5	0.136	0.151	0.164	0.1435				
Arsenic	0.5	**5.4** J	**6.64** J	**6.04** J	**6.02** J	21%	0%		
Barium	1.0	**22.7**	**23.9**	**21.7**	**23.3**	5%	7%		
Beryllium	0.1	0.198	0.198	0.183	0.198			0%	15%
Cadmium	0.1	**0.729**	**0.691**	**0.611**	**0.71**	5%	15%	38%	99%
Calcium	10	**4390**	**4950**	**4610**	**4670**	12%	1%		
Chromium	0.5	**17.9**	**14.1**	**13**	**16** J	24%	21%		
Cobalt	0.5	**2.58**	**2.57**	2.5	**2.575**	0%	3%		
Copper	0.5	**11.1** J	**9.71** J	**9.3** J	**10.405** J	13%	11%		
Iron	10	**12900**	**12800**	**11300**	**12850**	1%	13%		
Lead	0.3	**19.7** J	**22.6** J	**20.4** J	**21.15** J	14%	4%		
Magnesium	25	**1090** J	**1230** J	**1060** J	**1160** J	12%	9%		
Manganese	1.0	**431**	**431**	**401**	**431**	0%	7%		
Mercury	0.1	0.025 J	0.0179 J	0.0202 J	0.02145 J			7%	1%
Nickel	1.0	**10.2** J	**11.8** J	**13.8** J	**11** J	15%	23%		
Potassium	50	**424**	**420**	**418**	**422**	1%	1%		
Sodium	20	25.7	26.9	27.1	26.3			6%	4%
Thallium	0.2	0.106 J	0.0704 J	0.0585 J	0.0882 J			18%	15%
Vanadium	1.0	**8.25** J	**8.04** J	**7.5** J	**8.145** J	3%	8%		
Zinc	1.0	**51.7**	**57.2**	**54.8**	**54.45**	10%	1%		
					Average:	9%	8%	14%	27%

Note: Concentrations >5x RL are **bolded**. RPD is applicable only if both concentrations are >5x RL.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.
NA = Not applicable.

RPD exceeds 50%.

Relative difference (absolute difference/reporting limit) exceeds 100%.

Table 3-7
Assessment of Duplicate Samples - Load Line 1 Building CA-5
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Reporting Limits	Primary CA-5 LL1SS-517M-3018-SO 10/21/2009	MI Dup. CA-5 LL1SS-517M-3020-SO 10/21/2009	Blind Dup. CA-5 LL1SS-517M-3021-SO 10/21/2009	Average of Primary & MI Dup	RPDs (for conc >5x RL) Primary & MI Duplicate	RPDs (for conc >5x RL) Avg & Blind Dup	Relative Diff. (Conc <5xRL) Primary & MI Duplicate	Relative Diff. (Conc <5xRL) Avg & Blind Dup
Explosives, mg/kg									
2,4,6-Trinitrotoluene	0.25	**4.71** J	0.327 J	0.0989 U	**2.5185** J			1753%	988%
					Average:	NA	NA	1753%	988%
Metals, mg/kg									
Aluminum	20	**5220**	**5830**	**5370**	**5525**	11%	3%		
Antimony	0.5	0.363	0.284	0.281	0.3235			16%	9%
Arsenic	0.5	**9.51** J	**12.9** J	**10.5** J	**11.205** J	30%	6%		
Barium	1.0	**32**	**38**	**35**	**35**	17%	0%		
Beryllium	0.1	0.308	0.352	0.381	0.33			44%	51%
Cadmium	0.1	**0.831**	**0.904**	**0.83**	**0.8675**	8%	4%		
Calcium	10	**3980**	**3830**	**6230**	**3905**	4%	46%		
Chromium	0.5	**16.9** J	**14.2** J	**14.5** J	**15.55** J	17%	7%		
Cobalt	0.5	**4.43** J	**4.9** J	**4.95** J	**4.665** J	10%	6%		
Copper	0.5	**16.3**	**16.4**	**16**	**16.35**	1%	2%		
Iron	10	**15600** J	**16300** J	**14700** J	**15950** J	4%	8%		
Lead	0.3	**15.6** J	**16.6** J	**17.2** J	**16.1** J	6%	7%		
Magnesium	25	**2090** J	**2180** J	**2300** J	**2135** J	4%	7%		
Manganese	1.0	**353** J	**386** J	**392** J	**369.5** J	9%	6%		
Mercury	0.1	0.0162 J	0.0131 J	0.0203 J	0.01465 J			3%	6%
Nickel	1.0	**14.7**	**15.4**	**13.8**	**15.05**	5%	9%		
Potassium	50	**406**	**453**	**410**	**429.5**	11%	5%		
Selenium	0.5	0.25 J	0.223 J	0.252 J	0.2365 J			5%	3%
Sodium	20	23.1	28.5	34.1	25.8			27%	42%
Thallium	0.2	0.164	0.123	0.122	0.1435			21%	11%
Vanadium	1.0	**11.1** J	**12** J	**10.6** J	**11.55** J	8%	9%		
Zinc	1.0	**68.3**	**70.6**	**65.7**	**69.45**	3%	6%		
					Average:	9%	8%	20%	22%

Note: Concentrations >5x RL are **bolded**. RPD is applicable only if both concentrations are >5x RL.

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.
J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.
NA = Not applicable.

RPD exceeds 50%.
Relative difference (absolute difference/reporting limit) exceeds 100%.

Table 3-8
Assessment of Duplicate Samples - Load Line 1 Building CB-13 and -13A
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Reporting Limits	Primary CB-13/13A LL1SS-537M-3050-SO 11/04/09	MI Dup. CB-13/13A LL1SS-537M-3052-SO 11/04/09	Blind Dup. CB-13/13A LL1SS-537M-3053-SO 11/04/09	Average of Primary & MI Dup	RPDs (for conc >5x RL) Primary & MI Duplicate	RPDs (for conc >5x RL) Avg & Blind Dup	Relative Diff. (Conc <5xRL) Primary & MI Duplicate	Relative Diff. (Conc <5xRL) Avg & Blind Dup
Explosives/Propellants, mg/kg									
No Detections									
					Average:	NA	NA	NA	NA
Metals, mg/kg									
Aluminum	20	**5070** J	**5450** J	**5160** J	**5260** J	7%	2%		
Antimony	0.5	0.455 J	0.232 J	0.249 J	0.3435 J			45%	19%
Arsenic	0.5	**10.4** J	**10.8** J	**8.78** J	**10.6** J	4%	19%		
Barium	1.0	**31** J	**30.8** J	**30.9** J	**30.9** J	1%	0%		
Beryllium	0.1	0.293	0.3	0.295	0.2965			7%	2%
Cadmium	0.1	**0.917**	**0.947**	**0.883**	**0.932**	3%	5%		
Calcium	10	**3100**	**3100**	**3680**	**3100**	0%	17%		
Chromium	0.5	**14.5** J	**15.8** J	**15.2** J	**15.15** J	9%	0%		
Cobalt	0.5	**4.26**	**4.05**	**3.96**	**4.155**	5%	5%		
Copper	0.5	**18**	**17.8**	**17.2**	**17.9**	1%	4%		
Iron	10	**16300** J	**17000** J	**15800** J	**16650** J	4%	5%		
Lead	0.3	**13.6**	**13.7**	**12.2**	**13.65**	1%	11%		
Magnesium	25	**1880** J	**1830** J	**1900** J	**1855** J	3%	2%		
Manganese	1.0	**356** J	**332** J	**338** J	**344** J	7%	2%		
Mercury	0.1	0.0166 J	0.0148 J	0.0175 J	0.0157 J			2%	2%
Nickel	1.0	**15.2** J	**20.6** J	**16.5** J	**17.9** J	30%	8%		
Potassium	50	**415** J	**523** J	**477** J	**469** J	23%	2%		
Selenium	0.5	0.267 J	0.255 J	0.299 J	0.261 J			2%	8%
Sodium	20	20.2	26.2	28.6	23.2			30%	27%
Thallium	0.2	0.0954 J	0.0923 J	0.081 J	0.09385 J			2%	6%
Vanadium	1.0	**11** J	**11.6** J	**10.7** J	**11.3** J	5%	5%		
Zinc	1.0	**59.7** J	**60.4** J	**60.9** J	**60.05** J	1%	1%		
					Average:	6%	6%	15%	11%

Note: Concentrations >5x RL are **bolded**. RPD is applicable only if both concentrations are >5x RL.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

RPD exceeds 50%.

Relative difference (absolute difference/reporting limit) exceeds 100%.

Table 3-9
Assessment of Duplicate Samples - Building F-15
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Reporting Limits	Primary F-15 F15SS-012M-0500-SO 11/04/2009	MI Dup. F-15 F15SS-012M-0502-SO 11/04/2009	Blind Dup. F-15 F15SS-012M-0503-SO 11/04/2009	Average of Primary & MI Dup	RPDs (for conc >5x RL) Primary & MI Duplicate	RPDs (for conc >5x RL) Avg & Blind Dup	Relative Diff. (Conc <5xRL) Primary & MI Duplicate	Relative Diff. (Conc <5xRL) Avg & Blind Dup
Explosives/Propellants, mg/kg									
Nitrocellulose	2	2.5 U	2.65 J	2.87 J	1.95 J			8%	46%
					Average:	NA	NA	8%	46%
Metals, mg/kg									
Aluminum	20	**12200** J	**11600** J	**11600** J	**11900** J	5%	3%		
Antimony	0.5	0.444 J	0.278 J	0.441 J	0.361 J				
Arsenic	0.5	**10** J	**9.18** J	**10** J	**9.59** J	9%	4%		
Barium	1.0	**76.1** J	**76.7** J	**80** J	**76.4** J	1%	5%		
Beryllium	0.1	**0.588**	**0.578**	**0.592**	**0.583**	2%	2%		
Cadmium	0.1	**1.03**	**1.06**	**1.09**	**1.045**	3%	4%		
Calcium	10	**5690**	**5760**	**6150**	**5725**	1%	7%		
Chromium	0.5	**21.9** J	**19.8** J	**18.5** J	**20.85** J	10%	12%		
Cobalt	0.5	**6.83**	**6.33**	**6.58**	**6.58**	8%	0%		
Copper	0.5	**16.9**	**16.3**	**17.2**	**16.6**	4%	4%		
Iron	10	**22800** J	**22600** J	**23200** J	**22700** J	1%	2%		
Lead	0.3	**16.9**	**18**	**19.8**	**17.45**	6%	13%		
Magnesium	25	**3300** J	**3190** J	**3410** J	**3245** J	3%	5%		
Manganese	1.0	**330** J	**340** J	**366** J	**335** J	3%	9%		
Mercury	0.1	0.03 J	0.0361 J	0.0366 J	0.03305 J			6%	4%
Nickel	1.0	**30.6** J	**35.5** J	**35.3** J	**33.05** J	15%	7%		
Potassium	50	**981** J	**859** J	**848** J	**920** J	13%	8%		
Selenium	0.5	0.367 J	0.307 J	0.36 J	0.337 J			12%	5%
Sodium	20	**102**	85.9	91.8	93.95			81%	11%
Thallium	0.2	0.143 J	0.143 J	0.155 J	0.143 J			0%	6%
Vanadium	1.0	**22** J	**21.8** J	**21.6** J	**21.9** J	1%	1%		
Zinc	1.0	**56** J	**56.5** J	**58.9** J	**56.25** J	1%	5%		
					Average:	5%	5%	25%	6%

Note: Concentrations >5x RL are **bolded**. RPD is applicable only if both concentrations are >5x RL.

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.
J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.
NA = Not applicable.

RPD exceeds 50%.
Relative difference (absolute difference/reporting limit) exceeds 100%.

Table 3-10
Assessment of Duplicate Samples - Load Line 4 Building G-1
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Reporting Limits	Primary G-1 LL4SS-280M-2000-SO 10/21/2009	MI Dup. G-1 LL4SS-280M-2002-SO 10/21/2009	Blind Dup. G-1 LL4SS-280M-2003-SO 10/21/2009	Average of Primary & MI Dup	RPDs (for conc >5x RL) Primary & MI Duplicate	RPDs (for conc >5x RL) Avg & Blind Dup	Relative Diff. (Conc <5xRL) Primary & MI Duplicate	Relative Diff. (Conc <5xRL) Avg & Blind Dup
Explosives, mg/kg									
No Detections									
					Average:	NA	NA	NA	NA
Metals, mg/kg									
Aluminum	20	**10200**	**10400**	**9150**	**10300**	2%	12%		
Antimony	0.5	0.321	0.323	0.307	0.322			0%	3%
Arsenic	0.5	**14.4** J	**12.9** J	**11.5** J	**13.65** J	11%	17%		
Barium	1.0	**46.4** J	**49.6** J	**44.8** J	**48** J	7%	7%		
Beryllium	0.1	0.448	0.471	0.436	0.4595			23%	24%
Cadmium	0.1	**1.09** J	**1.06** J	**1.07** J	**1.075** J	3%	0%		
Calcium	10	**4130** J	**5700** J	**4300** J	**4915** J	32%	13%		
Chromium	0.5	**20.5**	**20.9**	**22.1**	**20.7**	2%	7%		
Cobalt	0.5	**5.41**	**5.27**	**5.67**	**5.34**	3%	6%		
Copper	0.5	**22.3**	**21**	**22.9**	**21.65**	6%	6%		
Iron	10	**21600** J	**21600** J	**21300** J	**21600** J	0%	1%		
Lead	0.3	**23.4** J	**19.5** J	**19.7** J	**21.45** J	18%	9%		
Magnesium	25	**3250** J	**3220** J	**3100** J	**3235** J	1%	4%		
Manganese	1.0	**363**	**387**	**420**	**375**	6%	11%		
Mercury	0.1	0.0234 J	0.0378 J	0.0222 J	0.0306 J			14%	8%
Nickel	1.0	**21.5**	**24.2**	**18.1**	**22.85**	12%	23%		
Potassium	50	**1280** J	**1250** J	**1090** J	**1265** J	2%	15%		
Selenium	0.5	0.295 J	0.288 J	0.21 J	0.2915 J			1%	16%
Sodium	20	64.8	74	60	69.4			46%	47%
Thallium	0.2	0.146	0.154	0.128	0.15			4%	11%
Vanadium	1.0	**18.9**	**18.7**	**17.2**	**18.8**	1%	9%		
Zinc	1.0	**79.9**	**76**	**82.3**	**77.95**	5%	5%		
					Average:	7%	9%	18%	21%

Note: Concentrations >5x RL are **bolded**. RPD is applicable only if both concentrations are >5x RL.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.
NA = Not applicable.

RPD exceeds 50%.

Relative difference (absolute difference/reporting limit) exceeds 100%.

or extract remains representative of environmental conditions, and by analysis of laboratory method blanks, trip blanks, and equipment blanks, which are used to identify sources of contamination not associated with environmental conditions. The aggregate sampling and analytical precision determined by the field duplicate results is also an indicator of data representativeness. Holding times were not exceeded for any soil analyses, the blanks associated with project samples were free of contamination, and overall field duplicate precision was acceptable. The weight of evidence leads to the conclusion that representativeness was adequate, sufficient, and acceptable (as opposed to inadequate or unsatisfactory).

Comparability of the project data with historical data sets was satisfied by ensuring that the Facility-Wide QAPP and the project-specific QAPP addendum were followed, proper sampling techniques were used, and appropriate analytical procedures were followed.

The data can be trusted to make remediation decisions.

3.2.3 Sensitivity

Except where affected by sample dilutions, the laboratory detection limits were consistent with those stated in Appendix A of the project-specific QAPP. The undiluted method detection limit (MDL) for nitrocellulose was approximately 2.5 mg/kg for all samples, which exceeds the Appendix A MDL of 2.0 mg/kg. However, the MDL meets the Project Quantitation Level of 5 mg/kg specified in the Facility-Wide QAPP; therefore, this variance has no effect on the useability of the data. For all chemicals with cleanup goals established in the IROD (CUG_{IROD}), the reporting limits were below the cleanup goals.

3.2.4 Data Validation

MEC^x performed data validation for both the primary laboratory (Microbac Laboratories, Inc.) and the QA laboratory (CT Laboratories). The purpose of the validation was to independently determine the useability and bias of the analytical data. Both the Data Validation Report (DVR) and the Chemical Quality Assurance Report (CQAR) are provided in Appendix F.

The only significant concern identified was that the analyses for pesticides performed by Microbac may have missed some target compounds due to the method used by the laboratory to establish retention time windows. MEC^x recommended that CT's data for pesticides be relied upon. A secondary concern identified was that 16.5% of the metals data were not in agreement when the results from the laboratories were compared.

In the DVR for the Microbac data, MEC^x stated that the narrow range of Microbac's retention time windows for pesticides resulted in false negatives (i.e., analytes that were present but reported as nondetect). That determination was made based on the validator's professional judgment and interpretation of SW-846 Method 8000B. However, based on information URS requested and received from the Methods Information Communication Exchange (MICE) Service (operated by Science Applications International Corporation under contract to the USEPA Office of Resource Conservation and Recovery), the retention time windows used by Microbac **were** established in accordance with SW-846 and are acceptable. Microbac's

reporting of nondetects for analytes falling outside that range on one or both analytical columns should be considered valid.

It should also be noted that the data generated by the CT was not subjected to a similar level of validation; therefore, the retention time windows defined by that laboratory are unknown. It is possible, if wider retention time windows were used, that false positives could be present in CT's data. In fact, seven pesticides (including the two pesticides that MEC^x specifies as false negatives in the Microbac data, dieldrin and endrin aldehyde) were reported as detections by CT with percent differences between the primary and confirmation analytical columns exceeding 40%. Since gas chromatography relies entirely on peak retention time for identifying chemicals, large differences between the concentrations quantified from two dissimilar columns can indicate inappropriate peak selection resulting from too-wide retention time windows.

Based on the above information, URS does not agree with MEC^x's assertion that the Microbac data contains false negatives. No additional qualification of the Microbac data is necessary.

MEC^x also reported in the CQAR that 19 pairs of metal results (16.5% of the metal data), primarily Inductively Coupled Plasma (ICP) data, exhibited poor agreement between the two laboratories. The validator stated that interelement correction factors at one or both labs may have been applied incorrectly and recommends the use of performance evaluation (PE) samples to determine whether this is the case. Although analytical error is certainly possible, it should be noted that both labs are accredited through the National Environmental Laboratory Accreditation Program (NELAP) and the Department of Defense Environmental Laboratory Accreditation Program (DoD-ELAP), and have already met stringent performance criteria including the successful analysis of PE samples. Therefore, it is more likely that factors other than improper instrument operation account for the discrepancies. In general, the most likely reason for poor agreement between results for primary and QA soil samples is variability in the sample matrix.

Overall, MEC^x compared primary and QA sample results from 311 pairs of data points, excluding the pesticides. Of those, 29 pairs of positive detections (representing 9.3% of the data) had RPDs exceeding 50%. With over 90% of the data in agreement, the data set as a whole is considered useable with some qualifications, and with the exception of the rejected data points described in Section 3.2.

3.3 MI SAMPLE RESULTS

3.3.1 Low Potential Buildings

Table 3-3 summarizes the chemicals detected at low potential buildings. Eleven primary MI samples were collected from the 0-1 foot bgs interval at eleven building footprints.

Explosives were not detected in any samples from low potential buildings.

Metals were detected in all samples collected from low potential buildings. Most of the TAL metals were detected in every sample. Hexavalent chromium, however, was not detected in any sample.

3.3.2 Medium Potential Buildings

Table 3-4 summarizes the chemicals detected at medium potential buildings. Thirteen primary MI samples were collected from the 0-1 foot bgs interval at 12 building footprints. One discrete VOC sample was collected from one building location.

Explosives were detected in five of the 15 MI samples at concentrations ranging from 0.264 mg/kg to 5.04 mg/kg. The highest concentration was for TNT (at Building CA-7), which was the explosive most frequently detected. No propellants were detected in any samples.

Metals were detected in all samples collected from medium potential buildings. Most of the TAL metals were detected in every sample. Hexavalent chromium, however, was not detected in any samples.

Ten SVOCs were each detected in one or two of the three samples analyzed for SVOCs. Most of the detected SVOCs were polycyclic aromatic hydrocarbons (PAHs). The detected SVOC concentrations ranged from 97.4 µg/kg to 361 µg/kg. The highest detected concentration was for 2,4-dinitrotoluene at Building CB-2.

Aroclor 1254 was detected in the single sample analyzed for PCBs. The concentration of Aroclor 1254 was 251 µg/kg in the sample collected at Building CB-3.

No volatile organics or pesticides were detected in any samples.

3.3.3 High Potential Buildings

Table 3-5 summarizes the chemicals detected at high potential buildings. Twenty-three primary MI samples were collected from the 0-1 foot bgs interval from 21 high potential building footprints. Four discrete primary VOC samples were collected from two building footprints.

Explosives were detected in six of the 29 MI samples with concentrations ranging from 0.305 mg/kg to 158 mg/kg. The highest concentration was for TNT (at Building CB-4A), which was the explosive most frequently detected. The only propellant detected was nitrocellulose, in eleven samples. The nitrocellulose concentrations ranged from 2.65 mg/kg to 41.3 mg/kg.

Metals were detected in all samples collected from high potential buildings. Most of the TAL metals were detected in every sample. Hexavalent chromium, however, was not detected in any sample.

Twelve SVOCs were detected in at least one of the six samples analyzed for SVOCs collected from high potential buildings. Most of the detected SVOCs were polycyclic aromatic hydrocarbons (PAHs). The detected SVOC concentrations ranged from 607 µg/kg to 4870 µg/kg. The highest concentration was for fluoranthene at Building CB-4A.

Aroclors 1254 and/or 1260 were detected in all ten samples analyzed for PCBs. Concentrations ranged from 54.5 µg/kg to 1,280 µg/kg. The highest concentration of PCBs was for Aroclor 1254 in an MI sample collected from Building CB-4A.

Two VOCs (methylene chloride and carbon disulfide) were detected in three of the five samples collected from high potential buildings, at concentrations ranging from 0.496 µg/kg to 9.34 µg/kg. The highest concentration detected was for methylene chloride at Building CB-10.

Pesticides were not detected in any samples.

The analytical data collected during the field screening and MI soil sampling efforts were evaluated by comparison to soil cleanup goals established for RVAAP. The following sections document the comparison process and summarize the results and conclusion of the comparisons.

4.1 ASSUMPTIONS

This current project, to complete sampling of soils below floor slabs and remediation at Load Lines 1, 3, and 4 and additional buildings, is based upon the assumption that there will be a Land Use Control (LUC) in place for Load Lines 1 through 4. The LUC proposed for Load Lines 1 through 4 would restrict the future land use by the Ohio Army National Guard (OHARNG) to "mounted training with no digging", based specifically on the National Guard Trainee receptor, whose exposure assumptions are the most protective. The LUC may be re-evaluated for Load Lines 1 through 4 at a later date if the future planned use changes or if the LUCs are considered differently in order to reduce or change the training restrictions for the OHARNG.

4.2 FIELD SCREENING COMPARISONS

The cleanup goals initially provided for this project are those listed in the IROD (Shaw, 2007). These levels were established based on a National Guard Trainee scenario for those chemicals considered site-related contaminants for Load Lines 1 through 4, including TNT and RDX. The cleanup goals established in the IROD for TNT and RDX are 1,646 mg/kg and 838 mg/kg, respectively.

The statistical analysis of the correlation samples collected during the previous screening effort at Load Lines 2, 3, and 4 indicated neither a significant high or low bias for RDX (URS, 2009a and b). Correlation and regression analyses were performed to statistically test the strength of the relationship between the field screening results and the fixed laboratory results. The regression equation developed for TNT indicated there was significant low bias in the screening samples relative to the fixed lab concentrations. Therefore, there was some potential for a false negative (i.e., determining the cleanup level was met when in fact it was exceeded) if the field screening result was measured between approximately 878 mg/kg and the TNT CUG_{IROD} of 1,646 mg/kg. Therefore, an adjusted cleanup goal (CUG_{adj}) of 878 mg/kg was adopted for this investigation. Any building footprint where a TNT screening result was above 878 mg/kg was covered with plastic. The CUG_{IROD} for field screening comparisons during this investigation remained unchanged for RDX (i.e., 838 mg/kg).

Exceedances of the TNT CUG_{adj} of 878 mg/kg were observed at two locations within the building footprints. The concentrations of TNT exceeded the CUG_{adj} at buildings CB-4AWS (4,520 mg/kg) and CB-4WN (2,630 mg/kg). Table 4-1 summarizes the field screening exceedances. Both of these exceedances occurred in the deepest interval sampled. The deepest sampling interval at CB-4AWS was 2.3 ft; the deepest interval sampled at CB-4WN was 3.5 ft. Both areas exceeding the TNT CUG_{adj} had already been covered with plastic in accordance with the Delivery Order Amendment No. 6. No exceedances of the RDX CUG_{IROD} were observed based upon the field screening results.

Table 4-1
Summary of Field Screening Cleanup Goal Exceedances
Ravenna Army Ammunition Plant
Ravenna, Ohio

Building/Description	Sample ID	TNT, mg/kg (CUG_{adj}: 878 mg/kg)
CB-4AWS/Washout Annex	LL1CB4AWS-SB-031SN-0003-SO	4,520
CB-4WN/Washout Annex	LL1CB4WN-SB-061SN-0005-SO	2,630

4.3 MI COMPARISONS

The results of the MI sampling were used to determine if additional excavation would be required at any of the building locations. Again, the cleanup goals initially provided for this project are those listed in the IROD (Shaw, 2007). However, the sub-slab confirmation (i.e., MI) sampling scheme included more analytes than those included in the IROD. Chemicals detected in confirmation samples but not identified as chemicals of concern in the IROD also need to be considered in the overall decision whether to remediate a given area (USACE, 2009). In addition, the application of cleanup goals on an individual chemical basis does not account for the potential additivity of adverse effects from simultaneous exposures to multiple chemicals. Therefore, the comparison of the MI samples to cleanup goals requires both the use of additional cleanup goals not defined in the IROD and an adjustment to account for the additivity of risk among chemicals.

4.3.1 Additional Values for MI Comparisons

Clean-up goals for chemicals detected in the MI soil samples, but not established in the IROD, were obtained from the draft Facility-Wide Cleanup Goal Report (SAIC, 2008) (i.e., FWCUGs). The FWCUGs used in the MI comparisons are summarized in Tables 4-2 and 4-3. (The initial comparison used a target carcinogenic risk level of 1E-06 and 0.1 for the Hazard Quotient (Section 4.3.3). This is analogous to the comparison used in the selection of chemicals of potential concern in a risk assessment.)

The intended future land use of the load lines is for the National Guard Trainee. Therefore, the FWCUGs established in SAIC (2008) for that receptor population were applied at the additional buildings. There are no calculated FWCUGs in SAIC (2008) for several chemicals detected in the MI samples. For those chemicals, the USEPA's Regional Screening Levels (RSLs) based on a residential land use were used in the first comparison (USEPA, 2009).

No cleanup goals have been calculated for essential nutrients (calcium, magnesium, potassium, sodium) by any methodology. They were not included in the comparisons since they were present at levels that are near or slightly above naturally occurring levels. These chemicals are toxic only at levels that are much higher than those associated with contact at a RVAAP area of

Table 4-2
Cleanup Goals for Screening Chemicals of Potential Concern
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Chemical	Carcinogenic FWCUG (Risk = 10^{-6})	Noncarcinogenic FWCUG (HQ = 0.1)	Background Concentration	Screening Value	Units
Volatiles					
Carbon Disulfide	82,000	--	NA	82,000	ug/kg
Methylene Chloride	11,000	--	NA	11,000	ug/kg
Semivolatiles					
2,4-Dinitrotoluene	13,400	652,000	NA	13,400	ug/kg
2,6-Dinitrotoluene	13,600	331,000	NA	13,600	ug/kg
Anthracene	--	1,700,000 (1)	NA	1,700,000	ug/kg
Benzo(a)anthracene	4,770	--	NA	4,770	ug/kg
Benzo(a)pyrene	477	--	NA	477	ug/kg
Benzo(b)fluoranthene	4,770	--	NA	4,770	ug/kg
Benzo(g,h,i)perylene	--	3,815,000 (2)	NA	3,815,000	ug/kg
Benzo(k)fluoranthene	47,700	--	NA	47,700	ug/kg
Carbazole	--	835,000	NA	835,000	ug/kg
Chrysene	--	477,000	NA	477,000	ug/kg
Fluoranthene	--	5,087,000	NA	5,087,000	ug/kg
Indeno(1,2,3-cd)pyrene	4,770	--	NA	4,770	ug/kg
Phenanthrene	--	1,700,000 (2)	NA	1,700,000	ug/kg
Pyrene	--	3,815,000	NA	3,815,000	ug/kg
PCBs					
Aroclor-1254	3,460	5,490	NA	3,460	ug/kg
Aroclor-1260	3,460	--	NA	3,460	ug/kg
Explosives/Propellants					
1,3,5-Trinitrobenzene	--	16,542	NA	16,542	mg/kg
2,4,6-Trinitrotoluene	464	249	NA	249	mg/kg
2-Amino-4,6-dinitrotoluene	--	124	NA	124	mg/kg
4-Amino-2,6-dinitrotoluene	--	124	NA	124	mg/kg
HMX	--	23,464	NA	23,464	mg/kg
RDX	145	1,711	NA	145	mg/kg
Nitrocellulose	NA	NA	NA	NA	mg/kg
Metals					
Aluminum	--	3,496	17,700	17,700	mg/kg
Antimony	--	175	0.96	175	mg/kg
Arsenic	2.78	114	15.4	15.4	mg/kg
Barium	--	351	88.4	351	mg/kg
Beryllium	--	16	NA	16	mg/kg
Cadmium	10.9	329	NA	10.9	mg/kg
Chromium, trivalent	--	12,000 (1)	NA	12,000	mg/kg
Cobalt	7.03	14	10.4	10.4	mg/kg
Copper	--	25,368	17.7	25,368	mg/kg
Iron	--	184,370	23,100	184,370	mg/kg
Lead	--	400 (1)	NA	400	mg/kg

Table 4-2
Cleanup Goals for Screening Chemicals of Potential Concern
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Chemical	Carcinogenic FWCUG (Risk = 10^{-6})	Noncarcinogenic FWCUG (HQ = 0.1)	Background Concentration	Screening Value	Units
Metals, cont'd.					
Manganese	--	35.1	1,450	1,450	mg/kg
Mercury	--	172	0.036	172	mg/kg
Nickel	--	12,639	21.1	12,639	mg/kg
Selenium	--	39 (1)	NA	39	mg/kg
Silver	--	3,105	NA	3,105	mg/kg
Thallium	--	47.7	NA	47.7	mg/kg
Vanadium	--	2,304	31.1	2,304	mg/kg
Zinc	--	187,269	61.8	187,269	mg/kg

FWCUG = Ravenna Facility Wide Cleanup Goal for a National Guard Trainee (SAIC 2008), where available. These CUGs are draft and subject to change.

(1) Value is the December 2009 residential RSL. RSLs based on a noncancer endpoint are divided by 10 for a hazard quotient of 0.1, except for lead.

(2) The FWCUG for pyrene was used for benzo(g,h,i)perylene and the RSL for anthracene was used for phenanthrene.

Table 4-3
Cleanup Goals for Cumulative Risk and Hazard Determination
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Chemical	Carcinogenic CUG_{IROD} (Risk = 10^{-5})	Noncarcinogenic CUG_{IROD} (HQ = 1)	Units
Benzo(a)pyrene	10,000 (1)	--	µg/kg
Arsenic	31 (1)	1,140 (2)	mg/kg

CUG = Cleanup Goal

-- = No CUG for this endpoint.

(1) CUG_{IROD} for a National Guard Trainee (Shaw 2007).

(2) FWCUG for a National Guard Trainee, based on an excess cancer risk of 1E-5 or a noncancer hazard quotient of 1 (SAIC 2008).

concern (USACE, 2009). It was, therefore, assumed that no remediation of essential nutrients was warranted.

The MI samples were analyzed for both total chromium and hexavalent chromium. Hexavalent chromium was not detected in any samples. Therefore, the total chromium result for each sample was considered representative of trivalent chromium. A FWCUG was not calculated for trivalent chromium since that analyte did not meet the criteria for a facility-wide chemical of concern. The RSL for trivalent chromium was used for comparison purposes.

For three detected chemicals there are no FWCUGs nor RSLs (nitrocellulose, benzo(g,h,i)perylene and phenanthrene). For the two PAHs, surrogate chemicals were selected based on similar chemical structures. The pyrene FWCUG was selected for benzo(g,h,i)perylene and the anthracene RSL was selected for phenanthrene. These surrogates were selected based primarily on the number of benzene rings for each chemical. In general, anthracene is used as a surrogate for PAHs with three rings; and pyrene is used as a surrogate for PAHs with four or more benzene rings. These are the surrogates recommended by Ohio EPA in their Voluntary Action Program supplemental toxicity guidance (OEPA, 1999).

No comparison value for nitrocellulose was developed since there are no available toxicity values and no suitable surrogate for this chemical. Nitrocellulose is evaluated for its explosivity (around 3%) rather than its toxicity.

4.3.2 Accounting for Additivity

Cleanup goals are calculated based on a single chemical basis. That is, each cleanup goal calculation assumes a target cancer risk level that ranges from 10^{-6} to 10^{-4} or a noncancer hazard quotient ranging from 0.1 to 1.0. Exposure, however, can occur to multiple chemicals simultaneously. To account for potential additive effects, a "Sum of Ratios" approach was employed (USACE, 2009). In this approach a risk ratio for each chemical, for either cancer or noncancer (or both, depending on the chemical's toxic effects) is calculated. Mathematically, the risk ratio is the exposure point concentration (EPC) divided by the comparison value. Risk ratios are then summed for all chemicals detected at a particular area (i.e., exposure area). If the sum of the risk ratios is equal to or less than one, it is concluded that cleanup goals are met and no remediation is warranted. Noncancer risk ratios are summed by similar toxic endpoint for each chemical since the target hazard index is applicable only on a similar target organ or mechanism basis.

Lead is an exception to this procedure. Because of its unique toxicological properties (a noncarcinogen without a threshold), the hazard quotient approach is not used in developing a cleanup goal. Rather, an acceptable blood lead level and associated soil concentration are determined via a modeling of environmental exposures and their effect on blood lead level. Lead, therefore, was not included in the multiple chemical adjustment evaluation.

4.3.3 Comparison Methodology

The comparisons were completed in a two-step process as described in USACE (2009). The first step was a screening comparison of each chemical detected in each MI sample against the

FWCUG or RSL, using a target cancer risk level of 10^{-6} or a target hazard quotient of 0.1, whichever is lower. If the lower value was less than the facility-wide background number for a given metal, then the background value was adopted as the FWCUG (Table 4-2).

Chemical concentrations that passed this screening step were not considered chemicals of concern and were not evaluated further (i.e., it was assumed these chemicals are not present at a level that warrants remediation). Chemicals that failed the screening step at any MI sampling location were retained for further evaluation in a second comparison. Tables 4-4 through 4-6 summarize the chemicals detected in each MI sample, the comparison to the appropriate value, and those locations and chemicals where a second comparison was warranted.

The second comparison included the adjustment for additivity. For this comparison, the CUG_{IROD} values were used and, where a CUG_{IROD} was not available, the FWCUGs for the National Guard trainee (Table 4-3). Each MI sample, which represented one exposure area, was evaluated by calculating both cancer and noncancer risk ratios, using cleanup goals based on a target cancer risk level of 10^{-5} and a hazard quotient of 1.0, separated by toxic endpoint, if necessary. The EPC for the risk ratio calculation was the MI sample result as reported by the laboratory. Table 4-7 summarizes the second comparison.

4.3.4 Results of MI Comparisons

The first comparison of MI analytical results resulted in the identification of two chemicals selected as chemicals of concern (Tables 4-4 through 4-6). These chemicals are benzo(a)pyrene and arsenic, each of which exceeded their respective screening value at one location. Arsenic was above its FWCUG at Building G-1A (Load Line 4) and benzo(a)pyrene was above its FWCUG at Building CB-4A (Load Line 1).

Table 4-7 summarizes the second comparison using the sum of risk ratios approach. For each of the buildings, only one chemical was detected above the first comparison screening values. There were no exceedances in the second comparison for these exposure areas.

Nitrocellulose was detected in 11 sub-slab MI samples. The highest detected concentration was 41.3 mg/kg (at Building CB-4A). Without an appropriate cleanup level, no comparison to determine whether remediation is warranted can be completed. Nitrocellulose is generally considered a concern for its reactivity, not toxicity. If concentrations of nitrocellulose are high enough, such that it is reactive, then the concern is for safety rather than health effects. Nitrocellulose demonstrates reactivity at concentrations above 100,000 mg/kg. The levels of nitrocellulose detected below slabs at Load Line 1 are orders of magnitude below its characteristic reactivity. The levels of nitrocellulose detected during this effort, therefore, do not warrant remediation.

Table 4-4
Screening of Explosives, Propellants, and Metals Detected in Multi-Increment Soil Samples
Load Line 1 and Additional Buildings
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	Screening Value[(1)]	1-51, 1-51A LL1SS-509M-3010-SO 10/20/2009	CA-5 LL1SS-517M-3018-SO 10/21/2009	CA-5 LL1SS-517M-3020-SO MI Duplicate	CA-5 LL1SS-517M-3021-SO Blind Duplicate	CA-6, CA-28 LL1SS-532M-3044-SO 11/03/2009	CA-6A, CA-28A LL1SS-533M-3045-SO 11/03/2009	CA-7 LL1SS-515M-3016-SO 10/21/2009	CA-14 (#1) LL1SS-539M-3055-SO 11/04/2009
Explosives/Propellants	1,3,5-Trinitrobenzene	mg/kg	16,542	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 U	0.1 U
	2,4,6-Trinitrotoluene	mg/kg	249	0.098 U	4.71 J	0.327 J	0.0989 U	1.51	0.31	5.04 J	0.1 U
	2-Amino-4,6-dinitrotoluene	mg/kg	124	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.665	0.1 U
	4-Amino-2,6-dinitrotoluene	mg/kg	124	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.903	0.1 U
	HMX	mg/kg	23,464	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 U	0.1 U
	RDX	mg/kg	145	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 U	0.1 U
	Nitrocellulose	mg/kg	NA	- -	- -	- -	- -	2.5 U	2.5 U	- -	18.6
Metals	Aluminum	mg/kg	17,700	5270	5220	5830	5370	6280 J	5280 J	7850	8910 J
	Antimony	mg/kg	175	0.297	0.363	0.284	0.281	0.405 J	0.283 J	0.375	0.27 J
	Arsenic	mg/kg	15	9.45	9.51 J	12.9 J	10.5 J	8.76 J	9.88 J	8.96	10.2 J
	Barium	mg/kg	351	40.9	32	38	35	39 J	30.8 J	59.8	70 J
	Beryllium	mg/kg	16	0.393	0.308	0.352	0.381	0.342	0.291	0.509	0.569
	Cadmium	mg/kg	11	0.835	0.831	0.904	0.83	0.868	0.871	0.997	1.16
	Calcium	mg/kg	NA	9840	3980	3830	6230	3980	3760	3650	14400
	Chromium	mg/kg	12,000	10.1 J	16.9 J	14.2 J	14.5 J	15.9 J	16.7 J	15 J	16.1 J
	Cobalt	mg/kg	10	3.59 J	4.43 J	4.9 J	4.95 J	4.47	4.14	5.98 J	5.04
	Copper	mg/kg	25,368	14.2	16.3	16.4	16	17.7	17.2	13.2	18.2
	Iron	mg/kg	184,370	14700 J	15600 J	16300 J	14700 J	16900 J	16300 J	19800 J	19000 J
	Lead	mg/kg	400	18.1 J	15.6 J	16.6 J	17.2 J	15.8	14.3	23 J	39.6
	Magnesium	mg/kg	NA	2150 J	2090 J	2180 J	2300 J	2100 J	2080 J	2060 J	2840 J
	Manganese	mg/kg	1,450	395 J	353 J	386 J	392 J	373 J	321 J	472 J	475 J
	Mercury	mg/kg	172	0.0116 J	0.0162 J	0.0131 J	0.0203 J	0.0194 J	0.0182 J	0.0186 J	0.0349 J
	Nickel	mg/kg	12,639	15.4	14.7	15.4	13.8	19.9 J	20.1 J	17.5	21.4 J
	Potassium	mg/kg	NA	458	406	453	410	520 J	524 J	563	945 J
	Selenium	mg/kg	39	0.213 J	0.25 J	0.223 J	0.252 J	0.279 J	0.266 J	0.314 J	0.424 J
	Silver	mg/kg	3,105	0.175 J	0.178 U	0.177 U	0.179 U	R	R	0.189 U	R
	Sodium	mg/kg	NA	51	23.1	28.5	34.1	31.8	27.8	26.6	117
	Thallium	mg/kg	48	0.0858 J	0.164	0.123	0.122	0.104 J	0.114 J	0.109 J	0.105 J
	Vanadium	mg/kg	2,304	10 J	11.1 J	12 J	10.6 J	12.9 J	11.1 J	16.1 J	16.1 J
	Zinc	mg/kg	187,269	79.2	68.3	70.6	65.7	59.9 J	66.6 J	54.2	67.3 J

(1) `

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.
J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.
UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

NA = Not available

-- = Not analyzed in this sample.

Indicates detected concentration exceeds screening value in at least one sample. Sample result exceeding screening value is also shaded.

Table 4-4
Screening of Explosives, Propellants, and Metals Detected in Multi-Increment Soil Samples
Load Line 1 and Additional Buildings
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	Screening Value[1]	CA-14 (#2) LL1SS-540M-3056-SO 11/04/2009	CA-15 LL1SS-514M-3015-SO 10/21/2009	CA-16 LL1SS-513M-3014-SO 10/21/2009	CA-17 (#1) LL1SS-541M-3057-SO 10/29/2009	CA-17 (#2) LL1SS-542M-3058-SO 10/29/2009	CA-21 LL1SS-516M-3017-SO 10/21/2009	CB-2 LL1SS-504M-3004-SO 10/20/2009	CB-3 LL1SS-506M-3006-SO 10/20/2009
Explosives/Propellants	1,3,5-Trinitrobenzene	mg/kg	16,542	0.1 U	0.0999 U	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U
	2,4,6-Trinitrotoluene	mg/kg	249	0.1 U	0.0999 U	0.0987 U	0.0993 U	0.0985 U	0.611	0.097 U	0.0967 U
	2-Amino-4,6-dinitrotoluene	mg/kg	124	0.1 U	0.0999 U	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U
	4-Amino-2,6-dinitrotoluene	mg/kg	124	0.1 U	0.0999 U	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U
	HMX	mg/kg	23,464	0.1 U	0.0999 U	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U
	RDX	mg/kg	145	0.1 U	0.0999 U	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U
	Nitrocellulose	mg/kg	NA	7.02	- -	- -	15.8 J	12.7 J	- -	- -	2.47 U
Metals	Aluminum	mg/kg	17,700	9200 J	6460	8840	8790	9940	7110	5920	3340
	Antimony	mg/kg	175	0.303 J	0.269	0.301	0.272	0.275	0.355	2.74	0.284
	Arsenic	mg/kg	15	10.1 J	10.4	10.6	7.77	8.6	9.07	12.7	9.02
	Barium	mg/kg	351	65 J	44.4	65.1	71.9	66.4	55.7	48.4	19.9
	Beryllium	mg/kg	16	0.527	0.461	0.544	0.532	0.574	0.446	0.35	0.205
	Cadmium	mg/kg	11	1.16	0.892	1.19	1.58	1.11	0.943	1.17	0.741
	Calcium	mg/kg	NA	10800	7700	3870	7290	8110	3200	5200	2560
	Chromium	mg/kg	12,000	16.4 J	17.6 J	16.6 J	16.5	16.7	13.6 J	13.6 J	11.9 J
	Cobalt	mg/kg	10	5.54	4.35 J	6.63 J	7.23	7.78	5.57 J	4.18 J	3.11 J
	Copper	mg/kg	25,368	16.6	14.8	18.8	19.8 J	14.3 J	12.6	18.7	13.8
	Iron	mg/kg	184,370	21000 J	15300 J	22500 J	18100	20900	18000 J	16100 J	12800 J
	Lead	mg/kg	400	31	33.6 J	23.8 J	50.8 J	33.1 J	34.3 J	49 J	17 J
	Magnesium	mg/kg	NA	2640 J	2160 J	2540 J	2000 J	2230 J	1830 J	2300 J	1390 J
	Manganese	mg/kg	1,450	396 J	404 J	454 J	961	1040	414 J	385 J	263 J
	Mercury	mg/kg	172	0.0312 J	0.0167 J	0.0182 J	0.0358 J	0.0262 J	0.0242 J	0.0181 J	0.00971 U
	Nickel	mg/kg	12,639	18.2 J	21.9	21.2	18.7 J	15.9 J	18.8	20.7	14.7
	Potassium	mg/kg	NA	870 J	582	595	672	740	511	571	347
	Selenium	mg/kg	39	0.296 J	0.282 J	0.352 J	0.32 J	0.306 J	0.344 J	0.281 J	0.212 J
	Silver	mg/kg	3,105	R	0.179 U	0.177 U	R	R	0.185 U	0.174 U	0.185 U
	Sodium	mg/kg	NA	88.2	43.7	27.1	93.8	67.1	32.7	40	17.8 J
	Thallium	mg/kg	48	0.102 J	0.122 J	0.13 J	0.146 J	0.147 J	0.131 J	0.126 J	0.101 J
	Vanadium	mg/kg	2,304	17.5 J	12.4 J	17.6 J	18 J	20.7 J	14.9 J	11.7 J	7.59 J
	Zinc	mg/kg	187,269	62.5 J	66.8	63.6	83.4 J	59.5 J	46.4	78.6	55.1

(1) Cleanup goal based on an excess cancer risk of 1E-6 or a noncancer hazard quotient of 0.1. See Table 4-1.

NA = Not available

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

-- = Not analyzed in this sample.

Indicates detected concentration exceeds screening value in at least one sample. Sample result exceeding screening value is also shaded.

Table 4-4
Screening of Explosives, Propellants, and Metals Detected in Multi-Increment Soil Samples
Load Line 1 and Additional Buildings
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	Screening Value[1]	CB-4 (#1) LL1SS-520M-3024-SO 11/03/2009	CB-4 (#2) LL1SS-521M-3025-SO 11/03/2009	CB-4 (#3) LL1SS-522M-3026-SO 11/03/2009	CB-4VP1 LL1SS-526M-3038-SO 11/03/2009	CB-4WS LL1SS-529M-3041-SO 11/03/2009	CB-4A (#1) LL1SS-523M-3027-SO 10/26/2009	CB-4A (#1) LL1SS-523M-3029-SO MI Duplicate	CB-4A (#1) LL1SS-523M-3030-SO Blind Duplicate
Explosives/Propellants	1,3,5-Trinitrobenzene	mg/kg	16,542	0.0998 U	0.0998 U	0.465	0.0998 U	0.0999 U	0.0988 U	0.0992 U	0.0987 U
	2,4,6-Trinitrotoluene	mg/kg	249	0.0998 U	0.0998 U	11	0.0998 U	25.5	0.0988 U	0.0992 U	0.0987 U
	2-Amino-4,6-dinitrotoluene	mg/kg	124	0.0998 U	0.0998 U	0.1 U	0.0998 U	0.0999 U	0.0988 U	0.0992 U	0.0987 U
	4-Amino-2,6-dinitrotoluene	mg/kg	124	0.0998 U	0.0998 U	0.344	0.0998 U	0.0999 U	0.0988 U	0.0992 U	0.0987 U
	HMX	mg/kg	23,464	0.0998 U	0.0998 U	0.1 U	0.0998 U	0.0999 U	0.0988 U	0.0992 U	0.0987 U
	RDX	mg/kg	145	0.0998 U	0.0998 U	0.1 U	0.0998 U	0.0999 U	0.0988 U	0.0992 U	0.0987 U
	Nitrocellulose	mg/kg	NA	2.5 U	2.49 U	4 J	- -	8.32	2.48 U	2.48 U	2.49 U
Metals	Aluminum	mg/kg	17,700	3060 J	2850 J	4900 J	8280 J	3550 J	2940	3010	2770
	Antimony	mg/kg	175	0.153 J	0.11 J	0.271 J	0.262 J	0.203 J	0.136	0.151	0.164
	Arsenic	mg/kg	15	5.98 J	4.66 J	6.79 J	9.46 J	5.45 J	5.4 J	6.64 J	6.04 J
	Barium	mg/kg	351	24 J	18 J	34.1 J	55.6 J	29 J	22.7	23.9	21.7
	Beryllium	mg/kg	16	0.194	0.178	0.256	0.476	0.212	0.198	0.198	0.183
	Cadmium	mg/kg	11	0.612	0.556	0.782	1.45	0.85	0.729	0.691	0.611
	Calcium	mg/kg	NA	2930	2500	4880	9520	3290	4390	4950	4610
	Chromium	mg/kg	12,000	16.1 J	21.5 J	17.3 J	18 J	18.6 J	17.9	14.1	13
	Cobalt	mg/kg	10	2.85	2.66	3.32	6.19	3.05	2.58	2.57	2.49
	Copper	mg/kg	25,368	10.7	46.5	12.6	17.2	20.7	11.1 J	9.71 J	9.3 J
	Iron	mg/kg	184,370	11100 J	11000 J	13100 J	20100 J	12000 J	12900	12800	11300
	Lead	mg/kg	400	21.9	9.84	32.5	57.8	28.5	19.7 J	22.6 J	20.4 J
	Magnesium	mg/kg	NA	931 J	825 J	1330 J	3530 J	1070 J	1090 J	1230 J	1060 J
	Manganese	mg/kg	1,450	291 J	245 J	278 J	514 J	291 J	431	431	401
	Mercury	mg/kg	172	0.0239 J	0.0187 J	0.0314 J	0.117	0.0302 J	0.025 J	0.0179 J	0.0202 J
	Nickel	mg/kg	12,639	11.6 J	11.4 J	22 J	20.8 J	12.7 J	10.2 J	11.8 J	13.8 J
	Potassium	mg/kg	NA	340 J	317 J	505 J	809 J	386 J	424	420	418
	Selenium	mg/kg	39	0.215 J	0.164 J	0.43 J	0.397 J	0.155 J	0.0986 U	0.0926 U	0.0968 U
	Silver	mg/kg	3,105	R	R	0.184 J	R	R	R	R	R
	Sodium	mg/kg	NA	23.3	17.6 J	32.2	45.7	21	25.7	26.9	27.1
	Thallium	mg/kg	48	0.0533 J	0.0398 J	0.0819 J	0.127 J	0.0516 J	0.106 J	0.0704 J	0.0585 J
	Vanadium	mg/kg	2,304	7.74 J	7.49 J	10.3 J	17 J	8.57 J	8.25 J	8.04 J	7.5 J
	Zinc	mg/kg	187,269	52 J	42.3 J	49.9 J	77 J	66.4 J	51.7	57.2	54.8

(1) Cleanup goal based on an excess cancer risk of 1E-6 or a noncancer hazard quotient of 0.1. See Table 4-1.

NA = Not available

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

-- = Not analyzed in this sample.

Indicates detected concentration exceeds screening value in at least one sample. Sample result exceeding screening value is also shaded.

Table 4-4
Screening of Explosives, Propellants, and Metals Detected in Multi-Increment Soil Samples
Load Line 1 and Additional Buildings
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	Screening Value[(1)]	CB-4A (#2) LL1SS-524M-3034-SO 10/26/2009	CB-4A (#3) LL1SS-525M-3036-SO 10/26/2009	CB-4AVP1 LL1SS-527M-3039-SO 10/27/2009	CB-4AWN LL1SS-530M-3042-SO 10/27/2009	CB-4B LL1SS-518M-3022-SO 10/21/2009	CB-8 LL1SS-508M-3009-SO 10/20/2009	CB-9 LL1SS-511M-3012-SO 10/20/2009	CB-10 (#1) LL1SS-534M-3046-SO 10/27/2009
Explosives/Propellants	1,3,5-Trinitrobenzene	mg/kg	16,542	2.16	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U	0.0995 U	0.0991 U
	2,4,6-Trinitrotoluene	mg/kg	249	158	0.0993 U	0.938	0.0968 U	0.0996 U	0.0981 U	0.0995 U	0.0991 U
	2-Amino-4,6-dinitrotoluene	mg/kg	124	0.853	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U	0.0995 U	0.0991 U
	4-Amino-2,6-dinitrotoluene	mg/kg	124	1.48	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U	0.0995 U	0.0991 U
	HMX	mg/kg	23,464	6.8	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U	0.0995 U	0.0991 U
	RDX	mg/kg	145	60.3	0.0993 U	0.0977 U	0.305	0.0996 U	0.0981 U	0.0995 U	0.0991 U
	Nitrocellulose	mg/kg	NA	41.3	2.49 U	14.1	2.48 U	--	--	--	2.48 U
Metals	Aluminum	mg/kg	17,700	3530	2780	12700	3770	4670	3830	4730	7390
	Antimony	mg/kg	175	0.211	0.24	0.445	0.192	0.45	0.26	0.27	0.273
	Arsenic	mg/kg	15	6.96 J	5.9 J	9.89	12.1	6.56 J	9.38	9.31	8.82
	Barium	mg/kg	351	27.2	24.4	105	25.3	46.3	37.3	27.7	37.2
	Beryllium	mg/kg	16	0.262	0.211	0.783	0.232	0.404	0.264	0.269	0.348
	Cadmium	mg/kg	11	0.952	0.749	1.5	0.779	1.18	0.791	0.813	0.927
	Calcium	mg/kg	NA	5140	3830	4350	4440	5810	7820	3790	4070
	Chromium	mg/kg	12,000	14	16.3	33.9	12.9	24.5 J	10.5 J	13.4 J	16.4
	Cobalt	mg/kg	10	2.58	2.92	8.74	2.98	3.24 J	2.87 J	3.96 J	4.16
	Copper	mg/kg	25,368	11.8 J	10.9 J	17 J	12.1 J	22	9.37	14	17.5 J
	Iron	mg/kg	184,370	15700	13600	21100	14100	12900 J	11200 J	14600 J	18300
	Lead	mg/kg	400	28.5 J	16.1 J	20.2	14.2	140 J	36.8 J	14.1 J	14.1
	Magnesium	mg/kg	NA	1250 J	1130 J	2020 J	1400 J	1690 J	1440 J	1920 J	2350 J
	Manganese	mg/kg	1,450	519	450	1040	388	450 J	327 J	339 J	330
	Mercury	mg/kg	172	0.0163 J	0.00978 U	0.0551 J	0.0531 J	0.0378 J	0.0126 J	0.00963 U	0.0158 J
	Nickel	mg/kg	12,639	12.5 J	12.2 J	11.3	15.3	21.3	15.3	18.8	17.5
	Potassium	mg/kg	NA	473	361	807	467	381	404	434	755
	Selenium	mg/kg	39	0.104 J	0.0983 UJ	0.108 J	0.176 J	0.256 J	0.274 J	0.143 J	0.208
	Silver	mg/kg	3,105	R	R	R	R	0.173 U	0.192 U	0.169 U	R
	Sodium	mg/kg	NA	32.7	19.4	48.7	23.4	36	38.3	23.7	36.1
	Thallium	mg/kg	48	0.0685 J	0.0604 J	0.0739 J	0.112 J	0.0864	0.078 J	0.1 J	0.115 J
	Vanadium	mg/kg	2,304	9.67 J	8.36 J	25.7 J	9.26 J	9.62 J	7.94 J	10.3 J	14.9 J
	Zinc	mg/kg	187,269	76.7	51.6	87.6	57.9	71	61.7	51.1	63.2

(1) Cleanup goal based on an excess cancer risk of 1E-6 or a noncancer hazard quotient of 0.1. See Table 4-1.

NA = Not available

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

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Table 4-4
Screening of Explosives, Propellants, and Metals Detected in Multi-Increment Soil Samples
Load Line 1 and Additional Buildings
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	Screening Value[(1)]	CB-10 (#2) LL1SS-535M-3048-SO 10/27/2009	CB-10VP1, 2, 3 LL1SS-536M-3049-SO 10/27/2009	CB-11 LL1SS-519M-3023-SO 10/21/2009	CB-13/13A LL1SS-537M-3050-SO 11/04/2009	CB-13/13A LL1SS-537M-3052-SO MI Duplicate	CB-13/13A LL1SS-537M-3053-SO Blind Duplicate	CB-13B LL1SS-538M-3054-SO 11/04/2009	CB-19 LL1SS-503M-3003-SO 10/20/2009
Explosives/Propellants	1,3,5-Trinitrobenzene	mg/kg	16,542	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
	2,4,6-Trinitrotoluene	mg/kg	249	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
	2-Amino-4,6-dinitrotoluene	mg/kg	124	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
	4-Amino-2,6-dinitrotoluene	mg/kg	124	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
	HMX	mg/kg	23,464	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
	RDX	mg/kg	145	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
	Nitrocellulose	mg/kg	NA	2.48 U	- -	- -	2.49 U	2.5 U	2.5 U	9.66	- -
Metals	Aluminum	mg/kg	17,700	6360	8250	4140	5070 J	5450 J	5160 J	4350 J	5260
	Antimony	mg/kg	175	0.3	0.371	0.24	0.455 J	0.232 J	0.249 J	0.293 J	0.313
	Arsenic	mg/kg	15	8.98	5.87	8.08 J	10.4 J	10.8 J	8.78 J	12 J	10.8
	Barium	mg/kg	351	44.2	56.4	21.3 J	31 J	30.8 J	30.9 J	27.7 J	32.7
	Beryllium	mg/kg	16	0.378	0.458	0.216	0.293	0.3	0.295	0.266	0.302
	Cadmium	mg/kg	11	0.899	1.11	0.716 J	0.917	0.947	0.883	0.79	0.914
	Calcium	mg/kg	NA	4000	3710	1390 J	3100	3100	3680	7600	4690
	Chromium	mg/kg	12,000	15.4	23.5	14.9	14.5 J	15.8 J	15.2 J	13.5 J	15.4 J
	Cobalt	mg/kg	10	6.48	5.13	3.33	4.26	4.05	3.96	3.27	4.21 J
	Copper	mg/kg	25,368	16.3 J	20.8 J	14.3	18	17.8	17.2	15.5	19.3
	Iron	mg/kg	184,370	17100	18200	13300 J	16300 J	17000 J	15800 J	15100 J	16900 J
	Lead	mg/kg	400	24.1	31.8	9.88 J	13.6	13.7	12.2	12.4	17.7 J
	Magnesium	mg/kg	NA	1860 J	2010 J	1430 J	1880 J	1830 J	1900 J	2420 J	2190 J
	Manganese	mg/kg	1,450	558	467	251	356 J	332 J	338 J	351 J	362 J
	Mercury	mg/kg	172	0.02 J	0.0295 J	0.00945 U	0.0166 J	0.0148 J	0.0175 J	0.0165 J	0.0165 J
	Nickel	mg/kg	12,639	15.5	12.5	15.9	15.2 J	20.6 J	16.5 J	13.5 J	20
	Potassium	mg/kg	NA	486	690	409 J	415 J	523 J	477 J	385 J	512
	Selenium	mg/kg	39	0.275	0.101 U	0.142 J	0.267 J	0.255 J	0.299 J	0.275 J	0.24 J
	Silver	mg/kg	3,105	R	R	R	R	R	R	R	0.175 U
	Sodium	mg/kg	NA	28.2	31.5	18.9	20.2	26.2	28.6	32.1	28.7
	Thallium	mg/kg	48	0.119 J	0.0795 J	0.0982	0.0954 J	0.0923 J	0.081 J	0.0822 J	0.11 J
	Vanadium	mg/kg	2,304	14.1 J	16.4 J	9.03	11 J	11.6 J	10.7 J	9.56 J	11.3 J
	Zinc	mg/kg	187,269	54.8	87	49.4	59.7 J	60.4 J	60.9 J	56.4 J	71.9

(1) Cleanup goal based on an excess cancer risk of 1E-6 or a noncancer hazard quotient of 0.1. See Table 4-1.

NA = Not available

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J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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-- = Not analyzed in this sample.

Indicates detected concentration exceeds screening value in at least one sample. Sample result exceeding screening value is also shaded.

Table 4-4
Screening of Explosives, Propellants, and Metals Detected in Multi-Increment Soil Samples
Load Line 1 and Additional Buildings
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	Screening Value[1]	CB-20 LL1SS-505M-3005-SO 10/20/2009	CB-25 LL1SS-507M-3008-SO 10/20/2009	CB-801 (#1) LL1SS-501M-3001-SO 10/20/2009	CB-801 (#2) LL1SS-502M-3002-SO 10/20/2009	CC-1 LL1SS-500M-3000-SO 10/19/2009	T-4801 LL1SS-512M-3013-SO 10/21/2009	F-15 F15SS-012M-0500-SO 11/04/2009	F-15 F15SS-012M-0502-SO MI Duplicate
Explosives/Propellants	1,3,5-Trinitrobenzene	mg/kg	16,542	0.0988 U	0.097 U	0.0991 U	0.1 U	0.0969 U	0.1 U	0.0997 U	0.0998 U
	2,4,6-Trinitrotoluene	mg/kg	249	0.0988 U	1.74	0.0991 U	0.1 U	0.0969 U	0.1 U	0.0997 U	0.0998 U
	2-Amino-4,6-dinitrotoluene	mg/kg	124	0.0988 U	0.097 U	0.0991 U	0.1 U	0.0969 U	0.1 U	0.0997 U	0.0998 U
	4-Amino-2,6-dinitrotoluene	mg/kg	124	0.0988 U	0.264	0.0991 U	0.1 U	0.0969 U	0.1 U	0.0997 U	0.0998 U
	HMX	mg/kg	23,464	0.0988 U	0.298	0.0991 U	0.1 U	0.0969 U	0.1 U	0.0997 U	0.0998 U
	RDX	mg/kg	145	0.0988 U	2.62	0.0991 U	0.1 U	0.0969 U	0.1 U	0.0997 U	0.0998 U
	Nitrocellulose	mg/kg	NA	- -	- -	- -	- -	- -	- -	2.5 U	2.65 J
Metals	Aluminum	mg/kg	17,700	4360	4120	10900	10100	5690	11300	12200 J	11600 J
	Antimony	mg/kg	175	0.308	0.234	0.449	0.229	0.669	0.523	0.444 J	0.278 J
	Arsenic	mg/kg	15	11.5	7.78	8.67	7.48	8.72	9.68	10 J	9.18 J
	Barium	mg/kg	351	27.7	23.4	102	85.7	57	76.7	76.1 J	76.7 J
	Beryllium	mg/kg	16	0.249	0.251	1.01	0.63	0.474	0.765	0.588	0.578
	Cadmium	mg/kg	11	0.833	0.945	0.944	0.87	1.48	1.19	1.03	1.06
	Calcium	mg/kg	NA	4570	6550	28800	4370	17600	9100	5690	5760
	Chromium	mg/kg	12,000	12.7 J	13.1 J	20.4 J	16.6 J	23.2 J	18.1 J	21.9 J	19.8 J
	Cobalt	mg/kg	10	4.33 J	3.87 J	5.32	7.13 J	3.39 J	5.95 J	6.83	6.33
	Copper	mg/kg	25,368	18	13.2	15.5	10.3	22.9	18.9	16.9	16.3
	Iron	mg/kg	184,370	14900 J	15700 J	19400 J	18100 J	20400	23100 J	22800 J	22600 J
	Lead	mg/kg	400	12.2 J	34.6 J	45.2 J	16.7 J	116 J	23.2 J	16.9	18
	Magnesium	mg/kg	NA	2130 J	2830 J	4460 J	2110 J	3240 J	3730 J	3300 J	3190 J
	Manganese	mg/kg	1,450	339 J	309 J	621 J	475 J	546	470 J	330 J	340 J
	Mercury	mg/kg	172	0.0157 J	0.00991 U	0.0182 J	0.0246 J	0.118	0.0667 J	0.03 J	0.0361 J
	Nickel	mg/kg	12,639	19.6	16	23.8	51.7	36.2	19	30.6 J	35.5 J
	Potassium	mg/kg	NA	435	579	890	621	630	631	981 J	859 J
	Selenium	mg/kg	39	0.197 J	0.137 J	0.389 J	0.343 J	0.317 J	0.358 J	0.367 J	0.307 J
	Silver	mg/kg	3,105	0.184 U	0.188 U	0.193 U	0.18 U	0.177 U	0.185 U	R	R
	Sodium	mg/kg	NA	23.6	30.9	151	71	72.6	79.8	102	85.9
	Thallium	mg/kg	48	0.104 J	0.0891 J	0.115 J	0.129 J	0.114 J	0.125 J	0.143 J	0.143 J
	Vanadium	mg/kg	2,304	9.58 J	9.53 J	14.7 J	19 J	12.1 J	19.7 J	22 J	21.8 J
	Zinc	mg/kg	187,269	61.4	77.8	52.8	50.6	140	139	56 J	56.5 J

(1) Cleanup goal based on an excess cancer risk of 1E-6 or a noncancer hazard quotient of 0.1. See Table 4-1.

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.
J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.
UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

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Table 4-4
Screening of Explosives, Propellants, and Metals Detected in Multi-Increment Soil Samples
Load Line 1 and Additional Buildings
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	Screening Value[1]	F-15 F15SS-012M-0503-SO Blind Duplicate	F-16 F16SS-008M-0504-SO 11/04/2009	LL3 EB-803 (#1) LL3SS-290M-2000-SO 10/21/2009	LL3 EB-803 (#2) LL3SS-291M-2001-SO 10/21/2009	LL4 G-1 LL4SS-280M-2000-SO 10/21/2009	LL4 G-1 LL4SS-280M-2002-SO MI Duplicate	LL4 G-1 LL4SS-280M-2003-SO Blind Duplicate
Explosives/Propellants	1,3,5-Trinitrobenzene	mg/kg	16,542	0.0999 U	0.1 U	0.0976 U	0.0986 U	0.0976 U	0.0972 U	0.0986 U
	2,4,6-Trinitrotoluene	mg/kg	249	0.0999 U	0.1 U	0.0976 U	0.0986 U	0.0976 U	0.0972 U	0.0986 U
	2-Amino-4,6-dinitrotoluene	mg/kg	124	0.0999 U	0.1 U	0.0976 U	0.0986 U	0.0976 U	0.0972 U	0.0986 U
	4-Amino-2,6-dinitrotoluene	mg/kg	124	0.0999 U	0.1 U	0.0976 U	0.0986 U	0.0976 U	0.0972 U	0.0986 U
	HMX	mg/kg	23,464	0.0999 U	0.1 U	0.0976 U	0.0986 U	0.0976 U	0.0972 U	0.0986 U
	RDX	mg/kg	145	0.0999 U	0.1 U	0.0976 U	0.0986 U	0.0976 U	0.0972 U	0.0986 U
	Nitrocellulose	mg/kg	NA	2.87 J	2.49 U	- -	- -	- -	- -	- -
Metals	Aluminum	mg/kg	17,700	11600 J	9410 J	7980	9450	10200	10400	9150
	Antimony	mg/kg	175	0.441 J	0.423 J	0.818	0.673	0.321	0.323	0.307
	Arsenic	mg/kg	15	10 J	11.8	10.9 J	8.12 J	14.4 J	12.9 J	11.5 J
	Barium	mg/kg	351	80 J	58.4 J	55.7 J	61.9 J	46.4 J	49.6 J	44.8 J
	Beryllium	mg/kg	16	0.592	0.495	0.454	0.464	0.448	0.471	0.436
	Cadmium	mg/kg	11	1.09	0.987	0.817 J	0.773 J	1.09 J	1.06 J	1.07 J
	Calcium	mg/kg	NA	6150	6870	18000 J	9270 J	4130 J	5700 J	4300 J
	Chromium	mg/kg	12,000	18.5 J	15.8 J	15.8	15.2	20.5	20.9	22.1
	Cobalt	mg/kg	10	6.58	6.13	4.46	4.74	5.41	5.27	5.67
	Copper	mg/kg	25,368	17.2	15.9	17.7	14	22.3	21	22.9
	Iron	mg/kg	184,370	23200 J	20700 J	16200 J	16800 J	21600 J	21600 J	21300 J
	Lead	mg/kg	400	19.8	15.2	15.7 J	14.3 J	23.4 J	19.5 J	19.7 J
	Magnesium	mg/kg	NA	3410 J	3420 J	2950 J	2450 J	3250 J	3220 J	3100 J
	Manganese	mg/kg	1,450	366 J	340 J	520	474	363	387	420
	Mercury	mg/kg	172	0.0366 J	0.0224 J	0.0111 J	0.0185 J	0.0234 J	0.0378 J	0.0222 J
	Nickel	mg/kg	12,639	35.3 J	29.6 J	23.8	13.1	21.5	24.2	18.1
	Potassium	mg/kg	NA	848 J	826 J	975 J	930 J	1280 J	1250 J	1090 J
	Selenium	mg/kg	39	0.36 J	0.408	0.204 J	0.322 J	0.295 J	0.288 J	0.21 J
	Silver	mg/kg	3,105	R	R	0.281 J	R	R	R	R
	Sodium	mg/kg	NA	91.8	54.8	102	103	64.8	74	60
	Thallium	mg/kg	48	0.155 J	0.137 J	0.117	0.108	0.146	0.154	0.128
	Vanadium	mg/kg	2,304	21.6 J	16.8 J	14.4	17.5	18.9	18.7	17.2
	Zinc	mg/kg	187,269	58.9 J	53.8 J	68.6	54.1	79.9	76	82.3

(1) Cleanup goal based on an excess cancer risk of 1E-6 or a noncancer hazard quotient of 0.1. See Table 4-1.

NA = Not available

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

-- = Not analyzed in this sample.

Indicates detected concentration exceeds screening value in at least one sample. Sample result exceeding screening value is also shaded.

Table 4-4
Screening of Explosives, Propellants, and Metals Detected in Multi-Increment Soil Samples
Load Line 1 and Additional Buildings
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	Screening Value[(1)]	LL4 G-1A LL4SS-281M-2004-SO 10/21/2009	LL4 G-3 LL4SS-282M-2005-SO 10/21/2009
Explosives/Propellants	1,3,5-Trinitrobenzene	mg/kg	16,542	0.0997 U	0.0995 U
	2,4,6-Trinitrotoluene	mg/kg	249	0.0997 U	0.0995 U
	2-Amino-4,6-dinitrotoluene	mg/kg	124	0.0997 U	0.0995 U
	4-Amino-2,6-dinitrotoluene	mg/kg	124	0.0997 U	0.0995 U
	HMX	mg/kg	23,464	0.0997 U	0.0995 U
	RDX	mg/kg	145	0.0997 U	0.0995 U
	Nitrocellulose	mg/kg	NA	- -	- -
Metals	Aluminum	mg/kg	17,700	8950	9410
	Antimony	mg/kg	175	0.374	0.472
	Arsenic	mg/kg	15	15.5 J	13.9 J
	Barium	mg/kg	351	45.6 J	45.4 J
	Beryllium	mg/kg	16	0.444	0.423
	Cadmium	mg/kg	11	1.1 J	1.07 J
	Calcium	mg/kg	NA	6860 J	8100 J
	Chromium	mg/kg	12,000	18.8	17.3
	Cobalt	mg/kg	10	5.06	4.52
	Copper	mg/kg	25,368	23.5	22.2
	Iron	mg/kg	184,370	21200 J	20600 J
	Lead	mg/kg	400	27 J	22.7 J
	Magnesium	mg/kg	NA	3200 J	3620 J
	Manganese	mg/kg	1,450	416	389
	Mercury	mg/kg	172	0.0183 J	0.024 J
	Nickel	mg/kg	12,639	20.7	26.6
	Potassium	mg/kg	NA	1170 J	1110 J
	Selenium	mg/kg	39	0.289 J	0.305 J
	Silver	mg/kg	3,105	R	R
	Sodium	mg/kg	NA	58.1	54
	Thallium	mg/kg	48	0.15	0.155
	Vanadium	mg/kg	2,304	16.9	18.1
	Zinc	mg/kg	187,269	84.9	84.2

(1) Cleanup goal based on an excess cancer risk of 1E-6 or a noncancer hazard quotient of 0.1. See Table 4-1.

NA = Not available

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.
J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.
UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
-- = Not analyzed in this sample.
Indicates detected concentration exceeds screening value in at least one sample. Sample result exceeding screening value is also shaded.

Table 4-5
Screening of VOCs Detected in Multi-Increment Soil Samples
Load Line 1
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	Screening Value[(1)]	CB-3	CB-4A (#1)	CB-4A (#1)	CB-4A (#2)	CB-4A (#3)	CB-10 (#1)
				LL1SS-506D-3007-SO 10/21/2009	LL1SS-523D-3031-SO 10/26/2009	LL1SS-523D-3033-SO Blind Duplicate	LL1SS-524D-3035-SO 10/26/2009	LL1SS-525D-3037-SO 10/26/2009	LL1SS-534D-3047-SO 10/27/2009
VOCs	Carbon disulfide	ug/kg	82,000	0.42 U	0.496 J	0.907 J	0.461 U	0.453 U	1.26 J
	Methylene chloride	ug/kg	11,000	0.84 U	1.83 J	6.09	0.921 U	0.905 U	9.34

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.
J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

(1) Cleanup goal based on an excess cancer risk of 1E-6 or a noncancer hazard quotient of 0.1. See Table 4-1.

Table 4-6
Screening of SVOCs and PCBs Detected in Multi-Increment Soil Samples
Load Line 1
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	Screening Value[(1)]	CB-2	CB-3	CB-4 (#1)	CB-4 (#2)	CB-4 (#3)	CB-4A (#1)	CB-4A (#1)	CB-4A (#1)
				LL1SS-504M-3004-SO 10/20/2009	LL1SS-506M-3006-SO 10/20/2009	LL1SS-520M-3024-SO 11/03/2009	LL1SS-521M-3025-SO 11/03/2009	LL1SS-522M-3026-SO 11/03/2009	LL1SS-523M-3027-SO 10/26/2009	LL1SS-523M-3029-SO MI Duplicate	LL1SS-523M-3030-SO Blind Duplicate
SVOCs	2,4-Dinitrotoluene	ug/kg	13,400	361 J	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
	2,6-Dinitrotoluene	ug/kg	13,600	159 J	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
	Anthracene	ug/kg	1,700,000	87.8 UJ	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
	Benzo(a)anthracene	ug/kg	4,770	100 J	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
	Benzo(a)pyrene	ug/kg	477	98.4 J	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
	Benzo(b)fluoranthene	ug/kg	4,770	97.4 J	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
	Benzo(g,h,i)perylene	ug/kg	3,815,000	87.8 UJ	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
	Benzo(k)fluoranthene	ug/kg	47,700	109 J	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
	Carbazole	ug/kg	835,000	87.8 UJ	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
	Chrysene	ug/kg	477,000	122 J	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
	Fluoranthene	ug/kg	5,087,000	221 J	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
	Indeno(1,2,3-cd)pyrene	ug/kg	4,770	87.8 UJ	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
	Phenanthrene	ug/kg	1,700,000	87.8 UJ	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
	Pyrene	ug/kg	3,815,000	163 J	95.2 UJ	--	--	--	428 UJ	432 UJ	400 UJ
PCBs	Aroclor-1254	ug/kg	3,460	--	251	296	116	495	1220	1280	1200
	Aroclor-1260	ug/kg	3,460	--	8.09 U	144	54.5	209	8.62 U	7.88 U	8.23 U

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.
J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.
UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
-- = Not analyzed in this sample.

(1) Cleanup goal based on an excess cancer risk of 1E-6 or a noncancer hazard quotient of 0.1. See Table 4-1.

Indicates analyte and sample concentration that exceeds the screening value.

Table 4-6
Screening of SVOCs and PCBs Detected in Multi-Increment Soil Samples
Load Line 1
Ravenna Army Ammunition Plant
Ravenna, Ohio

	Parameter	Units	Screening Value[(1)]	CB-4A (#2) LL1SS-524M-3034-SO 10/26/2009	CB-4A (#3) LL1SS-525M-3036-SO 10/26/2009	CB-10 (#1) LL1SS-534M-3046-SO 10/27/2009	CB-10 (#2) LL1SS-535M-3048-SO 10/27/2009	CB-19 LL1SS-503M-3003-SO 10/20/2009
SVOCs	2,4-Dinitrotoluene	ug/kg	13,400,000	427 UJ	480 UJ	86.7 UJ	--	88.4 UJ
	2,6-Dinitrotoluene	ug/kg	13,600,000	427 UJ	480 UJ	86.7 UJ	--	88.4 UJ
	Anthracene	ug/kg	1,700,000	427 UJ	1080 J	86.7 UJ	--	88.4 UJ
	Benzo(a)anthracene	ug/kg	4,770	427 UJ	1870 J	86.7 UJ	--	99.1 J
	Benzo(a)pyrene	ug/kg	477	427 UJ	1400 J	86.7 UJ	--	88.4 UJ
	Benzo(b)fluoranthene	ug/kg	4,770	427 UJ	1150 J	86.7 UJ	--	88.4 UJ
	Benzo(g,h,i)perylene	ug/kg	3,815,000	427 UJ	607 J	86.7 UJ	--	88.4 UJ
	Benzo(k)fluoranthene	ug/kg	47,700	427 UJ	1380 J	86.7 UJ	--	98.2 J
	Carbazole	ug/kg	835,000	427 UJ	666 J	86.7 UJ	--	88.4 UJ
	Chrysene	ug/kg	477,000	427 UJ	1780 J	86.7 UJ	--	103 J
	Fluoranthene	ug/kg	5,087,000	427 UJ	4870 J	86.7 UJ	--	221 J
	Indeno(1,2,3-cd)pyrene	ug/kg	4,770	427 UJ	684 J	86.7 UJ	--	88.4 UJ
	Phenanthrene	ug/kg	1,700,000	427 UJ	3850 J	86.7 UJ	--	106 J
	Pyrene	ug/kg	3,815,000	427 UJ	3610 J	86.7 UJ	--	165 J
PCBs	Aroclor-1254	ug/kg	3,460	915	788	124	333	--
	Aroclor-1260	ug/kg	3,460	8.07 U	9.84 U	8.53 U	8.83 U	--

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.
J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.
UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
-- = Not analyzed in this sample.

(1) Cleanup goal based on an excess cancer risk of 1E-6 or a noncancer hazard quotient of 0.1. See Table 4-1.

Indicates analyte and sample concentration that exceeds the screening value.

5.1 SUMMARY OF CLEANUP GOAL EXCEEDANCES

No exceedances of either the TNT (CUG_{adj}) or RDX (CUG_{IROD}) cleanup goals were detected during the field screening investigation or the MI sampling at the low or medium potential buildings. Based on the post-slab removal field screening sampling, explosive contamination beneath the floor slabs at these buildings was not detected, and no remediation is warranted based upon field screening laboratory analytical data.

There were no RDX exceedances in any field screening samples collected from the high potential building footprints. Exceedances for TNT were identified at two building footprints at Load Line 1: Buildings CB-4AWS and CB-4WN. At both buildings, the TNT CUG_{adj} exceedances were detected in the deepest interval sampled within the affected core collected from the footprint. At Building CB-4WN the deepest interval sampled was 3.5 ft bgs; at Building CB-4AWS the deepest interval sampled was 2.3 ft bgs. The MI sampling conducted at the high potential buildings confirmed that no additional areas require remediation.

The MI process provides a means to analytically evaluate soils over a wide area with a single sample and analysis. The analytical results are very reproducible as evidenced by the QC duplicate analyses from sampling conducted during this field investigation. The MI process, however, addresses only the 0.0 to 1.0 foot bgs interval. Based on field screening core results, there may be areas of impact below the 1.0 foot bgs depth due to the natural distribution or migration of the contamination. Therefore, a recognized data gap for contaminant information at depths below 1.0 foot bgs is acknowledged.

5.2 SUMMARY OF EXCAVATION AREAS

The field screening effort identified two areas at two high potential buildings at Load Line 1 that exceeded the TNT CUG_{adj}. These areas are noted for future remediation excavation work as indicted on Figure 5-1. The two areas are summarized below:

- Building CB-4WN: This building was a wash out annex connected to the melt pour building CB-4. The TNT exceedance was detected in the core taken from the northeast corner of the annex. The highest level of TNT in two other cores in the vicinity of the exceedance was 11 mg/kg. Therefore, extent of contamination within the building footprint has been defined, but there may be contamination outside the building footprint in the easterly direction. The TNT exceedance occurred in the 3.5 ft bgs sampling interval, which was the deepest sample collected and analyzed. Based on this information, the removal area is estimated to be approximately 20 feet by 20 feet by 5 feet deep.
- Building CB-4AWS: This building was a wash out annex connected to the melt pour building CB-4A. The TNT exceedance was detected in 2.3-foot interval within the core taken from the northeast corner of the annex. The highest level of TNT in the other core collected from this footprint was 432 mg/kg. This result was also from the deepest interval sampled and analyzed in this core. While the extent of TNT contamination has been defined within the footprint, contamination may be outside the building footprint in

DEPTH INTERVAL	TNT CONC. MG/KG
001	ND
002	ND
003	19
004	ND
005 (3.5FT.)	2630

DEPTH INTERVAL	TNT CONC. MG/KG
001	13
002	ND
003	342
004	19
005 (4FT.)	ND

DEPTH INTERVAL	TNT CONC. MG/KG
001	ND
002	ND
003 (2FT.)	9.8

DEPTH INTERVAL	TNT CONC. MG/KG
001	5.6
002 (1FT.)	1.4

DEPTH INTERVAL	TNT CONC. MG/KG
001	0.9
002	ND
003	173
004 (2.5FT.)	7.4

DEPTH INTERVAL	TNT CONC. MG/KG
001	ND
002	2.4
003 (2FT.)	11

DEPTH INTERVAL	TNT CONC. MG/KG
001	ND
002	ND
003	1.2
004	ND
005 (4FT.)	7.9

DEPTH INTERVAL	TNT CONC. MG/KG
001	ND
002	3.8
003 (2FT.)	ND

DEPTH INTERVAL	TNT CONC. MG/KG
001	7.6
002	ND
003	ND
004 (3.5FT.)	3.7

DEPTH INTERVAL	TNT CONC. MG/KG
001	1.9
002	ND
003 (3FT.)	ND

DEPTH INTERVAL	TNT CONC. MG/KG
001	1.8
002	1.0
003	0.8
004 (3.5FT.)	0.8

DEPTH INTERVAL	TNT CONC. MG/KG
001	ND
002	33
003 (2.3FT.)	4520

DEPTH INTERVAL	TNT CONC. MG/KG
001	ND
002	ND
003 (2.4FT.)	432

LL1CB4-SB-058SN
LL1CB4-SB-059SN
LL1CB4WS-SB-047SN
LL1CB4WN-SB-061SN
LL1CB4-SB-057SN
LL1CB4WS-SB-046SN
LL1CB4WN-SB-060SN
LL1CB4-SB-056SN (ND)
CB-4
LL1CB4-SB-055SN (ND)
LL1CB4-SB-054SN (ND)
CB-4VP1
LL1CB4VP1-SB-062SN
LL1CB4-SB-053SN (ND)
LL1CB4-SB-052SN (ND)
LL1CB4-SB-051SN (ND)
LL1CB4-SB-050SN
LL1CB4-SB-048SN (ND)
LL1CB4-SB-049SN (ND)
LL1CB4A-SB-043SN
LL1CB4A-SB-042SN
LL1CB4AWN-SB-044SN
LL1CB4A-SB-040SN (ND)
LL1CB4A-SB-041SN (ND)
LL1CB4AWS-SB-031SN
LL1CB4AWN-SB-045SN (ND)
LL1CB4AWS-SB-030SN
CB-4A
LL1CB4A-SB-039SN (ND)
LL1CB4A-SB-038SN (ND)
LL1CB4A-SB-037SN (ND)
LL1CB4AVP1-SB-029SN
CB-4AVP1
LL1CB4A-SB-036SN (ND)
LL1CB4A-SB-035SN (ND)
LL1CB4A-SB-034SN (ND)
LL1CB4A-SB-033SN (ND)
LL1CB4A-SB-032SN (ND)
1000
1000
1000
1000

LEGEND

- SCREENING CORE LOCATION
- HIGH POTENTIAL BUILDING
- ASPHALT ROAD
- WALKWAYS
- GRAVEL ROAD
- RAILROAD TRACKS
- FENCE LINE
- CONTOUR (2 FT. INTERVAL)
- CONTOUR (10 FT. INTERVAL)
- TREE OR TREELINE
- EXCAVATION AREA, BASED ON SCREENING RESULTS

ND NON DETECT

- ADDITIONAL OUTBUILDINGS
- VACUUM BAG HOUSE

US Army Corps of Engineers

0 12.5 25 50
SCALE 1" ~ 50'

URS

RAVENNA ARMY AMMUNITION PLANT
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS

LOAD LINE 1
PROPOSED EXCAVATION AREAS (BASED ON TNT CUG OF 878 MG/KG)
BUILDING CB-4 AND CB-4A

DRAWN BY:	CHECKED BY:	PROJECT No:	DATE:	FIGURE No:	PAGE No:
JSC	SL	13812319	01/12/10	5-1	5-2

K:\Projects\R\Ravenna AAP\13812319\DWGs\Figures\LL1-Report\Ravenna-Figure 5-1 Field Screening Core Locations and Potential Excav CB4-CB4A.dwg User:jessica_cotton Jan 25, 2010 - 10:25am

the easterly direction. Based on this information, the removal area is estimated to be approximately 20 feet by 20 feet by 4 feet deep.

The impacted areas described above will require additional characterization to support area excavation. This will be done by collecting additional field screening samples during excavation. Final MI confirmatory samples will be collected from the sidewall and excavation floors once the field screening samples indicate that the TNT levels are below the CUG_{adj}.

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APPENDIX A

Field Sampling Reports

Field Sampling Report

Location ID: LL1CC1-SS-001SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/19/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: __1545_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field — Estimated - Measured - GPS Surveyed

Sample Depth: ____0-1_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)		
PID / FID Readings:		
Background:	0.0	ppm
Sample:	0.0	ppm
Water Level:		FT
Temperature:		°C
Sp. Conductance:		uMHOs
pH:		units
Dissolved Oxygen:		Mg/L
Redox Potential:		mV
Turbidity:		N.T.U

Analytical Parameters			
VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose,moist. brown silty SAND with gravel

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BE _____ (Please Print)

Signature: Ben Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-500M-3000-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/19/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1615 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 feet (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:		
Background:	0.0	ppm
Sample:	0.0	ppm
Water Level:		Ft
Temperature:		°C
Sp. Conductance:		uMHOS
pH:		units
Dissolved Oxygen:		Mg / L
Redox Potential:		mV
Turbidity:		N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose,moist, brown silty SAND with gravel

Recovery: **4 inches**

Refusal: **varies 4-12 inches**

Building Footprint ID: *CC-1*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brit Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB10-SB-063SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/19/2009

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: __1700_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field - Estimated - Measured - GPS Surveyed

Sample Depth: ____0-3.5_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters				
VOC				
SVOC				
Explosives	X			
Metals				
Perchlorate				
PCBs				
Nitrate / Nitrite				
TPH DRO / HRO				
Propellants				
Pesticides				

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist,brown sandy SILT little clay,little rock fragments

Recovery: **35 inches**

Refusal: **42 inches**

Building Footprint ID: CB-10

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: _____ Date: 12-3-09

Field Sampling Report

Location ID: LL1CB2-SS-004SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1055 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field - Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT

Soil sample description should include:
Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:
Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1SS-504M-3004-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1105 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field; Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters			
VOC			
SVOC	X		
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT

Recovery: **3 inches**

Refusal: **varied 3-12 inches**

Building Footprint ID: *CB-2*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature]

Date: 12-3-09

Field Sampling Report

Location ID: LL1CB3-SS-006SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1205 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: ____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Loose moist silty sand with traces of clay

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BPratt (Please Print)

Signature: Brian Pratt

Reviewed by: Brian Egan (Please Print)

Signature: Brian Egan Date: 12-1-09

Field Sampling Report

Location ID: LL1CB3-SS-007SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1210 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Loose moist silty sand with traces of clay

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BPratt (Please Print)

Signature: Brandon Pratt

Reviewed by: Brian Egan (Please Print)

Signature: Brian Egan Date: 12-1-09

Field Sampling Report

Location ID: LL1CB3-SS-008SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1215 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: ____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Loose moist silty sand with traces of clay

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BPratt (Please Print)

Signature: Bruce Pratt

Reviewed by: Brian Egan (Please Print)

Signature: Brian Egan Date: 12-1-09

Field Sampling Report

Location ID: LL1CB3-SS-009SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1220 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated_ - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)		Analytical Parameters				Other Parameters			
PID / FID Readings:		VOC				Corrosivity			
Background:	0.0 ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	0.0 ppm	Explosives	X			Ignitability			
Water Level:	Ft	Metals							
Temperature:	°C	Perchlorate				QA Samples			
Sp. Conductance:	uMHOs	PCBs				MS/MSD	Yes / No		NA
pH:	units	Nitrate / Nitrite				Duplicate ID			NA
Dissolved Oxygen:	Mg / L	TPH DRO / HRO				Equipment Rinse ID			NA
Redox Potential:	mV	Propellants				Trip Blank ID			NA
Turbidity:	N.T.U	Pesticides							

Sample Description

Loose moist silty sand with traces of clay

Soil sample description should include:
Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:
Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BPratt (Please Print)

Signature: Brian Pratt

Reviewed by: Brian Egan (Please Print)

Signature: Brian Egan

Date: 11-1-09

Field Sampling Report

Location ID: LL1CB8-SS-015SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1515___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-1____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters			
VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, silty fine SAND

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature] Date: 12-3-09

Field Sampling Report

Location ID: LL1SS-508M-3009-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1520 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field; Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, silty fine SAND

Recovery: **4.0 inches**

Refusal: **varied 4-12 inches**

Building Footprint ID: *CB-08*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Brenda Pratt (Please Print)

Signature: Brenda Pratt

Reviewed by: Brian Egan (Please Print)

Signature: Brian Egan Date: 12-1-09

Field Sampling Report

Location ID: LL1-1-51-SS-016SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1535____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field - Estimated - Measured - GPS Surveyed

Sample Depth: _____0-1____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, fine sandy SILT, some clay

Soil sample description should include:
Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:
Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brian Egon

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1-1-51A-SS-017SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1538____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field — Estimated - Measured - GPS Surveyed

Sample Depth: _____0-1____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, fine sandy SILT, some clay

Soil sample description should include:
Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:
Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-509M-3010-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/2009

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1545 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, fine sandy SILT, some clay

Recovery: 5 inches

Refusal: varied 5-12 inches

Building Footprint ID: *1-51 and 1-51A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Brenda Pratt (Please Print)

Signature: Brenda Pratt

Reviewed by: Brian Egan (Please Print)

Signature: Brian Egan Date: 12-1-09

Field Sampling Report

Location ID: LL1CB9-SS-018SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____1605___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

LOOSE, MOIST,BROWN, SANDY SILT WITH LITTLE CLAY

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: MIKE SHOOP (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1SS-511M-3012-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1623 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

LOOSE, MOIST, BROWN, SILTY SAND WITH LITTLE CLAY

Recovery: 4"

Refusal: varied 4-12 inches

Building Footprint ID: *CB-9*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: MIKE SHOOP (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB801-SS-002SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____0955___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-1_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Medium stiff moist grey and brown mottled silty CLAY.

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-502M-3002-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1000 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Med stiff moist, gray brown mottled,silty clay

Recovery: Avg 3 inches

Refusal: Varied 3-12 inches

Building Footprint ID: CB-801

Soil sample description should include:
Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:
Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Brenda Pratt (Please Print)

Signature: Brenda Pratt

Reviewed by: Brian Egan (Please Print)

Signature: Brian Egan Date: 12/09

Field Sampling Report

Location ID: LL1SS-501M-3001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1020 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Med stiff moist, gray brown mottled,silty clay

Recovery: **Avg 3 inches**

Refusal: **Varied 3-12 inches**

Building Footprint ID: **CB-801**

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Brenda Pratt (Please Print)

Signature: Brenda Pratt

Reviewed by: Brian Egan (Please Print)

Signature: Brian Egan Date:

Field Sampling Report

Location ID: LL1CB19-SS-003SN-0001 — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____1030___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-1_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0ppm
Sample:	0.0ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Loose moist brown sandy silt and trace clay

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Bpratt_____ (Please Print)

Signature: Brenda Pratt

Reviewed by: Brian Eyon (Please Print)

Signature: Br

Date:

Field Sampling Report

Location ID: LL1SS-503M-3003-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1040 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field; Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0ppm
Sample:	0.0ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC	X		
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Loose moist brown sandy silt and trace clay

Recovery: **Avg 4 inches**

Refusal: **varied 4-12 inches**

Building Footprint ID: CB-19

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Brenda Pratt (Please Print)

Signature: Brenda Pratt

Reviewed by: Brian Egan (Please Print)

Signature: Brian Egan Date: 12-1-09

Field Sampling Report

Location ID: LL1CB20-SS-005SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1120 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist silty SAND trace gravel

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ bme _____ (Please Print)

Signature: Ben Eger

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-505M-3005-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1130 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist silty SAND trace gravel

Recovery: **6 inches**

Refusal: **varied 8-12 inches**

Building Footprint ID: ***CB-20***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: B.Egan (Please Print)

Signature: Ben Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-506M-3006-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1230 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC	X		
Explosives	X		
Metals	X		
Perchlorate			
PCBs	X		
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides	X		

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Loose moist silty sand with traces of clay

Recovery: Avg 4 inches

Refusal: varied 4-12 inches

Building Footprint ID: CB-3

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Brenda Pratt (Please Print)

Signature: Brenda Pratt

Reviewed by: Brian Egan (Please Print)

Signature: B

Date: 12-1-09

Field Sampling Report

Location ID: LL1CB25-SS-010SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1640 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, tan, fine sandy silt with little gravel

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: MIKE SHOOP (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB25-SS-011SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1643____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-1___ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist,brown, fine grain sandy silt, trace gravel

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB25-SS-012SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1648___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field - Estimated - Measured - GPS Surveyed

Sample Depth: _____0-1___ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters				
VOC				
SVOC				
Explosives	X			
Metals				
Perchlorate				
PCBs				
Nitrate / Nitrite				
TPH DRO / HRO				
Propellants				
Pesticides				

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist,brown, fine grain sandy silt, trace gravel

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt

Date: 12-1-09

Field Sampling Report

Location ID: LL1CB25-SS-013SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1652__ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-1___ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist,brown, fine grain sandy silt, trace gravel

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB25-SS-014SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1659__ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-1___ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft, moist, brown, silty clay

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ Mike Shoop _____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-507M-3008-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/20/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1710 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Loose, brown, moist, sandy silt with clay

Recovery: 4"

Refusal: varied 4-12 inches

Building Footprint ID: *CB-25*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: MIKE SHOOP (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CA15-SS-021SN-001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1043____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown fine sandy SILT little clay and gravel

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CA16-SS-020SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1045 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist silty brown SAND

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Cyr

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1SS-513M-3014-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1050 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist silty brown SAND

Recovery: **7 inches**

Refusal: **12 inches**

Building Footprint ID: *CA-16*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature] Date: 12-3-09

Field Sampling Report

Location ID: LL1SS-514M-3015-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1057 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown fine sandy SILT, trace gravel, trace clay

Recovery: **3 inches**

Refusal: **varied 3-12 inches**

Building Footprint ID: *CA-15*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: B Mc Sy

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Location ID: LL1CA21-SS-023SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1116 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft, moist, brown clayey SILT little fine sand trace gravel

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Ben Eger

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1SS-516M-3017-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1131 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft, moist, brown clayey SILT little fine sand trace gravel

Recovery: **7 inches**

Refusal: **varied 9-12 inches**

Building Footprint ID: *CA-21*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: B M

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

FIELD SAMPLING REPORT

Location ID: LL1CA28-SS-024SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1433 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters			
VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown fine silty SAND

Soil sample description should include:
Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:
Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

FIELD SAMPLING REPORT

Location ID: LL1CA28A-SS-025SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1443 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Loose moist brown silty SAND with little clay.

Soil sample description should include:
Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:
Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brenda Pratt

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Location ID: LL1CB4B-SS-027SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____1449____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOS
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown SAND trace gravel

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Eng

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1SS-518M-3022-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1505 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown SAND trace gravel

Recovery: **2 inches**

Refusal: **varies 2-12 inches**

Building Footprint ID: ***CB-4B***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: bme (Please Print)

Signature: Bme

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB11-SS-028SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____1517____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown SAND trace gravel trace clay

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature] Date: 12-3-09

Field Sampling Report

Location ID: LL1SS-519M-3023-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1522 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown SAND trace gravel trace clay

Recovery: **5 inches**

Refusal: **varies 5-12 inches**

Building Footprint ID: ***CB-11***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Ben Eg

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1T4801-SS-019SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1015____ hrs

Sample Type: Composite - MI - Grab : If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOS
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N T U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty fine SAND

Soil sample description should include:
Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:
Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-512M-3013-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1030 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med. Stiff, moist, brown and gray mottled clay SILT, little gravel

Recovery: **7 inches**

Refusal: **12 inches**

Building Footprint ID: *T-4801*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CA7-SS-022SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____1125____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOS
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters			
VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Moist, brown, silty sand with silty clay

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Brian Egan (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-515M-3016-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1135 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	YES	NA
Duplicate ID			NA
Equipment Rinse ID			NA
Trip Blank ID			NA

Sample Description

Moist, brown, silty sand with silty clay

Recovery: **5 inches**

Refusal: **varied 9-12 inches**

Building Footprint ID: *CA-7*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Brian Egan (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-515M-3016-MS

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1135 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO/
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	YES	NA
Duplicate ID			NA
Equipment Rinse ID			NA
Trip Blank ID			NA

Sample Description

Moist, brown, silty sand with silty clay

Recovery: 5 inches

Refusal: varied 9-12 inches

Building Footprint ID: *CA-7*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Brian Egan (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-515M-3016-MSD

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1135 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	unit
Dissolved Oxygen:	Mg/l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	YES	NA
Duplicate ID			NA
Equipment Rinse ID			NA
Trip Blank ID			NA

Sample Description

Moist, brown, silty sand with silty clay

Recovery: 5 inches

Refusal: varied 9-12 inches

Building Footprint ID: *CA-7*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Brian Egan (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-506D-3007-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No				Terracore sampling technique			

Sample Collection: 1439 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken:

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: Surface

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC	X		
SVOC			
Explosives			
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Loose moist silty sand with traces of clay

Recovery: NA

Refusal: NA

Building Footprint ID: CB-3

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Brenda Pratt (Please Print)

Signature: Brenda Pratt

Reviewed by: Brian Egan (Please Print)

Signature: Brian Egan Date: 12-1-09

Field Sampling Report

Location ID: LL3EB803-SS-001SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1620 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose dry brown sandy SILT

Soil sample description should include:
Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:
Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL3SS-290M-2000-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1631 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose dry brown sandy SILT

Recovery: **3 inches**

Refusal: **varied 3-12 inches**

Building Footprint ID: ***EB-803***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Eyn

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL3SS-291M-2001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1640 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose dry brown sandy SILT

Recovery: **4 inches**

Refusal: **varied 4-12 inches**

Building Footprint ID: ***EB-803***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Eyn

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL4G1-SS-001SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1700 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown sandy silty CLAY trace gravel

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ John Craig _____ (Please Print)

Signature: Brian Egan (for John Craig)

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL4G1A-SS-002SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____1755____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown sandy silty CLAY trace gravel

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brie Eyn

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL4SS-28IM-2004-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1800 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown sandy silty CLAY trace gravel

Recovery: **4 inches**

Refusal: **varied 6-12 inches**

Building Footprint ID: ***G-IA***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL4G3-SS-003SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1805 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown sandy silty CLAY trace gravel

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Brenda Pratt (Please Print)

Signature: Brenda Pratt

Reviewed by: Brian Gan (Please Print)

Signature: Brian Gan Date:

Field Sampling Report

Location ID: LL4SS-282M-2005-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/21/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1810 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC				
SVOC				
Explosives	X			
Metals	X			
Perchlorate				
PCBs				
Nitrate / Nitrite				
TPH DRO / HRO				
Propellants				
Pesticides				

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown sandy silty CLAY trace gravel

Recovery: **4 inches**

Refusal: **varied 6-12 inches**

Building Footprint ID: ***G-3***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4A-SB-032-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/22/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____1148___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

fine grained weathered sandstone

Recovery: **15 inches**

Refusal: **2 feet**

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4A-SB-033-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/22/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: __1155_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

tan fine grained weathered sandstone

Recovery: **2 feet**

Refusal: **2 feet**

Building Footprint ID: ***CB-4A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4A-SB-036-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/22/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1435____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.5_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

brown fine grained weathered sandstone

Recovery: **22 inches**

Refusal: **3.5 feet**

Building Footprint ID:

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4A-SB-034-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/22/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1500____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-1.4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

brown fine grained weathered sandstone trace silt

Recovery: **17 inches**

Refusal: **17 inches**

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Ben Eger

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4A-SB-037-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/22/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____1503___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

brown fine grained weathered sandstone trace silt

Recovery: **22 inches**

Refusal: **2 feet**

Building Footprint ID: ***CB-4A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Ben Y

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4A-SB-035-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/22/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1530___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2.3_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

tan to grey weathered fine grained sandstone

Recovery: **23 inches**

Refusal: **28 inches**

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4A-SB-038-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/22/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1534___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT over tan and grey weathered fine sandstone

Recovery: **17 inches**

Refusal: **2 feet**

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Ben Ge

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4A-SB-039-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/22/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1545___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2.1_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT over tan and gray weathered fine sandstone

Recovery: **18 inches**

Refusal: **25 inches**

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Bme

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4A-SB-040-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/22/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1600____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field ___ Estimated - Measured - GPS Surveyed

Sample Depth: ___0-1.3_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

brown weathered fine sandstone

Recovery: **14 inches**

Refusal: **16 inches**

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4A-SB-041-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/22/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1611____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

brown weathered fine sandstone

Recovery: **18 inches**

Refusal: **24 inches**

Building Footprint ID: ***CB-4A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4A-SB-042-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/22/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____1629___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.5_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters			
VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT over tan and grey weathered fine sandstone

Recovery: **23 inches**

Refusal: **42 inches**

Building Footprint ID: ***CB-4A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4A-SB-043-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/22/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1625____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-3.5_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT over brown weathered fine grained sandstone

Recovery: **21 inches**

Refusal: **42 inches**

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4AWS-SB-030-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___0945___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2.4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO/
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown fine sandy SILT and sandstone rock fragments

Recovery: **21 inches**

Refusal: **29 inches**

Building Footprint ID: *CB-4AWS*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Bme Eyn

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4AWS-SB-031-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: __0951____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2.3_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown fine grained sandy SILT

Recovery: **20 inches**

Refusal: **27 inches**

Building Footprint ID: ***CB-4AWS***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4A-SB-045-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1019___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2.9_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND with sandstone rock fragments

Recovery: **21 inches**

Refusal: **35 inches**

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4A-SB-044-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1025____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-3_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC				
SVOC				
Explosives (TNT,RDX)	X			
Metals				
Perchlorate				
PCBs				
Nitrate / Nitrite				
TPH DRO / HRO				
Propellants				
Pesticides				

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND with sandstone rock fragments

Recovery: **19.5 inches**

Refusal: **3.0 feet**

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB4AVPI-SB-029-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1049___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:

Background: 0.0 ppm

Sample: 0.0 ppm

Water Level: Ft

Temperature: °C

Sp. Conductance: uMHOs

pH: units

Dissolved Oxygen: Mg / l

Redox Potential: mV

Turbidity: N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist gray brown clayey SILT with some sand and sandstone

Recovery: **17 inches**

Refusal: **2 feet**

Building Footprint ID: *CB-4AVP1*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brenda Pratt

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB10-SB-065SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1120____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-1_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters			
VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT little clay

Recovery: **9.5 inches**

Refusal: **12 inches**

Building Footprint ID: *CB-10*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Ben Z

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB10-SB-064SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1123___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2.9_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty fine SAND with rock fragments

Recovery: **27 inches**

Refusal: **35 inches**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brian Eg

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB10-SB-066SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: __1135_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.3_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters			
VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty fine SAND little rock fragments

Recovery: **35 inches**

Refusal: **40 inches**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Ben E

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB10-SB-067SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1149___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2.8_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty fine SAND little clay and rock fragments

Recovery: **25 inches**

Refusal: **33 inches**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature] Date: 12-3-09

Field Sampling Report

Location ID: LL1CB10-SB-068SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1205____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.0_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist light brown silty fine SAND with some rock fragments

Recovery: **30 inches**

Refusal: **36 inches**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB10-SB-072SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1255____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field ___ Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters			
VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown silty CLAY with some sandstone rock fragmentts

Recovery: **23 inches**

Refusal: **24 inches**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB10-SB-069SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1305____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: ____0-3.3_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT with some rock fragments little clay

Recovery: **30 inches**

Refusal: **40 inches**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB10-SB-070SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1210___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	unit
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty fine SAND with rock fragments trace clay

Recovery: **17 inches**

Refusal: **2 feet**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brenda Pratt

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB10-SB-071SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1310___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty fine SAND

Recovery: **2 feet**

Refusal: **3 feet**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Ben Eg

Reviewed by: Brenden Pratt (Please Print)

Signature: Brenden Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB10-SB-074SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1325____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	unit
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose soft brown clayey SILT with rock fragments (sandstone)

Recovery: **22 inches**

Refusal: **24 inches**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brian Eg

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB10-SB-073SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/23/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____1342___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brownsilty and SAND with rock fragments trace clay trace brick

Recovery: **32 inches**

Refusal: **38 inches**

Building Footprint ID: *CB-10*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1SS-523D-3031-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1040 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken:

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC	X		
SVOC			
Explosives			
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NO	NA
BLIND DUP		LL1SS-523D-3033-SO	
QA DUP		LL1SS-523D-3032-QA	

Sample Description

loose moist brown silty SAND with rock fragments

Recovery: NA

Refusal: NA

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brenda Pratt

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-523D-3032-QA — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneons	Well Purging Form Yes - No							

Sample Collection: 1042 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken:

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC	X		
SVOC			
Explosives			
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NO	NA
BLIND DUP		LL1SS-523D-3033-SO	
QA DUP		LL1SS-523D-3032-QA	

Sample Description

loose moist brown silty SAND with rock fragments

Recovery: NA

Refusal: NA

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Ben Eye

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-523D-3033-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1044 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken:

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC	X		
SVOC			
Explosives			
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NO	NA
BLIND DUP		LL1SS-523D-3033-SO	
QA DUP		LL1SS-523D-3032-QA	

Sample Description

loose moist brown silty SAND with rock fragments

Recovery: NA

Refusal: NA

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature] Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-523M-3027-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1045 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	
Sample:	
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC	X		
Explosives	X		
Metals	X		
Perchlorate			
PCBs	X		
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides	X		

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NO	NA
FIELD DUP		LL1SS-523M-3029-SO	
BLIND DUP		LL1SS-523M-3030-SO	
QA DUP		LL1SS-523M-3028-QA	

Sample Description

loose moist brown silty SAND with rock fragments

Recovery: **2 inches**

Refusal: **varied 2-12 inches**

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brenda Pratt

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-523M-3029-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1045 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC				
SVOC	X			
Explosives	X			
Metals	X			
Perchlorate				
PCBs	X			
Nitrate / Nitrite				
TPH DRO / HRO				
Propellants	X			
Pesticides	X			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NO	NA
FIELD DUP		LL1SS-523M-3029-SO	
BLIND DUP		LL1SS-523M-3030-SO	
QA DUP		LL1SS-523M-3028-QA	

Sample Description

loose moist brown silty SAND with rock fragments

Recovery: **2 inches**

Refusal: **varied 2-12 inches**

Building Footprint ID: ***CB-4A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: 

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-523M-3028-QA — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1045 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC	X		
Explosives	X		
Metals	X		
Perchlorate			
PCBs	X		
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides	X		

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

	Yes / No	NO	NA
MS/MSD			
FIELD DUP		LL1SS-523M-3029-SO	
BLIND DUP		LL1SS-523M-3030-SO	
QA DUP		LL1SS-523M-3028-QA	

Sample Description

loose moist brown silty SAND with rock fragments

Recovery: **2 inches**

Refusal: **varied 2-12 inches**

Building Footprint ID: ***CB-4A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Eyer

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-523M-3030-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1100 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHO/
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC	X		
Explosives	X		
Metals	X		
Perchlorate			
PCBs	X		
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides	X		

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NO	NA
FIELD DUP		LL1SS-523M-3029-SO	
BLIND DUP		LL1SS-523M-3030-SO	
QA DUP		LL1SS-523M-3028-QA	

Sample Description

loose moist brown silty SAND with rock fragments

Recovery: **2 inches**

Refusal: **varies 2-12 inches**

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: B. Mc

Reviewed by: Brenda Grant (Please Print)

Signature: Brenda Grant Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-524D-3035-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1105 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken:

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC	X		
SVOC			
Explosives			
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND with rock fragments

Recovery: NA

Refusal: NA

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brenda Pratt

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-524M-3034-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1115 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC	X		
Explosives	X		
Metals	X		
Perchlorate			
PCBs	X		
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides	X		

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND with rock fragments

Recovery: **2.5 inches**

Refusal: **varied 2.5-12 inches**

Building Footprint ID: ***CB-4A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Bme

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-525M-3036-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1130 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC	X		
Explosives	X		
Metals	X		
Perchlorate			
PCBs	X		
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides	X		

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	YES	NA
Duplicate ID			NA
Equipment Rinse ID			NA
Trip Blank ID			NA

Sample Description

loose moist brown silty SAND with rock fragments and little clay

Recovery: **3 inches**

Refusal: **varied 3-12 inches**

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Bme

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-525M-3036-MS

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1130 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	unit
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters			
VOC			
SVOC	X		
Explosives	X		
Metals	X		
Perchlorate			
PCBs	X		
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides	X		

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples			
MS/MSD	Yes / No	YES	NA
Duplicate ID			NA
Equipment Rinse ID			NA
Trip Blank ID			NA

Sample Description

loose moist brown silty SAND with rock fragments and little clay

Recovery: 3 inches

Refusal: varied 3-12 inches

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Bm Eg

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-525M-3036-MSD

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1130 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	unit
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters			
VOC			
SVOC	X		
Explosives	X		
Metals	X		
Perchlorate			
PCBs	X		
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides	X		

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples			
MS/MSD	Yes / No	YES	NA
Duplicate ID			NA
Equipment Rinse ID			NA
Trip Blank ID			NA

Sample Description

loose moist brown silty SAND with rock fragments and little clay

Recovery: 3 inches

Refusal: varied 3-12 inches

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Eyl

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-525D-3037-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1145 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken:

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC	X		
SVOC			
Explosives			
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	YES	NA
Duplicate ID			NA
Equipment Rinse ID			NA
Trip Blank ID			NA

Sample Description

loose moist brown silty SAND with rock fragments and little clay

Recovery: NA

Refusal: NA

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-525D-3037-MS — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1145 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken:

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC	X		
SVOC			
Explosives			
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	YES	NA
Duplicate ID			NA
Equipment Rinse ID			NA
Trip Blank ID			NA

Sample Description

loose moist brown silty SAND with rock fragments and little clay

Recovery: NA

Refusal: NA

Building Footprint ID: *CB-4A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-525D-3037-MSD — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1145 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken:

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	unit
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC	X		
SVOC			
Explosives			
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	YES	NA
Duplicate ID			NA
Equipment Rinse ID			NA
Trip Blank ID			NA

Sample Description

loose moist brown silty SAND with rock fragments and little clay

Recovery: NA

Refusal: NA

Building Footprint ID: *CB-4A*

Soil sample description should include:
Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:
Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature:

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CA17-SB-107SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____1451___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.5____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

medium stiff moist brown gray silty clay

Recovery: **35 inches**

Refusal: **42 inches**

Building Footprint ID: *CA-17*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CA17-SB-112SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1454___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med stiff moist brown gray silty CLAY

Recovery: **40.5 inches**

Refusal: **none**

Building Footprint ID: *CA-17*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Ben S

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CA17-SB-111SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1505____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field ___ Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.7_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

medium stiff moist brown clay some silt

Recovery: **38 inches**

Refusal: **44 inches**

Building Footprint ID: *CA-17*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Ben Ey

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CA17-SB-108SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1519____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-3_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOS
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

medium stiff moist brown silty CLAY with rock fragments

Recovery: **28 inches**

Refusal: **3 feet**

Building Footprint ID: ***CA-17***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CA17-SB-106SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____1521___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: ____0-3.3_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

medium stiff moist brown gray silty CLAY

Recovery: **27 inches**

Refusal: **40 inches**

Building Footprint ID: ***CA-17***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brendon Pratt (Please Print)

Signature: _____ Date: 12-2-09

Field Sampling Report

Location ID: LL1CA17-SB-110SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1523____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description
soft moist brown silty CLAY

Recovery: **24 inches**

Refusal: **36 inches**

Building Footprint ID: *CA-17*

Soil sample description should include:
Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:
Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: _____ Date: 12-2-09

Field Sampling Report

Location ID: LL1CA17-SB-109SN-0001-SO — **RVAAP LL 1 Sub-Slab Sample, Ravenna, OH**

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1538____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.5_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

medium stiff moist brown and gray silty CLAY little sand

Recovery: **36 inches**

Refusal: **42 inches**

Building Footprint ID: *CA-17*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CA17-SB-105SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/2009

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1540____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.7____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown silty CLAY with trace rock fragments

Recovery: **33 inches**

Refusal: **44 inches**

Building Footprint ID: ***CA-17***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CA17-SB-104SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1551____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2.5_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

medium stiff brown to tan CLAY some silt

Recovery: **28 inches**

Refusal: **30 inches**

Building Footprint ID: *CA-17*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: _____ Date: 12-2-09

Field Sampling Report

Location ID: LL1CA17-SB-113SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1601____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2.5____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft to med stiff moist brown silty CLAY with little rock fragments

Recovery: **30 inches**

Refusal: **42 inches**

Building Footprint ID: *CA-17*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

QC 12-3-09

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB10-SB-075SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/26/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1612___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.5____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft to med stiff moist brown silty CLAY with some fine sand trace gravel

Recovery: **23 inches**

Refusal: **42 inches**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB4-SB-048SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___0924____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist grey brown silty fine SAND with rock fragments

Recovery: **22 inches**

Refusal: **24 inches**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brn Eg

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4-SB-049SN-0001-SO — **RVAAP LL 1 Sub-Slab Sample, Ravenna, OH**

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____0944___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2.4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)		**Analytical Parameters**				**Other Parameters**			
PID / FID Readings:		VOC				Corrosivity			
Background:	0.0 ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	0.0 ppm	Explosives (TNT,RDX)	X			Ignitability			
Water Level:	Ft	Metals							
Temperature:	°C	Perchlorate				**QA Samples**			
Sp. Conductance:	uMHOs	PCBs				MS/MSD	Yes / No		NA
pH:	units	Nitrate / Nitrite				Duplicate ID			NA
Dissolved Oxygen:	Mg / L	TPH DRO / HRO				Equipment Rinse ID			NA
Redox Potential:	mV	Propellants				Trip Blank ID			NA
Turbidity:	N.T.U	Pesticides							

Sample Description

loose moist brown silty fine grained SAND

Recovery: **22 inches**

Refusal: **29 inches**

Building Footprint ID: ***CB-4***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Ben E

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4-SB-050SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___0934____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist grey brown silty fine grained SAND with rock fragments

Recovery: **21 inches**

Refusal: **2 feet**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brian Eby

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4-SB-051SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____0950___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.3_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOS
pH:	units
Dissolved Oxygen:	Mg/l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND with little gravel and clay

Recovery: **25 inches**

Refusal: **39 inches**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Gay

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4-SB-052SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____1035___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty fine grained SAND

Recovery: **19 inches**

Refusal: **24 inches**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4-SB-053SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1022___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-1.2____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist tan to orange brown silty fine SAND with little gravel and clay

Recovery: **10 inches**

Refusal: **14 inches**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Bm Eg

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4-SB-054SN-0001-SO — **RVAAP LL 1 Sub-Slab Sample, Ravenna, OH**

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1048____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2.5_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)		**Analytical Parameters**				**Other Parameters**			
PID / FID Readings:		VOC				Corrosivity			
Background:	0.0 ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	0.0 ppm	Explosives (TNT,RDX)	X			Ignitability			
Water Level:	Ft	Metals							
Temperature:	°C	Perchlorate				**QA Samples**			
Sp. Conductance:	uMHOs	PCBs				MS/MSD	Yes / No		NA
pH:	units	Nitrate / Nitrite				Duplicate ID			NA
Dissolved Oxygen:	Mg / l	TPH DRO / HRO				Equipment Rinse ID			NA
Redox Potential:	mV	Propellants				Trip Blank ID			NA
Turbidity:	N.T.U	Pesticides							

Sample Description

loose moist brown silty fine sand with little gravel trace clay

Recovery: **16 inches**

Refusal: **30 inches**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt

Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4-SB-055SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____1118___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2.1_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

moist brwon fine grain SANDSTONE

Recovery: **20.5 inches**

Refusal: **25 inches**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4-SB-056SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: __1111_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2.2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters			
VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty fine SAND with little gravel

Recovery: **24 inches**

Refusal: **26 inches**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4-SB-057SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1200____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field ___ Estimated - Measured - GPS Surveyed

Sample Depth: ____0-1_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silt over tan sandstone

Recovery: **10 inches**

Refusal: **12 inches**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: ___BME_____ (Please Print)

Signature: Brian Eger

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4-SB-058SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: __1115____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty fine SAND with little gravel and clay

Recovery: **19 inches**

Refusal: **24 inches**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: ___BME_____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4-SB-059SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: __1232_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty fine SAND with rock fragments little clay

Recovery: **27 inches**

Refusal: **48 inches**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-530M-3042-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1525 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT

Recovery: **3 inches**

Refusal: **varied 3-12 inches**

Building Footprint ID: ***CB-4A***

Soil sample description should include:
Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:
Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: 

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-527M-3039-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1535 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field; Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist soft brown silty CLAY

Recovery: **4 inches**

Refusal: **12 inches**

Building Footprint ID: ***CB-4A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature:

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-534D-3047-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1630 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken:

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC	X		
SVOC			
Explosives			
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No NA
Duplicate ID	NA
Equipment Rinse ID	Taken on MI #1 of CB-10
Trip Blank ID	NA

Sample Description

loose brown sandy SILT with clay

Recovery: NA

Refusal: NA

Building Footprint ID: *CB-10*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brenda Pratt

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-30-09

Field Sampling Report

Location ID: LL1SS-534M-3046-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1635 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC	X		
Explosives	X		
Metals	X		
Perchlorate			
PCBs	X		
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides	X		

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No NA
Duplicate ID	NA
Equipment Rinse ID	Taken on MI #1 of CB-10
Trip Blank ID	NA

Sample Description

loose brown sandy SILT with clay

Recovery: **5 inches**

Refusal: **varies 7-12 inches**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: B E

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1SS-535M-3048-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1640 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs	X		
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose brown sandy SILT with clay

Recovery: **7 inches**

Refusal: **varies 8-12 inches**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brenda Pratt

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1SS-536M-3049-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/27/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1701 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown clayey SILT with some sand and gravel

Recovery: **6 inches**

Refusal: **10 inches**

Building Footprint ID: ***CB-10VP1, VP2, and VP3***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

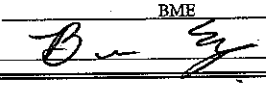
Agency/Company:

Address:

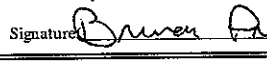
QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: 

Reviewed by: Brenda Pratt (Please Print)

Signature:  Date: 2-3-09

Field Sampling Report

Location ID: LL1CB4WN-SB-061SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1006____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-3.5_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters			
VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, tan, silty fine SAND and rock fragments

Recovery: **28 inches**

Refusal: **42 inches**

Building Footprint ID: ***CB4-WN***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: MIKE SHOOP (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4WN-SB-060SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1030____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field ___ Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, tan, silty SAND and rock fragments

Recovery: **19 inches**

Refusal: **24 inches**

Building Footprint ID: *CB4-WN*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____MIKE SHOOP_____ (Please Print)

Signature: Brenda Pratt for mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4WS-SB-047SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1050___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-1.5_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters			
VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist to wet, brown, silty SAND with some rock fragments and little clay

Recovery: **22 inches**

Refusal: **30 inches**

Building Footprint ID: ***CB4-WS***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

12-1-09

Logged By: _____MIKE SHOOP_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: ~~Brenda Pratt~~ Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4WS-SB-046SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1100____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg/l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

sandy silt over sandstone over gravel

Recovery: **24 inches**

Refusal: **none**

Building Footprint ID: ***CB4-WS***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____MIKE SHOOP_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB4VP1-SB-062SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1144____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - Surveyed

Sample Depth: ____0-4_____FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

Loose, moist, brown, silty fine sand with rock fragments, trace clay

Recovery: **18 inches**

Refusal: **none**

Building Footprint ID: *CB4-VP1*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____MIKE SHOOP_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB13-SB-080SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: __1405_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field ___ Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose brown moist sandy SILT with rock fragments

Recovery: **24 inches**

Refusal: **none**

Building Footprint ID: *CB-13*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: _____ Date: 12-2-09

Field Sampling Report

Location ID: LL1CB13-SB-078SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: __1417_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-3.5_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose brown moist silty SAND with some rock fragments'

Recovery: **29 inches**

Refusal: **42 inches**

Building Footprint ID: *CB-13*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt

Date: 12-2-09

Field Sampling Report

Location ID: LL1CB13-SB-082SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1430____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown clayey SILT with rock fragments

Recovery: **32 inches**

Refusal: **none**

Building Footprint ID: ***CB-13***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Eyr

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB13-SB-079SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/2009

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1439____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field ___ Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO/
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

medium stiff moist brown sandy silty CLAY with little gravel

Recovery: **42 inches**

Refusal: **none**

Building Footprint ID: *CB-13*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB13-SB-081SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1455____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO/
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown clayey SILT with gravel/rock fragments

Recovery: **37.5 inches**

Refusal: **none**

Building Footprint ID:

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB13-SB-083SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1502____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty fine SAND with some gravel little clay

Recovery: **27 inches**

Refusal: **none**

Building Footprint ID: *CB-13*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Ben Eg

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB13-SB-084SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: __1510_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field ___ Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT with gravel/rock fragments

Recovery: **28 inches**

Refusal: **none**

Building Footprint ID: ***CB-13***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Bme

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB13A-SB-085SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/2009

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1545 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC				
SVOC				
Explosives	X			
Metals				
Perchlorate				
PCBs				
Nitrate / Nitrite				
TPH DRO / HRO				
Propellants				
Pesticides				

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT with gravel

Recovery: **34 inches**

Refusal: **none**

Building Footprint ID: ***CB-13A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brenden Pratt

Reviewed by: Brenden Pratt (Please Print)

Signature: Brenden Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB13A-SB-086SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/2009

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1615____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT with rock and brick fragments

Recovery: **28.5 inches**

Refusal: **none**

Building Footprint ID: ***CB-13A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB13A-SB-087SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/2009

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1622___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND over med stiff CLAY over rock fragments trace wood

Recovery: **28 inches**

Refusal: **none**

Building Footprint ID: ***CB-13A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB13A-SB-090SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1631___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT with some clay little gravel and wood

Recovery: **34 inches**

Refusal: **48 inches**

Building Footprint ID: *CB-13A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB13A-SB-089SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/2009

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1644____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown SILT over gray Clay

Recovery: **41.5 inches**

Refusal: **none**

Building Footprint ID: ***CB-13A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB13A-SB-088SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/28/2009

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1650___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	unit
Dissolved Oxygen:	Mg/l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT over med stiff moist brown silty CLAY with little gravel

Recovery: **45 inches**

Refusal: **none**

Building Footprint ID: *CB-13A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Ben Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1SS-541M-3057-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 0924 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft, med stiff, moist, brown, clayey SILT with little gravel and sand

Recovery: **6"**

Refusal: **varies 8-12 inches**

Building Footprint ID: *CA-17*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Mike Shoop (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-4-09

Field Sampling Report

Location ID: LL1SS-542M-3058-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 0930 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	YES	NA
Duplicate ID			NA
Equipment Rinse ID			NA
Trip Blank ID			NA

Sample Description

soft, med stiff, moist, brown, clayey SILT with little gravel and sand

Recovery: 6"

Refusal: varies 8-12 inches

Building Footprint ID: *CA-17*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Mike Shoop (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1SS-542M-3058-MS — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 0930 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field — Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	YES	NA
Duplicate ID			NA
Equipment Rinse ID			NA
Trip Blank ID			NA

Sample Description

soft, med stiff, moist, brown, clayey SILT with little gravel and sand

Recovery: 6"

Refusal: varies 8-12 inches

Building Footprint ID: *CA-17*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Mike Shoop (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1SS-542M-3058-MSD

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 0930 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	YES	NA
Duplicate ID			NA
Equipment Rinse ID			NA
Trip Blank ID			NA

Sample Description

soft, med stiff, moist, brown, clayey SILT with little gravel and sand

Recovery: **6"**

Refusal: **varies 8-12 inches**

Building Footprint ID: ***CA-17***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Mike Shoop (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CB13B-SB-103SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1105____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: __0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, sandy SILT with rock fragments overly medium stiff, brown and gray, silty CLAY with rock fragments

Recovery: *27"*

Refusal: **none**

Building Footprint ID: *CB-13B*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB13B-SB-099SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____1110___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ___0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, sandy SILT with rock fragments

Recovery: **18.5"**

Refusal: **none**

Building Footprint ID: ***CB-13B***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB13B-SB-102SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: __1150_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: __0-2.6_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND with little gravel, clay with red stains at bottom

Recovery: **24 inches**

Refusal: **31 inches**

Building Footprint ID: ***CB-13B***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB13B-SB-101SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: __1155____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2.3____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT with gravel

Recovery: **18 inches**

Refusal: **28 inches**

Building Footprint ID: ***CB-13B***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: ____BME_____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB13B-SB-098SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: __1432_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND with little gravel over med stiff brown sitly CLAY with little gravel

Recovery: **28 inches**

Refusal: **48 inches**

Building Footprint ID: *CB-13B*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB13B-SB-100SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1436____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-1.5_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, silty SAND with gravel

Recovery: **15.5'**

Refusal: **18'**

Building Footprint ID: ***CB-13B***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB13B-SB-096SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1515 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, silty fine to dense SAND with little gravel

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

Recovery: **21 inches**

Refusal: **none**

Building Footprint ID: ***CB-13B***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Mike Shoop (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB13B-SB-097SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: _1522_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-1.5_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, silty SAND with rock fragments

Recovery: **16.5 inches**

Refusal: **18 inches**

Building Footprint ID: ***CB-13B***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB13B-SB-094SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1616___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, silty SAND and gravel

Recovery: 19.5 inches

Refusal: none

Building Footprint ID: *CB-13B*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB13B-SB-095SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/29/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1631____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field - Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose, moist, brown, silty fine SAND with some gravel, little clay

Recovery: **23 inches**

Refusal: **none**

Building Footprint ID: ***CB-13B***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB13B-SB-091SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/30/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___0911___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-3.5_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	unit
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND over gravel

Recovery: **29.5 inches**

Refusal: **42 inches**

Building Footprint ID: ***CB-13B***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brie Eyer

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB13B-SB-092SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/30/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___0930___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-3.2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC				
SVOC				
Explosives (TNT,RDX)	X			
Metals				
Perchlorate				
PCBs				
Nitrate / Nitrite				
TPH DRO / HRO				
Propellants				
Pesticides				

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND over gravel

Recovery: **26.5 inches**

Refusal: **39 inches**

Building Footprint ID: ***CB-13B***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Mike Shoop (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CB13B-SB-093SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/30/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___0942____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2.2_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND over rock fragments and sandy silt

Recovery: **17 inches**

Refusal: **26 inches**

Building Footprint ID: ***CB-17B***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CA6-SB-118SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/30/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1016 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field - Estimated - Measured - GPS Surveyed

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND with rock fragments over soft moist brown sandy CLAY with rock fragments

Recovery: **32 inches**

Refusal: **none**

Building Footprint ID: ***CA-6***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CA6-SB-116SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/30/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____1020___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)		**Analytical Parameters**				**Other Parameters**			
PID / FID Readings:		VOC				Corrosivity			
Background:	0.0 ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	0.0 ppm	Explosives (TNT,RDX)	X			Ignitability			
Water Level:	Ft	Metals							
Temperature:	°C	Perchlorate				**QA Samples**			
Sp. Conductance:	uMHOs	PCBs				MS/MSD	Yes / No		NA
pH:	units	Nitrate / Nitrite				Duplicate ID			NA
Dissolved Oxygen:	Mg/l	TPH DRO / HRO				Equipment Rinse ID			NA
Redox Potential:	mV	Propellants				Trip Blank ID			NA
Turbidity:	N.T.U	Pesticides							

Sample Description

loose moist brown silty SAND with gravel and some clay

Recovery: **27 inches**

Refusal: **none**

Building Footprint ID: ***CA-6***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CA6-SB-117SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/30/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____1044___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)		Analytical Parameters				Other Parameters			
PID / FID Readings:		VOC				Corrosivity			
Background:	0.0 ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	0.0 ppm	Explosives (TNT,RDX)	X			Ignitability			
Water Level:	Ft	Metals							
Temperature:	°C	Perchlorate				QA Samples			
Sp. Conductance:	uMHOs	PCBs				MS/MSD	Yes / No		NA
pH:	units	Nitrate / Nitrite				Duplicate ID			NA
Dissolved Oxygen:	Mg/l	TPH DRO / HRO				Equipment Rinse ID			NA
Redox Potential:	mV	Propellants				Trip Blank ID			NA
Turbidity:	N.T.U.	Pesticides							

Sample Description

loose moist brown silty SAND over stiff moist brown sandy CLAY

Recovery: **27 inches**

Refusal: **none**

Building Footprint ID: ***CA—6***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CA6-SB-114SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/30/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: __1109_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown sandy CLAY little gravel

Recovery: **29 inches**

Refusal: **none**

Building Footprint ID: ***CA-6***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brian Cyra

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CA6-SB-115SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/30/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: __1111____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters			
VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown SILT with rock fragments

Recovery: **23 inches**

Refusal: **none**

Building Footprint ID: ***CA-6***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CA6-SB-121SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/30/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1140___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field - Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters			
VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown to grey clayey SILT with gravel

Recovery: **30.5 inches**

Refusal: **none**

Building Footprint ID: ***CA-6A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CA6-SB-120SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/30/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1200___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist sandy SILT over tan/brown sandstone

Recovery: **28 inches**

Refusal: **none**

Building Footprint ID: ***CA-6A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Eyra

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CA6-SB-119SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/30/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1300 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (INT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist silty SAND over tan fine grained SANDSTONE

Recovery: **31 inches**

Refusal: **none**

Building Footprint ID: ***CA-6A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CA6-SB-122SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 10/30/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1313 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters			
VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown dilty SAND with clay little gravel

Recovery: **29 inches**

Refusal: **none**

Building Footprint ID: ***CA-6A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CA14-SB-136SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____1015___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2.7_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND

Recovery: **24 inches**

Refusal: **32 inches**

Building Footprint ID: ***CA-14***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CA14-SB-135SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____1035___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown-grey silty CLAY with little sand/gravel

Recovery: **24 inches**

Refusal: **none**

Building Footprint ID: *CA-14*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brian Z

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CA14-SB-137SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1055____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-1.9_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHO/
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND with rock fragments

Recovery: **15 inches**

Refusal: **23 inches**

Building Footprint ID: *CA-14*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: B-S

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CA14-SB-138SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1055____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown silty CLAY little sand and gravel

Recovery: **35 inches**

Refusal: **none**

Building Footprint ID: ***CA-14***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CA14-SB-134SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: __1135_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field ___ Estimated - Measured - GPS Surveyed

Sample Depth: _____0-1.9_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND with rock fragments

Recovery: **19 inches**

Refusal: **23 inches**

Building Footprint ID: *CA-14*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: B. E.

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CA14-SB-139SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____1141___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.3____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown silty CLAY with little sand and gravel

Recovery: **28 inches**

Refusal: **39 inches**

Building Footprint ID: ***CA-14***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Duncan Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Duncan Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CA14-SB-133SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: __1155_____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.3_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters			
VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med stiff moist brown silty CLAY with some sand and gravel

Recovery: **34 inches**

Refusal: **40 inches**

Building Footprint ID: ***CA-14***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brenda Pratt

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CA14-SB-141SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1202____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field ___ Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.1_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown silty CLAY with some sand; and gravel

Recovery: **30 inches**

Refusal: **37 inches**

Building Footprint ID: ***CA-14***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CA14-SB-132SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1205___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2.8____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med stiff moist brown silty CLAY with some sand and gravel

Recovery: **29 inches**

Refusal: **34 inches**

Building Footprint ID: ***CA-14***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Ben Eg

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CA14-SB-131SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1225____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2.7_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med stiff brown silty CLAY with rock fragments

Recovery: **25 inches**

Refusal: **32 inches**

Building Footprint ID: *CA-14*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: _____ Date: 12-3-09

Field Sampling Report

Location ID: LL1CA14-SB-140SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: __1226____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field ___ Estimated - Measured - GPS Surveyed

Sample Depth: _____0-2.9_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med stiff moist brown silty CLAY with sand and gravel

Recovery: **33 inches**

Refusal: **42 inches**

Building Footprint ID: ***CA-14***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CA14-SB-130SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/2/2009

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1240___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.6_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med stiff moist brown silty CLAY little sand/gravel

Recovery: **43 inches**

Refusal: **43 inches**

Building Footprint ID: *CA-14*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CA14-SB-142SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1247___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: ____0-2.9_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)		**Analytical Parameters**				**Other Parameters**			
PID / FID Readings:		VOC				Corrosivity			
Background:	0.0 ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	0.0 ppm	Explosives (TNT,RDX)	X			Ignitability			
Water Level:	Ft	Metals							
Temperature:	°C	Perchlorate				**QA Samples**			
Sp. Conductance:	uMHOs	PCBs				MS/MSD	Yes / No		NA
pH:	units	Nitrate / Nitrite				Duplicate ID			NA
Dissolved Oxygen:	Mg / l	TPH DRO / HRO				Equipment Rinse ID			NA
Redox Potential:	mV	Propellants				Trip Blank ID			NA
Turbidity:	N.T.U	Pesticides							

Sample Description

smed stiff moist brown silty CLAY with sand and gravel

Recovery: **24 inches**

Refusal: **35 inches**

Building Footprint ID: *CA-14*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: F-16-SB-144SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____1400___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med stif brown gray mottled CLAY some gravel

Recovery: **35 inches**

Refusal: **none**

Building Footprint ID: ***F-16***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brie Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1CA14-SB-129SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ____1458___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med stiff moist brown silty CLAY little sand/gravel

Recovery: **38 inches**

Refusal: **none**

Building Footprint ID: *CA-14*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Brenda Pratt

Logged By: _____Mike Shoop_____ (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: ~~Brenda Pratt~~ BP 12-3-09 (Please Print)

Signature: Brenda Pratt Date: 12-3-09

Field Sampling Report

Location ID: LL1CA14-SB-128SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1500____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3.7_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med stiff moist brown silty clay with some sand and gravel

Recovery: **33 inches**

Refusal: **44 inches**

Building Footprint ID: *CA-14*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-4-09

Field Sampling Report

Location ID: F-16-SB-143SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1606___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med stiff moist brown gray mottled CLAY trace gravel

Recovery: **38 inches**

Refusal: **none**

Building Footprint ID: ***F-16***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: F-16-SB-144SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____1621___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med stiff moist brown gray silty CLAY little gravel and sand

Recovery: **33 inches**

Refusal: **none**

Building Footprint ID: ***F-16***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Bm Egm

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: F-16-SB-146SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1625____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC				
SVOC				
Explosives (TNT,RDX)	X			
Metals				
Perchlorate				
PCBs				
Nitrate / Nitrite				
TPH DRO / HRO				
Propellants				
Pesticides				

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med stiff moist brown gray CLAY trace gravel

Recovery: **35 inches**

Refusal: **none**

Building Footprint ID: ***F-16***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Ben Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: F-15-SB-149SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1700___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOS
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown silty CLAY with little sand and gravel

Recovery: **23 inches**

Refusal: **none**

Building Footprint ID: ***F-15***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Mike Shoop (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: F-15-SB-147SN-0001-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1705____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown silty CLAY with little sand and gravel

Recovery: **29 inches**

Refusal: **none**

Building Footprint ID: ***F-15***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: F-15-SB-148SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: ___1725____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives (TNT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

med stiff moist brown CLAY trace gravel

Recovery: **38 inches**

Refusal: **none**

Building Footprint ID: ***F-15***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____BME_____ (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: F-15-SB-150SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/02/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____1725___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-4____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC				
SVOC				
Explosives (TNT,RDX)	X			
Metals				
Perchlorate				
PCBs				
Nitrate / Nitrite				
TPH DRO / HRO				
Propellants				
Pesticides				

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft to med stiff moist brown silty CLAY with little sand/gravel

Recovery: **34 inches**

Refusal: **none**

Building Footprint ID: ***F-15***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: Mike Shoop (Please Print)

Signature: Brenda Pratt for Mike Shoop

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-520M-3024-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/03/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 0930 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field - Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs	X		
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brwon silty SAND with gravel

Recovery: **5 inches**

Refusal: **varies 5-12 inches**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Ben Eye

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-521M-3025-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/03/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 0950 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs	X		
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty sand little gravel

Recovery: **3 inches**

Refusal: **4 inches**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Ben Eg

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-522M-3026-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/03/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1015 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs	X		
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND little gravel/clay

Recovery: **3 inches**

Refusal: **4 inches**

Building Footprint ID: *CB-4*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Ben Eg

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-529M-3041-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/03/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1041 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND little gravel

Recovery: **4 inches**

Refusal: **6 inches**

Building Footprint ID: *CB-4WS*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Ben Eger

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-526M-3038-SO — **RVAAP LL 1 Sub-Slab Sample, Ravenna, OH**

Date: 11/03/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1055 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters			
VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND with clay

Recovery: **6 inches**

Refusal: **10 inches**

Building Footprint ID: *CB-4VPI*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Ben Eger

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-533M-3045-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/03/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1440 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist sandy SILT little clay and gravel

Recovery: **8 inches**

Refusal: **varies 10-12 inches**

Building Footprint ID: ***CA-6 A and CA28A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-538M-3054-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/04/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1500 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown silty SAND trace clay and gravel

Recovery: **5 inches**

Refusal: **varied 5-12 inches**

Building Footprint ID: *CB-13B*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Eyl

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-532M-3044-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/03/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1510 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist sandy SILT little clay and gravel

Recovery: **8 inches**

Refusal: **none**

Building Footprint ID: *CA6 and CA28*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brie Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-2-09

Field Sampling Report

Location ID: LL1CB10-SB-077SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/03/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ____1630___ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: ____0-3.3_____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives (INT,RDX)	X		
Metals			
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants			
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy SILT

Recovery: **25 inches**

Refusal: **40 inches**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: _____

Reviewed by: Brenda Pratt (Please Print)

Signature: _____ Date: 12-4-09

Field Sampling Report

Location ID: LL1CB10-SB-076SN-0001-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/03/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe		Plastic Liner	
Type/Construction					Mattocks		JMC	X
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: ___1649____ hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: _____

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: _____0-3____ FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	
PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters				
VOC				
SVOC				
Explosives (TNT,RDX)	X			
Metals				
Perchlorate				
PCBs				
Nitrate / Nitrite				
TPH DRO / HRO				
Propellants				
Pesticides				

Other Parameters			
Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples		
MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

soft moist brown silty CLAY with some sand little gravel

Recovery: **14 inches**

Refusal: **36 inches**

Building Footprint ID: ***CB-10***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: _____ BME _____ (Please Print)

Signature: Ben Eg

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-4-09

Field Sampling Report

Location ID: F15SS-012M-0500-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/04/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1700 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No NA
QA Samples	F15SS-012M-0501-QA
Field Dup	F15SS-012M-0502-SO
Blind Dup	F15SS-012M-0503-SO

Sample Description

loose moist brown and gray CLAY with trace sand and gravel

Recovery: 6 inches

Refusal: 12 inches

Building Footprint ID: *F-15*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

Field Sampling Report

Location ID: F15SS-012M-0501-QA — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/04/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1700 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No NA
QA Samples	F15SS-012M-0501-QA
Field Dup	F15SS-012M-0502-SO
Blind Dup	F15SS-012M-0503-SO

Sample Description

loose moist brown and gray CLAY with trace sand and gravel

Recovery: **6 inches**

Refusal: **12 inches**

Building Footprint ID: ***F-15***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature] Date: 12-1-09

Field Sampling Report

Location ID: F15SS-012M-0502-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/04/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1700 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No NA
QA Samples	F15SS-012M-0501-QA
Field Dup	F15SS-012M-0502-SO
Blind Dup	F15SS-012M-0503-SO

Sample Description

loose moist brown and grey CLAY with trace sand and gravel

Recovery: 6 inches

Refusal: 12 inches

Building Footprint ID: *F-15*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature] Date: 12-1-09

Field Sampling Report

Location ID: F15SS-012M-0503-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/04/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form							
	Yes - No							

Sample Collection: 1710 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field
Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft.
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No NA
QA Samples	F15SS-012M-0501-QA
Field Dup	F15SS-012M-0502-SO
Blind Dup	F15SS-012M-0503-SO

Sample Description

loose moist brown and grey CLAY with trace sand and gravel

Recovery: **6 inches**

Refusal: **12 inches**

Building Footprint ID: ***F-15***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature] Date: 12-1-09

Field Sampling Report

Location ID: LL1SS-537M-3050-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/04/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1400 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NO	NA
QA Duplicate	LL1SS-537M-3051-QA		
Field Duplicate	LL1SS-537M-3052-SO		
Blind Duplicate	LL1SS-537M-3053-SO		

Sample Description

loose moist brown SAND with trace clay and gravel

Recovery: **6 inches**

Refusal: **varies 6-12 inches**

Building Footprint ID: *CB-13/13A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature] Date: 12-4-09

Field Sampling Report

Location ID: LL1SS-537M-3051-QA — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/04/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1400 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHO
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	0.0 ppm		
Pesticides	0.0 ppm		

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NO NA
QA Duplicate		LL1SS-537M-3051-QA
Field Duplicate		LL1SS-537M-3052-SO
Blind Duplicate		LL1SS-537M-3053-SO

Sample Description

loose moist brown silty SAND with trace clay and gravel

Recovery: **6 inches**

Refusal: **varies 6-12 inches**

Building Footprint ID: ***CB13/13A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature] Date: 12-4-09

Field Sampling Report

Location ID: LL1SS-537M-3052-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/04/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1400 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / l
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NO	NA
QA Duplicate		LL1SS-537M-3051-QA	
Field Duplicate		LL1SS-537M-3052-SO	
Blind Duplicate		LL1SS-537M-3053-SO	

Sample Description

moist loose brown silty SAND with trace clay and gravel

Recovery: **6 inches**

Refusal: **varies 6-12 inches**

Building Footprint ID: *CB-13/13A*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature] Date: 12-4-09

Field Sampling Report

Location ID: LL1SS-537M-3053-SO

RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/04/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1415 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NO	NA
QA Duplicate		LL1SS-537M-3051-QA	
Field Duplicate		LL1SS-537M-3052-SO	
Blind Duplicate		LL1SS-537M-3053-SO	

Sample Description

loose moist brown silty SANd with trace clay and gravel

Recovery: **6 inches**

Refusal: **6-12 inches**

Building Footprint ID: ***CB-13/13A***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature] Date: 12-4-09

Field Sampling Report

Location ID: LL1SS-539M-3055-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/04/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	**Well Purging Form** Yes - No							

Sample Collection: 1523 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:		
Background:	0.0	ppm
Sample:	0.0	ppm
Water Level:		FT
Temperature:		°C
Sp. Conductance:		uMHOs
pH:		units
Dissolved Oxygen:		Mg / l
Redox Potential:		mV
Turbidity:		N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy clay some gravel

Recovery: **4 inches**

Refusal: **varies 4-12 inches**

Building Footprint ID: *CA-14*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brenda Pratt

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-4-09

Field Sampling Report

Location ID: LL1SS-540M-3056-SO — **RVAAP LL 1 Sub-Slab Sample, Ravenna, OH**

Date: 11/04/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1528 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	FT
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg/l
Redox Potential:	mV
Turbidity:	N.T.U

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown sandy CLAY some gravel

Recovery: **4 inches**

Refusal: **varies 4-12 inches**

Building Footprint ID: *CA-14*

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: [signature]

Reviewed by: Brenda Pratt (Please Print)

Signature: [signature] Date: 12-4-09

Field Sampling Report

Location ID: F16SS-008M-0504-SO — RVAAP LL 1 Sub-Slab Sample, Ravenna, OH

Date: 11/04/09

Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	X	Plastic Liner	
Type/Construction					Mattocks		JMC	
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1737 hrs

Sample Type: Composite - MI - Grab If MI, # of increments taken: 30

Location: Plotted on Map - Staked in Field Estimated - Measured - GPS Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters
(at time of sample)

PID / FID Readings:	
Background:	0.0 ppm
Sample:	0.0 ppm
Water Level:	Ft
Temperature:	°C
Sp. Conductance:	uMHOs
pH:	units
Dissolved Oxygen:	Mg / L
Redox Potential:	mV
Turbidity:	N.T.U.

Analytical Parameters

VOC			
SVOC			
Explosives	X		
Metals	X		
Perchlorate			
PCBs			
Nitrate / Nitrite			
TPH DRO / HRO			
Propellants	X		
Pesticides			

Other Parameters

Corrosivity			
Reactivity Sulfide/Cyanide			
Ignitability			

QA Samples

MS/MSD	Yes / No	NA
Duplicate ID		NA
Equipment Rinse ID		NA
Trip Blank ID		NA

Sample Description

loose moist brown and gray CLAY with trace sand and gravel

Recovery: **6 inches**

Refusal: **12 inches**

Building Footprint ID: ***F-16***

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks

Parameters: Same as Above - As Listed

Logged By: BME (Please Print)

Signature: Brian Egan

Reviewed by: Brenda Pratt (Please Print)

Signature: Brenda Pratt Date: 12-1-09

APPENDIX B

COCs / Freight Bills

COC No. A 01142

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: URS Corporation - Cleveland

Project Contact: P. Schuler | Contact Phone #: 216-622-2400

Turn Around Requirements: Norm | Location: Ravenna, Ohio

Project ID: 13812319

Sampler (print): M. Snoop, BPrath | Signature: B Prath

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	Explosives	TAL metals + Hex Chrom	Pesticides	SVOCs	PCBs	Pesticides	VOCs	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
LLSS-500M-3000-SO		X	10-19-09 BP	1615	SO:1	1		X	X							
LLSS-502M-3002-SO		X	10-20-09	1000		1		X	X							
LLSS-501M-3001-SO		X		1020		1		X	X							
LLSS-503M-3003-SO		X		1040		1		X	X		X					
LLSS-504M-3004-SO		X		1105		1		X	X		X					
LLSS-505M-3005-SO		X		1130		1		X	X							
LLSS-506M-3006-SO		X		1230		1		X	X	X	X	X	X			
LLSS-506D-3007-SO		X	10-21-09	1439		4								X		
LLSS-507M-3008-SO		X	10-20-09	1710		1		X	X							
LLSS-508M-3009-SO		X		1520		1		X	X							
LLSS-509M-3010-SO		X		1545		1		X	X							
LLSS-511M-3012-SO		X		1623		1		X	X							
LLSS-512M-3013-SO		X	10-21-09	1030		1		X	X							
LLSS-513M-3014-SO		X		1050		1		X	X							
LLSS-514M-3015-SO		X		1057		1		X	X							
LLSS-515M-3016-SO		X		1135		1		X	X							
↓ ↓ ↓ -MS		X		↓		1		X	X							
-MSD		X				1		X	X							
LLSS-516M-3017-SO		X		1131		1		X	X							
Trip Blank 1		X	10-21-09	—	Aq	2								X		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
B Prath	10-21-09	2000					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

COC No. A 01143

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: URS Corporation

Project Contact: P. Schuler

Contact Phone #: 216-622-2406

Turn Around Requirements: Norm

Location: Ravenna, Ohio

Project ID: 13812319

Sampler (print): M. Shoup, B. Pratt

Signature: B Pratt

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	Explosives	TAL metals + Hex. Chrom	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
LL155-517M-3018-SO		X	10-21-09	1450	Soil	1		X	X		
" " -3020-SO		X		1450		1		X	X		
" " -3021-SO		X	1530	~~1535~~ BP		1		X	X		
LL155-518M-3022-SO		X		1505		1		X	X		
LL155-519M-3023-SO		X		1522		1		X	X		
LL355-290M-2000-SO		X		1631		1		X	X		
LL355-291M-2001-SO		X		1640		1		X	X		
LL455-280M-2000-SO		X		1710		1		X	X		
" " -2002-SO		X		1710		1		X	X		
" " -2003-SO		X		1715		1		X	X		
LL455-281M-2004-SO		X		1800		1		X	X		
LL455-282M-2005-SO		X		1810		1		X	X		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
B Pratt	10-21-09	2000					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

COC No. A 01145

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: URS Corp

Project Contact: P. Schuler

Contact Phone #: 216-622-2400

Turn Around Requirements: Norm

Location: Ravenna, OH

Project ID: 13812319

Sampler (print): B Egan, B Pruett

Signature: B Pruett

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	Metals	Hex Chrm	SVOCs	VOCs	Pesticides	PCBs	Propellants	Explosives	TOTAL # (LAB USE)
LL155-534M-0000-ER		X	10-22-09	1800	AQ	12		1	1	2	2	2	2	2	2	
Trip Blank 1022		X	—	—	AQ	2					2					

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
B Pruett	10-22-09	1900					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

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Chain of Custody

Page 1 of 1

Company: URS Corp
Project Contact: P. Schuler
Telephone: 216-622-2406
Project Name: RVAAP
Project Number: 13812319
Project Location: Ravenna, Ohio
Sampled By: M. Snoop

Regulatory Program:
UST RCRA SDWA NPDES
Solid Waste Other _____

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Turnaround Time
Normal RUSH*
Date Needed _____

*Notify Lab prior to sending in RUSH samples. Surcharges:
24 hr 200% 2-3 days 100% 4-9 days 50%, subject to change without notice.

Lab Use Only
Place Header Sticker Here:

Mail Report To:
Company: URS Corp.
Address: 1375 Euclid Ave
City/State/Zip: Cleveland OH 44105

Invoice To:
Company: Same
Address:
City/State/Zip:

PO No.

Client Special Instructions:

Landfill License Number:

Collection Date	Collection Time	Grab/ Comp	Sample ID Description	WDNR Well ID #	**Matrix:	TAL Metals + Hex Chrom	Explosives						Total # of Containers	Preservation*	Lab ID #
				Filt? Y/N											
				Fill in Spaces with Bottles per Test											
10-21-09	1450	M1	LL155-517M-3019-QA		SO	X	X						1	A	
10-21-09	1710	M1	LL155-280M-2001-QA		SO	X	X						1	A	

Relinquished By:	Date/Time	Relinquished By:	Date/Time
BPratt	10-22-09 1900		
Received by:	Date/Time	Received for Laboratory by:	Date/Time

Ice Present Yes No
Temperature _____
Cooler # _____

**Matrix
S–Soil A–Air Sl–Sludge M–Misc Waste
GW–Groundwater SW–Surface Water
WW–Wastewater DW–Drinking Water

* Preservation Code
A=None B=HCL
C=H2SO4 D=HNO3
E=Encore F=Methanol
G=NaOH
O=Other _____

COC No. A 01146

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: URS Corp

Project Contact: P Schuler

Contact Phone #: 216-622-2400

Turn Around Requirements: Norm

Location: Ravenna, OH

Project ID: 13812319

Sampler (print): M. Shoop, B. Pratt

Signature: B Pratt

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	Explosives	TAL metals + Hex Chrom	Propellants	SVOCs	PCBs	Pesticides	VOCs	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
LL155-523M-3027-SO	X		10-26-09	1045	SO	1		X	X	X	X	X	X			
LL155-523M-3029-SO	X		"	1045	SO	1		X	X	X	X	X	X			
LL155-523M-3030-SO	X		"	1100	SO	1		X	X	X	X	X	X			
LL155-523D-3031-SO	X	X	"	1040	SO	3								X		
LL155-523D-3033-SO	X	X	"	1044	SO	3								X		
LL155-524M-3034-SO	X		"	1115	SO	1		X	X	X	X	X	X			
LL155-525M-3036-SO	X		"	1130	SO	1		X	X	X	X	X	X			
" " " -MS	X		"	"	SO	1		X	X	X	X	X	X			
" " " -MSD	X		"	"	SO	1		X	X	X	X	X	X			
LL155-525D-3037-SO		X	"	1145	SO	3								X		
LL155-525D-3037-MS		X	"	"	SO	3								X		
LL155-525D-3037-MSD		X	"	"	SO	3								X		
Trip Blank K-10216			10-26-09	—	AQ	2								X		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
B Pratt	10-26-09	1900					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

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Chain of Custody

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Company: URS
Project Contact: P. Schuler
Telephone: 216 622-2400
Project Name: RVAAP
Project Number: 13812319
Project Location: Ravenna, OH
Sampled By: M. Shoup

Regulatory Program:
UST RCRA SDWA NPDES
Solid Waste Other _____

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
608-356-2760 Fax 608-356-2766
www.ctlaboratories.com

Turnaround Time
(Normal) RUSH*
Date Needed _____

*Notify Lab prior to sending in RUSH samples. Surcharges:
24 hr 200% 2-3 days 100% 4-9 days 50%, subject to change without notice.

Lab Use Only
Place Header Sticker Here:

Mail Report To:
Company:
Address:
City/State/Zip:

Invoice To:
Company:
Address:
City/State/Zip:

PO No.

Client Special Instructions:

Landfill License Number:

Collection Date	Collection Time	Grab/ Comp	Sample ID Description	WDNR Well ID #	**Matrix:	Explosives	TAL metals + Hexavalent Chromium	Propellants	SVOCs	PCBs	Pesticides	VOCs		Total # of Containers	Preservation*	Lab ID #
			Filt? Y/N													
			Fill in Spaces with Bottles per Test													
10-26-09	1045	M1	LL155-523M-3028-QA		S	X	X	X	X	X	X			1	A	
10-26-09	1042	G	LL155-523D-3032-QA		S							X		1	H	

* Preservation Code
A=None B=HCL
C=H2SO4 D=HNO3
E=Encore F=Methanol
G=NaOH
O=Other _____

Relinquished By:	Date/Time	Relinquished By:	Date/Time
B Prcott	10-26 /1800		
Received by:	Date/Time	Received for Laboratory by:	Date/Time

Ice Present Yes No
Temperature _____
Cooler # _____

**Matrix
S–Soil A–Air Sl–Sludge M–Misc Waste
GW–Groundwater SW–Surface Water
WW–Wastewater DW–Drinking Water

COC No. A 01148

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: URS Corp

Project Contact: P. Schuler

Contact Phone #: 216-622-2400

Turn Around Requirements: Norm

Location: Ravenna, Ohio

Project ID: 13812317

Sampler (print): B. Pratt, M. Shoop

Signature: B. Pratt

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs	Explosives	TAL Metals + HEX Chrom	Prodecellants	SVOCs	PCBs	Pesticides	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
LL155-524D-303550		X	10-26-09	1165	SO	3		X								
LL155-527M-3039-50	X		10-27-09	1535	SO	1			X	X	X					
LL155-530M-3042-50	X			1525	SO	1			X	X	X					
LL155-534M-3046-50	X			1635	SO	1			X	X	X	X	X	X		
LL155-534D-3047-50	*	X		1630	SO	3		X								
LL155-535M-3048-50	X			1640	SO	1			X	X	X		X			
LL155-536M-3049-50	X			1701	SO	1			X	X						
TripBlank 1027		X		—	AQ	2		X								

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
B. Pratt	10-27-09	1800					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

COC No. A 12937

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: URS Corporation

Project Contact: P. Schuler

Contact Phone #: 216-622-2406

Turn Around Requirements: Norm

Location: Ravenna, OH

Project ID: 13812319

Sampler (print): B. Pratt, M. Shoop

Signature: B Pratt

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	Explosives	Propellants	TAL Metals + Hex Chrom	SVOCs	PCBs / Pesticides	VOCs	TOTAL # (LAB USE)
LL155-541M-30578	X		10-29-09	0924	Soil	1		X	X	X				
LL155-542M-3058-30	X		"	0930	Soil	1		X	X	X				
" " 4-MS	X		"	"	Soil	1		X	X	X				
" " 4-MSD	X		"	"	Soil	1		X	X	X				
LL155-523M-0000-FB		X	10-29-09	1730	AQ	12		X	X	X	X	X	X	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
B. Pratt	10-29-09	1900					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page _____ of _____

COC No. A 01147

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: URS Corp

Project Contact: P. Schuler

Contact Phone #: 216-622-2400

Turn Around Requirements: Norm

Location: Ravenna, Ohio

Project ID: 13812319 RVAAP

Sampler (print): M. Shoop, J. Shepard

Signature:

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	Explosives	Propellants	Metals + Wet Chem	PCBs	TOTAL # (LAB USE)
LL15S-520M-3024-SO	X		11-03-09	0930	SO	1		X	X	X	X	
-521M-3025-SO	X			0950		1		X	X	X	X	
-522M-3026-SO	X			1030		1		X	X	X	X	
-526M-3038-SO	X			1055		1		X		X		
-529M-3041-SO	X			1041		1		X	X	X		
-532M-3044-SO	X			1510		1		X	X	X		
-533M-3045-SO	X		BP	1428		1		X	X	X		
-537M-3050-SO	X		11-04-09	1400		1		X	X	X		
-537M-3052-SO	X		BP	1415 1400		1		X	X	X		
-537M-3053-SO	X			1415		1		X	X	X		
-538M-3054-SO	X			1500		1		X	X	X		
-539M-3055-SO	X			1523		1		X	X	X		
-540M-3056-SO	X			1528		1		X	X	X		
F15SS-012M-0500-SO	X			1700		1		X	X	X		
F15SS-012M-0502-SO	X			1700		1		X	X	X		
F15SS-013M-0503-SO	X			1710		1		X	X	X		
F16SS-008M-0504-SO	X			1737		1		X	X	X		
LL15S-520M-0000-ER		X	11-4-09	1600	AQ	8		X	X	X	X	

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
B. Pruett	11-04-09 BP	1800					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

FedEx Express **US Airbill**

FedEx Tracking Number 8686 5827 7810

Sender's Copy

From *Please print and press hard.*

Date 10-21-09 | Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Brenda Pratt | Phone (216) 622-2400

Company URS Corporation

Address 1375 Euclid Ave 600

Dept./Floor/Suite/Room

City Cleveland | State OH | ZIP 44105

Your Internal Billing Reference 13822319.01.00100
First 24 characters will appear on invoice.

To

Recipient's Name Sample Receiving | Phone (740) 373-4071

Company Microbac Labs

Recipient's Address 158 Starlite Drive

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

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Marietta | State OH | ZIP 45750

Schedule a pickup at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

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

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

FedEx Envelope rate not available. Minimum charge: One-pound rate. *To most locations.

4b Express Freight Service *Packages over 150 lbs.*

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

* Call for Confirmation: ** To most locations.

5 Packaging

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

* Declared value limit $500.

6 Special Handling

Include FedEx address in Section 3.

- [ ] **SATURDAY Delivery NOT Available for** FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] **HOLD Weekday at FedEx Location NOT Available for** FedEx First Overnight.
- [ ] **HOLD Saturday at FedEx Location Available ONLY for** FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

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

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:*

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

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

FedEx Acct. No. or Credit Card No. 157805967 | Exp. Date

Total Packages	Total Weight	Total Declared Value†
3	173.75	$ .00

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

8 Residential Delivery Signature Options

If you require a signature, check Direct or Indirect.

- [ ] **No Signature Required** — Package may be left without obtaining a signature for delivery.
- [ ] **Direct Signature** — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] **Indirect Signature** — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

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RETAIN THIS COPY FOR YOUR RECORDS.

FedEx Express **US Airbill**

FedEx Tracking Number 8686 5827 7820

Sender's Copy

From *Please print and press hard.*

Date 10-22-09 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Brenda Pratt Phone (216) 622-2400

Company URS Corp

Address 1375 Euclid Ave Dept./Floor/Suite/Room 400

City Cleveland State OH ZIP 44105

Your Internal Billing Reference First 24 characters will appear on invoice. 13812319 OPTIONAL 10000

To

Recipient's Name Sample Receiving Phone (740) 373-4071

Company Microbac

Recipient's Address 158 Starlite Drive Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Marietta State OH ZIP 45750

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

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

FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service *Packages over 150 lbs.*

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

* Call for Confirmation: ** To most locations.

5 Packaging

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

* Declared value limit $500.

6 Special Handling Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — NOT Available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

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

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

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

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

Total Packages	Total Weight	Total Declared Value†
1	52	$ .00

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

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

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FedEx US Airbill
Express

FedEx Tracking Number 8686 5827 7853

From *Please print and press hard.*

Date 10-26-09 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Brenda Pratt Phone (216) 622-2400

Company URS Corp

Address 1375 Euclid Ave 600
Dept/Floor/Suite/Room

City Cleveland State OH ZIP 44105

Your Internal Billing Reference (OPTIONAL)
First 24 characters will appear on invoice. 13812319.100000

To

Recipient's Name Sample Receiving Phone (740) 373-4071

Company Microbac

Recipient's Address 158 Starlite Drive
We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept/Floor/Suite/Room

Address
To request a package be held at a specific FedEx location, print FedEx address here.

City Marietta State OH ZIP 45750

Schedule a pickup at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

Sender's Copy

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

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

FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service *Packages over 150 lbs.*

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

* Call for Confirmation: ** To most locations.

5 Packaging

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

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — NOT Available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

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

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

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

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

Total Packages	Total Weight	Total Declared Value†
1	37	$ .00

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

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

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RETAIN THIS COPY FOR YOUR RECORDS.

FedEx US Airbill
Express

FedEx Tracking Number 8686 5827 7842

From *Please print and press hard.*

Date 10-22-09 Sender's FedEx Account Number 2030 0976 7

Sender's Name Brenda Pratt Phone (216) 622-2400

Company URS Corporation

Address 1375 Euclid Ave 600
Dept/Floor/Suite/Room

City Cleveland State OH ZIP 44105

Your Internal Billing Reference (OPTIONAL)
First 24 characters will appear on invoice. 13812319.100000

To

Recipient's Name Sample Receiving Phone (608) 356-2760

Company CT Laboratories

Recipient's Address 1230 Lange Court
We cannot deliver to P.O. boxes or P.O. ZIP codes. Dept/Floor/Suite/Room

Address
To request a package be held at a specific FedEx location, print FedEx address here.

City Baraboo State WI ZIP 53913

Store your addresses at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

Sender's Copy

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

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

FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service *Packages over 150 lbs.*

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

* Call for Confirmation: ** To most locations.

5 Packaging

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

* Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — NOT Available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

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

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

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

FedEx Acct. No. or Credit Card No. Exp. Date

Total Packages	Total Weight	Total Declared Value†
1		$ .00

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

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

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FedEx US Airbill
Express

FedEx Tracking Number 8686 5827 7864

From *Please print and press hard.*

Date 10-26-09 Sender's FedEx Account Number 2030 0426 7 SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Brenda Pratt Phone (216) 622-2400

Company URS Corporation

Address 1375 Euclid Ave 600 Dept./Floor/Suite/Room

City Cleveland State OH ZIP 44105

Your Internal Billing Reference First 24 characters will appear on invoice. 13812319, 18000 OPTIONAL

To

Recipient's Name Sample Receiving Phone (608) 356-2760

Company CT Laboratories

Recipient's Address 1230 Lange Court Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Baraboo State WI ZIP 53913

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Simplify your shipping. Manage your account. Access all the tools you need.

Sender's Copy

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

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

FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service *Packages over 150 lbs.*

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

* Call for Confirmation: ** To most locations.

5 Packaging

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

* Declared value limit $500.

6 Special Handling Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — NOT Available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

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

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

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

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

Total Packages	Total Weight	Total Declared Value†
1	13	$ .00

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

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

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RETAIN THIS COPY FOR YOUR RECORDS.

FedEx US Airbill
Express

FedEx Tracking Number 8686 5827 7875

From *Please print and press hard.*

Date 10-27-09 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Brenda Pratt Phone (216) 622-2400

Company URS

Address 1375 Euclid Ave 600 Dept./Floor/Suite/Room

City Cleveland State OH ZIP 44105

Your Internal Billing Reference First 24 characters will appear on invoice. 13812319 OPTIONAL

To

Recipient's Name Sample Receiving Phone (740) 373-4071

Company Microbac

Recipient's Address 158 Starlite Drive Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Marietta State OH ZIP 45750

Ship and track packages at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

Sender's Copy

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

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

FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service *Packages over 150 lbs.*

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

* Call for Confirmation: ** To most locations.

5 Packaging

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

* Declared value limit $500.

6 Special Handling Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — NOT Available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

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

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging. [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

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

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

Total Packages	Total Weight	Total Declared Value†
1	29	$ .00

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

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

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FedEx Express US Airbill

FedEx Tracking Number 8686 5827 7886

From *Please print and press hard.*

Date 10-29-09 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Brenda Pratt Phone (216) 622-2400

Company URS

Address 1375 Euclid Ave

Dept./Floor/Suite/Room

City Cleveland State OH ZIP 44105

Your Internal Billing Reference First 24 characters will appear on invoice. 13812319, 10000

To

Recipient's Name Sample Receiving Phone (740) 373-4071

Company Microbac

Recipient's Address 158 Starlite Drive

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Marietta State OH ZIP 45750

Store your addresses at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

Sender's Copy

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

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

FedEx Envelope rate not available. Minimum charge: One-pound rate.

*To most locations.

4b Express Freight Service *Packages over 150 lbs.*

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

*Call for Confirmation:

**To most locations.

5 Packaging

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

*Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
- [ ] HOLD Weekday at FedEx Location — NOT Available for FedEx First Overnight.
- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

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

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* — Enter FedEx Acct. No. or Credit Card No. below.

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

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

Total Packages	Total Weight	Total Declared Value†
1	5	$ .00

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

8 Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
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FedEx Express US Airbill

FedEx Tracking Number 8686 5827 7897

From *Please print and press hard.*

Date 11-04-09 Sender's FedEx Account Number SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Brenda Pratt Phone (216) 622-2400

Company URS Corp

Address 1375 Euclid Ave 600

Dept./Floor/Suite/Room

City Cleveland State OH ZIP 44105

Your Internal Billing Reference First 24 characters will appear on invoice. 13812319, 10000

To

Recipient's Name Sample Receiving Phone (740) 373-4071

Company Microbac

Recipient's Address 158 Starlite Drive

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Marietta State OH ZIP 45750

Schedule a pickup at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

Sender's Copy

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

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

FedEx Envelope rate not available. Minimum charge: One-pound rate.

*To most locations.

4b Express Freight Service *Packages over 150 lbs.*

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

*Call for Confirmation:

**To most locations.

5 Packaging

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

*Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
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- [ ] HOLD Saturday at FedEx Location — Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.

Does this shipment contain dangerous goods? One box must be checked.

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

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* — Enter FedEx Acct. No. or Credit Card No. below.

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

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

Total Packages	Total Weight	Total Declared Value†
2	120	$ .00

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

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- [ ] No Signature Required — Package may be left without obtaining a signature for delivery.
- [ ] Direct Signature — Someone at recipient's address may sign for delivery. *Fee applies.*
- [ ] Indirect Signature — If no one is available at recipient's address, someone at a neighboring address may sign for delivery. *Fee applies.*

520

RETAIN THIS COPY FOR YOUR RECORDS.

FedEx® US Airbill Express

FedEx Tracking Number 8686 5827 6993

From *Please print and press hard.*

Date 11-4-09 Sender's FedEx Account Number 2030 0926 7 SENDER'S FEDEX ACCOUNT NUMBER ONLY

Sender's Name Brenda Pratt Phone (216) 622-2400

Company URS Corp

Address 1375 Euclid Ave 6000 Dept/Floor/Suite/Room

City Cleveland State OH ZIP 44105

Your Internal Billing Reference First 24 characters will appear on invoice. 138123 19. STATION 10000

To

Recipient's Name Samae Receiving Phone (608) 356-2760

Company CT Labs

Recipient's Address 1230 Lange Court

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

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City Baraboo State WI ZIP 53913

Ship and track packages at fedex.com
Simplify your shipping. Manage your account. Access all the tools you need.

Sender's Copy

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

- [x] FedEx Priority Overnight — Next business morning.* Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.
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FedEx Envelope rate not available. Minimum charge: One-pound rate. * To most locations.

4b Express Freight Service *Packages over 150 lbs.*

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* Call for Confirmation: ** To most locations.

5 Packaging

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

* Declared value limit $500.

6 Special Handling Include FedEx address in Section 3.

- [ ] SATURDAY Delivery — NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 3Day Freight.
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Does this shipment contain dangerous goods? One box must be checked.

- [x] No
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Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

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

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

Total Packages	Total Weight	Total Declared Value†
1	1	$ .00

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

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APPENDIX C

Field Screening Core Location Coordinates

Appendix C: Soil Core Location Coordinates (Obtained from GPS Unit)

POINTNAME	NORTHING	EASTING
F15-SB-147SN	563743.168	2349449.68
F15-SB-148SN	563749.45	2349473.511
F15-SB-149SN	563820.131	2349444.151
F15-SB-150SN	563818.031	2349477.382
F16-SB-143SN	562527.026	2349475.472
F16-SB-144SN	562518.158	2349506.922
F16-SB-145SN	562436.53	2349478.115
F16-SB-146SN	562439.568	2349501.294
LL1-151A-SS-017SN	563009.698	2375967.098
LL1-151-SS-016SN	563058.062	2375941.214
LL1CA14-SB-128SN	564635.132	2376169.583
LL1CA14-SB-129SN	564648.374	2376152.102
LL1CA14-SB-130SN	564665.986	2376144.508
LL1CA14-SB-131SN	564683.456	2376136.088
LL1CA14-SB-132SN	564695.202	2376127.711
LL1CA14-SB-133SN	564720.227	2376116.993
LL1CA14-SB-134SN	564732.02	2376112.374
LL1CA14-SB-135SN	564668.158	2376177.493
LL1CA14-SB-136SN	564804.078	2376123.511
LL1CA14-SB-137SN	564797.191	2376107.079
LL1CA14-SB-138SN	564790.744	2376112.979
LL1CA14-SB-139SN	564725.688	2376162.136
LL1CA14-SB-140SN	564676.086	2376160.698
LL1CA14-SB-141SN	564707.547	2376158.774
LL1CA14-SB-142SN	564641.337	2376183.204
LL1CA15-SS-021SN	565080.454	2376352.367
LL1CA16-SS-020SN	565050.937	2375989.369
LL1CA16-SS-020SN	565050.937	2375989.369
LL1CA17-SB-104SN	565197.444	2375850.663
LL1CA17-SB-105SN	565230.641	2375879.152
LL1CA17-SB-106SN	565231.07	2375852.772
LL1CA17-SB-107SN	565241.997	2375821.643
LL1CA17-SB-108SN	565259.592	2375856.519
LL1CA17-SB-109SN	565259.747	2375830.374
LL1CA17-SB-110SN	565285.122	2375817.11
LL1CA17-SB-111SN	565307.946	2375828.054
LL1CA17-SB-112SN	565285.411	2375794.255
LL1CA17-SB-113SN	565270.408	2375812.006
LL1CA21-SS-023SN	563932.37	2376831.594
LL1CA28A-SS-025SN	563153.818	2377222.296
LL1CA28-SS-024-SN	563597.629	2376985.601
LL1CA5-SS-026SN	562596.256	2377557.735
LL1CA6A-SB-119SN	563157.546	2377255.904
LL1CA6A-SB-120SN	563131.3	2377269.127
LL1CA6A-SB-121SN	563139.735	2377245.112
LL1CA6A-SB-122SN	563146.994	2377227.495
LL1CA6A-SB-123SN	563121.691	2377238.995
LL1CA6-SB-114SN	563599.493	2377005.27
LL1CA6-SB-115SN	563575.252	2377022.752
LL1CA6-SB-116SN	563579.416	2377003.956
LL1CA6-SB-117SN	563586.066	2376987.617
LL1CA6-SB-118SN	563562.759	2376998.701
LL1CA7-SS-021SN	564133.047	2376713.972
LL1CA8-SS-015SN	562856.29	2376219.975

POINTNAME	NORTHING	EASTING
LL1CB10-SB-063SN	563683.568	2376175.068
LL1CB10-SB-064SN	563696.312	2376195.012
LL1CB10-SB-065SN	563761.692	2376146.269
LL1CB10-SB-066SN	563798.07	2376148.097
LL1CB10-SB-067SN	563801.271	2376102.695
LL1CB10-SB-068SN	563849.289	2376097.955
LL1CB10-SB-069SN	563886.555	2376097.15
LL1CB10-SB-070SN	563855.21	2376066.755
LL1CB10-SB-071SN	563930.322	2376072.492
LL1CB10-SB-072SN	563938.015	2376041.667
LL1CB10-SB-073SN	563955.226	2376019.329
LL1CB10-SB-074SN	563969.513	2376051.732
LL1CB10VP1-SB-075SN	563924.453	2376142.607
LL1CB10VP2-SB-076SN	563853.121	2376175.9
LL1CB10VP3-SB-077SN	563787.658	2376218.504
LL1CB11-SS-028SN	563341.428	2376628.146
LL1CB13A-SB-085SN	564715.334	2375615.329
LL1CB13A-SB-086SN	564730.945	2375641.731
LL1CB13A-SB-087SN	564774.961	2375604.241
LL1CB13A-SB-088SN	564828.6	2375566.894
LL1CB13A-SB-089SN	564857.665	2375544.78
LL1CB13A-SB-090SN	564868.598	2375567.593
LL1CB13B-SB-081SN	564534.015	2375747.647
LL1CB13B-SB-091SN	564460.145	2375818.174
LL1CB13B-SB-092SN	564473.632	2375840.391
LL1CB13B-SB-093SN	564490.944	2375868.01
LL1CB13B-SB-094SN	564497.44	2375799.458
LL1CB13B-SB-095SN	564536.139	2375811.774
LL1CB13B-SB-096SN	564564.293	2375787.089
LL1CB13B-SB-097SN	564607.383	2375797.628
LL1CB13B-SB-098SN	564601.734	2375746.083
LL1CB13B-SB-099SN	564641.262	2375733.72
LL1CB13B-SB-100SN	564661.148	2375771.69
LL1CB13B-SB-101SN	564688.245	2375734.532
LL1CB13B-SB-102SN	564730.384	2375740.991
LL1CB13B-SB-103SN	564716.617	2375688.782
LL1CB13-SB-078SN	564360.705	2375791.726
LL1CB13-SB-079SN	564424.747	2375807.192
LL1CB13-SB-080SN	564430.527	2375757.958
LL1CB13-SB-082SN	564544.591	2375695.695
LL1CB13-SB-083SN	564610.806	2375704.654
LL1CB13-SB-084SN	564681.816	2375622.093
LL1CB19-SS-003SN	561845.847	2377161.535
LL1CB20-SS-005SN	562038.387	2377157.537
LL1CB25-SS-010SN-0001-SO	562517.732	2376838.242
LL1CB25-SS-011SN-0001-SO	562510.95	2376839.283
LL1CB25-SS-012SN-0001-SO	562503.878	2376844.377
LL1CB25-SS-013SN-0001-SO	562483.947	2376834.387
LL1CB25-SS-014SN-0001-SO	562517.518	2376850.331
LL1CB2-SS-004SN	561921.976	2377121.024
LL1CB3-SS-006-SN-0001-SO	562093.136	2377055.398
LL1CB3-SS-007-SN-0001-SO	562185.596	2376980.261
LL1CB3-SS-008-SN-0001-SO	562208.545	2376964.423
LL1CB3-SS-009-SN-0001-SO	562233.553	2376952.842
LL1CB4-048	563276.4	2376474.735
LL1CB4-049	563310.374	2376454.724

POINTNAME	NORTHING	EASTING
LL1CB4-050	563299.864	2376483.414
LL1CB4-051	563286.83	2376509.119
LL1CB4-052	563326.529	2376492.947
LL1CB4-053	563311.532	2376510.121
LL1CB4-054	563310.225	2376547.966
LL1CB4-055	563346.855	2376530.43
LL1CB4-056	563338.134	2376584.443
LL1CB4-057	563365.7	2376571.448
LL1CB4-058	563348.908	2376645.568
LL1CB4-059	563385.071	2376628.337
LL1CB4A-032	562830.014	2376698.81
LL1CB4A-033	562859.241	2376690.963
LL1CB4A-034	562857.66	2376721.463
LL1CB4A-035	562849.157	2376744.08
LL1CB4A-036	562879.77	2376721.791
LL1CB4A-037	562876.358	2376755.981
LL1CB4A-038	562868.361	2376778.688
LL1CB4A-039	562904.725	2376768.221
LL1CB4A-040	562911.076	2376821.312
LL1CB4A-041	562922.208	2376803.691
LL1CB4A-042	562915.472	2376891.483
LL1CB4A-043	562962.199	2376869.739
LL1CB4A-WN-044	562935.069	2376808.423
LL1CB4A-WN-045	562922.836	2376789.91
LL1CB4A-WS-030	562872.511	2376814.712
LL1CB4A-WS-031	562876.365	2376832.881
LL1CB4B-SS-027SN	563069.182	2376565.856
LL1CB4VP1-SB-062SN	563396.939	2376467.913
LL1CB4WN-SB-060SN	563370.631	2376564.728
LL1CB4WN-SB-061SN	563376.384	2376581.942
LL1CB4WS-SB-046SN	563309.62	2376583.615
LL1CB4WS-SB-047SN	563315.316	2376603.535
LL1CB801-SS-002SN	561653.971	2377323.085
LL1CB9-SS-018SN	563479.538	2376300.6
LL1CC1-SS-001SN	561926.657	2377364.747
LL1T4801-SS-019SN	564402.094	2376063.055

APPENDIX D

Field Screening Laboratory Calculations

Table D-1
TNT Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	$Abs_{"initial"}$	$Abs_{"sample"}$	Result	TNT Conc. (ppm) (Cleanup Level: 878 ppm)	Comments
LL1CB10-SB-063-SN-0001-SO	10/19/2009	17:00	10/20/2009	1	0.005	0.011	-0.28	ND	
LL1CB10-SB-063-SN-0002-SO	10/19/2009	17:00	10/20/2009	1	0.002	0.006	-0.06	ND	
LL1CB10-SB-063-SN-0003-SO	10/19/2009	17:00	10/20/2009	1	0.003	0.011	-0.03	ND	
LL1CB10-SB-063-SN-0004-SO	10/19/2009	17:00	10/20/2009	1	0.003	0.011	-0.03	ND	
LL1CB10-SB-063-SN-0005-SO	10/19/2009	17:00	10/20/2009	1	0.004	0.008	-0.25	ND	
LL1CC1-SS-001-SN-0001-SO	10/19/2009	15:45	10/20/2009	1	0.170	0.281	-12.35	ND	
LL1CB801-SS-002-SN-0001-SO	10/19/2009	9:55	10/20/2009	1	0.004	0.008	-0.25	ND	
LL1CB19-SS-003-SN-0001-SO	10/19/2009	10:30	10/20/2009	1	0.003	0.006	-0.19	ND	
LL1CB2-SS-004-SN-0001-SO	10/19/2009	10:55	10/20/2009	1	0.006	0.021	-0.09	ND	
LL1CB20-SS-005-SN-0001-SO	10/19/2009	11:20	10/20/2009	1	0.003	0.006	-0.19	ND	
LL1CB3-SS-006-SN-0001-SO	10/20/2009	12:05	10/20/2009	1	0.010	0.016	-0.74	ND	
LL1CB3-SS-007-SN-0001-SO	10/20/2009	12:10	10/20/2009	1	0.006	0.012	-0.37	ND	
LL1CB3-SS-008-SN-0001-SO	10/20/2009	12:15	10/20/2009	1	0.009	0.017	-0.59	ND	
LL1CB3-SS-009-SN-0001-SO	10/20/2009	12:20	10/20/2009	1	0.007	0.015	-0.40	ND	
LL1CB3-SS-009-SN-0001-DUP	10/20/2009	12:20	10/20/2009	1	0.008	0.016	-0.50	ND	
LL1CB8-SS-015SN-0001-SO	10/20/2009	15:15	10/22/2009	1	0.003	0.005	-0.22	ND	
LL1151-SS-016SN-0001-SO	10/20/2009	15:35	10/22/2009	1	0.046	0.091	-2.88	ND	
LL1151A-SS-017SN-0001-SO	10/20/2009	15:38	10/22/2009	1	0.035	0.058	-2.54	ND	
LL1CB9-SS-018SN-0001-SO	10/20/2009	16:05	10/22/2009	1	0.010	0.012	-0.87	ND	
LL1CB25-SS-010SN-0001-SO	10/20/2009	16:40	10/22/2009	1	0.005	0.026	0.19	ND	
LL1CB25-SS-011SN-0001-SO	10/20/2009	16:43	10/22/2009	1	0.014	0.041	-0.46	ND	
LL1CB25-SS-012SN-0001-SO	10/20/2009	16:48	10/22/2009	1	0.018	0.189	3.62	3.6	
LL1CB25-SS-013SN-0001-SO	10/20/2009	16:52	10/22/2009	1	0.027	0.067	-1.27	ND	
LL1CB25-SS-014SN-0001-SO	10/20/2009	16:59	10/22/2009	1	0.092	0.165	-6.28	ND	
LL1T4801-SS-019SN-0001-SO	10/21/2009	10:15	10/22/2009	1	0.028	0.085	-0.84	ND	
LL1CA15-SS-021SN-0001-SO	10/21/2009	10:43	10/22/2009	1	0.028	0.098	-0.43	ND	
LL1CA16-SS-020SN-0001-SO	10/21/2009	10:45	10/22/2009	1	0.002	0.007	-0.03	ND	
LL1CA21-SS-023SN-0001-SO	10/21/2009	11:16	10/22/2009	1	0.008	0.037	0.15	ND	
LL1CA7-SS-022SN-0001-SO	10/21/2009	11:25	10/22/2009	1	0.020	0.775	21.52	21.5	
LL1CA28-SS-024SN-0001-SO	10/21/2009	14:33	10/22/2009	1	0.010	0.032	-0.25	ND	
LL1CA28A-SS-025SN-0001-SO	10/21/2009	14:43	10/22/2009	1	0.007	0.028	0.00	ND	
LL1CA5-SS-026SN-0001-SO	10/21/2009	14:45	10/22/2009	1	0.009	0.016	-0.62	ND	
LL1CB4B-SS-027SN-0001-SO	10/21/2009	14:49	10/22/2009	1	0.020	0.094	0.43	ND	
LL1CB11-SS-028SN-0001-SO	10/21/2009	15:17	10/22/2009	1	0.002	0.007	-0.03	ND	
LL1CB11-SS-028SN-0001-SO-DUP	10/21/2009	15:17	10/22/2009	1	0.003	0.009	-0.09	ND	
LL3EB803-SS-001SN-0001-SO	10/21/2009	16:20	10/22/2009	1	0.014	0.029	-0.84	ND	
LL4G1-SS-001SN-0001-SO	10/21/2009	17:00	10/22/2009	1	0.004	0.015	-0.03	ND	
LL4G1A-SS-002SN-0001-SO	10/21/2009	17:55	10/22/2009	1	0.003	0.010	-0.06	ND	
LL4G3-SS-003SN-0001-SO	10/21/2009	18:05	10/22/2009	1	0.002	0.012	0.12	ND	
LL1CB4A-SB-032SN-0001-SO	10/22/2009	1148	10/23/2009	1	0.000	0.001	0.03	ND	
LL1CB4A-SB-032SN-0002-SO	10/22/2009	1148	10/23/2009	1	0.001	0.002	-0.06	ND	
LL1CB4A-SB-032SN-0003-SO	10/22/2009	1148	10/23/2009	1	0.000	0.004	0.12	ND	
LL1CB4A-SB-033SN-0001-SO	10/22/2009	1155	10/23/2009	1	0.001	0.002	-0.06	ND	
LL1CB4A-SB-033SN-0002-SO	10/22/2009	1155	10/23/2009	1	0.000	0.001	0.03	ND	
LL1CB4A-SB-033SN-0003-SO	10/22/2009	1155	10/23/2009	1	0.000	0.002	0.06	ND	
LL1CB4A-SB-034SN-0001-SO	10/22/2009	1500	10/23/2009	1	0.000	0.003	0.09	ND	
LL1CB4A-SB-034SN-0002-SO	10/22/2009	1500	10/23/2009	1	0.000	0.001	0.03	ND	
LL1CB4A-SB-034SN-0003-SO	10/22/2009	1500	10/23/2009	1	0.003	0.006	-0.19	ND	
LL1CB4A-SB-035SN-0001-SO	10/22/2009	1530	10/23/2009	1	0.002	0.005	-0.09	ND	
LL1CB4A-SB-035SN-0002-SO	10/22/2009	1530	10/23/2009	1	0.000	0.001	0.03	ND	
LL1CB4A-SB-035SN-0003-SO	10/22/2009	1530	10/23/2009	1	0.000	0.009	0.28	ND	
LL1CB4A-SB-036SN-0001-SO	10/22/2009	1435	10/23/2009	1	0.003	0.012	0.00	ND	
LL1CB4A-SB-036SN-0002-SO	10/22/2009	1435	10/23/2009	1	0.000	0.006	0.19	ND	
LL1CB4A-SB-036SN-0003-SO	10/22/2009	1435	10/23/2009	1	0.000	0.004	0.12	ND	
LL1CB4A-SB-037SN-0001-SO	10/22/2009	1503	10/23/2009	1	0.003	0.007	-0.15	ND	
LL1CB4A-SB-037SN-0002-SO	10/22/2009	1503	10/23/2009	1	0.001	0.009	0.15	ND	

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Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	$Abs_{"initial"}$	$Abs_{"sample"}$	Result	TNT Conc. (ppm) (Cleanup Level: 878 ppm)	Comments
LL1CB4A-SB-037SN-0003-SO	10/22/2009	1503	10/23/2009	1	0.001	0.006	0.06	ND	
LL1CB4A-SB-038SN-0001-SO	10/22/2009	1534	10/23/2009	1	0.000	0.011	0.34	ND	
LL1CB4A-SB-038SN-0002-SO	10/22/2009	1534	10/23/2009	1	0.007	0.012	-0.50	ND	
LL1CB4A-SB-038SN-0002-SO-DUP	10/22/2009	1534	10/23/2009	1	0.005	0.010	-0.31	ND	
LL1CB4A-SB-038SN-0003-SO	10/22/2009	1534	10/23/2009	1	0.000	0.012	0.37	ND	
LL1CB4A-SB-039SN-0001-SO	10/22/2009	1545	10/23/2009	1	0.000	0.014	0.43	ND	
LL1CB4A-SB-039SN-0002-SO	10/22/2009	1545	10/23/2009	1	0.000	0.007	0.22	ND	
LL1CB4A-SB-039SN-0003-SO	10/22/2009	1545	10/23/2009	1	0.000	0.012	0.37	ND	
LL1CB4A-SB-040SN-0001-SO	10/22/2009	1605	10/23/2009	1	0.000	0.004	0.12	ND	
LL1CB4A-SB-040SN-0002-SO	10/22/2009	1605	10/23/2009	1	0.000	0.007	0.22	ND	
LL1CB4A-SB-040SN-0003-SO	10/22/2009	1605	10/23/2009	1	0.000	0.000	0.00	ND	
LL1CB4A-SB-041SN-0001-SO	10/22/2009	1611	10/23/2009	1	0.000	0.013	0.40	ND	
LL1CB4A-SB-041SN-0002-SO	10/22/2009	1611	10/23/2009	1	0.000	0.018	0.56	ND	
LL1CB4A-SB-041SN-0003-SO	10/22/2009	1611	10/23/2009	1	0.000	0.011	0.34	ND	
LL1CB4A-SB-042SN-0001-SO	10/22/2009	1629	10/23/2009	1	0.013	0.111	1.83	1.8	
LL1CB4A-SB-042SN-0002-SO	10/22/2009	1629	10/23/2009	1	0.008	0.065	1.02	1.0	
LL1CB4A-SB-042SN-0003-SO	10/22/2009	1629	10/23/2009	1	0.000	0.025	0.77	0.8	
LL1CB4A-SB-042SN-0004-SO	10/22/2009	1629	10/23/2009	1	0.000	0.025	0.77	0.8	
LL1CB4A-SB-043SN-0001-SO	10/22/2009	1625	10/23/2009	1	0.018	0.319	7.65	7.6	
LL1CB4A-SB-043SN-0002-SO	10/22/2009	1625	10/23/2009	1	0.004	0.015	-0.03	ND	
LL1CB4A-SB-043SN-0003-SO	10/22/2009	1625	10/23/2009	1	0.000	0.009	0.28	ND	
LL1CB4A-SB-043SN-0004-SO	10/22/2009	1625	10/23/2009	1	0.005	0.139	3.68	3.7	
LL1CB4A-SB-043SN-0004-SO-DUP	10/22/2009	1625	10/23/2009	1	0.008	0.129	3.00	3.0	
LL1CB4AVP1-SB-029SN-0001-SO	10/22/2009	10:49	10/26/2009	1	0.206	0.334	-15.17	ND	
LL1CB4AVP1-SB-029SN-0002-S0	10/22/2009	10:49	10/26/2009	1	0.034	0.108	-0.87	ND	
LL1CB4AVP1-SB-029SN-0003-SO	10/22/2009	10:49	10/26/2009	1	0.003	0.004	-0.25	ND	
LL1CB4AWS-SB-030SN-0001-SO	10/22/2009	9:45	10/26/2009	1	0.000	0.007	0.22	ND	
LL1CB4AWS-SB-030SN-0002-SO	10/22/2009	9:45	10/26/2009	1	0.000	0.007	0.22	ND	
LL1CB4AWS-SB-030SN-0003-SO	10/22/2009	9:45	10/26/2009	1	0.140	3.116	79.13	79.1	light orange/dark red
LL1CB4AWS-SB-030SN-0003-SO DL	10/22/2009	9:45	10/26/2009	50	0.010	0.319	431.89	431.9	
LL1CB4AWS-SB-031SN-0001-SO	10/22/2009	9:51	10/26/2009	1	0.011	0.053	0.28	ND	
LL1CB4AWS-SB-031SN-0002-SO	10/22/2009	9:51	10/26/2009	1	0.002	1.252	38.51	38.5	
LL1CB4AWS-SB-031SN-0002-SO DL1	10/22/2009	9:51	10/26/2009	25	0.007	0.062	26.32	26.3	
LL1CB4AWS-SB-031SN-0002-SO DL2	10/22/2009	9:51	10/26/2009	10	0.007	0.140	34.67	34.7	
LL1CB4AWS-SB-031SN-0002-SO DL3	10/22/2009	9:51	10/26/2009	5	0.009	0.246	32.51	32.5	
LL1CB4AWS-SB-031SN-0003-SO	10/22/2009	9:51	10/26/2009	1	1.407	3.118	-77.71	ND	dark orange/merlot
LL1CB4AWS-SB-031SN-0003-SO DL1	10/22/2009	9:51	10/26/2009	50	0.030	3.182	4739.94	4739.9	
LL1CB4AWS-SB-031SN-0003-SO DL2	10/22/2009	9:51	10/26/2009	500	0.014	0.348	4520.12	4520.1	
LL1CB4AWN-SB-044SN-0001-SO	10/22/2009	10:25	10/26/2009	1	0.000	0.060	1.86	1.9	
LL1CB4AWN-SB-044SN-0002-SO	10/22/2009	10:25	10/26/2009	1	0.021	0.029	-1.70	ND	
LL1CB4AWN-SB-044SN-0003-SO	10/22/2009	10:25	10/26/2009	1	0.010	0.042	0.06	ND	
LL1CB4AWN-SB-045SN-0001-SO	10/22/2009	10:19	10/26/2009	1	0.007	0.047	0.59	ND	
LL1CB4AWN-SB-045SN-0002-SO	10/22/2009	10:19	10/26/2009	1	0.008	0.024	-0.25	ND	
LL1CB4AWN-SB-045SN-0003-SO	10/22/2009	10:19	10/26/2009	1	0.006	0.019	-0.15	ND	
LL1CB10-SB-064SN-0001-SO	10/22/2009	10:23	10/26/2009	1	0.008	0.014	-0.56	ND	
LL1CB10-SB-064SN-0002-S0	10/22/2009	10:23	10/26/2009	1	0.027	0.029	-2.45	ND	
LL1CB10-SB-064SN-0003-SO	10/22/2009	10:23	10/26/2009	1	0.003	0.011	-0.03	ND	
LL1CB10-SB-065SN-0001-S0	10/22/2009	11:20	10/26/2009	1	0.004	0.019	0.09	ND	
LL1CB10-SB-065SN-0002-S0	10/22/2009	11:20	10/26/2009	1	0.015	0.018	-1.30	ND	
LL1CB10-SB-065SN-0002-S0-DUP	10/22/2009	11:20	10/26/2009	1	0.013	0.015	-1.15	ND	
LL1CB10-SB-066SN-0001-SO	10/23/2009	11:35	10/27/2009	1	0.003	0.012	0.00	ND	
LL1CB10-SB-066SN-0002-SO	10/23/2009	11:35	10/27/2009	1	0.008	0.013	-0.59	ND	
LL1CB10-SB-066SN-0003-SO	10/23/2009	11:35	10/27/2009	1	0.001	0.002	-0.06	ND	
LL1CB10-SB-066SN-0004-SO	10/23/2009	11:35	10/27/2009	1	0.001	0.002	-0.06	ND	
LL1CB10-SB-067SN-0001-SO	10/23/2009	11:49	10/27/2009	1	0.000	0.004	0.12	ND	
LL1CB10-SB-067SN-0002-SO	10/23/2009	11:49	10/27/2009	1	0.007	0.018	-0.31	ND	

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TNT Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	$Abs_{"initial"}$	$Abs_{"sample"}$	Result	TNT Conc. (ppm) (Cleanup Level: 878 ppm)	Comments
LL1CB10-SB-067SN-0003-SO	10/23/2009	11:49	10/27/2009	1	0.000	0.001	0.03	ND	
LL1CB10-SB-068SN-0001-SO	10/23/2009	12:05	10/27/2009	1	0.001	0.003	-0.03	ND	
LL1CB10-SB-068SN-0002-SO	10/23/2009	12:05	10/27/2009	1	0.000	0.000	0.00	ND	
LL1CB10-SB-068SN-0003-SO	10/23/2009	12:05	10/27/2009	1	0.000	0.001	0.03	ND	
LL1CB10-SB-068SN-0004-SO	10/23/2009	12:05	10/27/2009	1	0.001	0.003	-0.03	ND	
LL1CB10-SB-069SN-0001-SO	10/23/2009	13:05	10/27/2009	1	0.009	0.010	-0.80	ND	
LL1CB10-SB-069SN-0002-SO	10/23/2009	13:05	10/27/2009	1	0.003	0.015	0.09	ND	
LL1CB10-SB-069SN-0003-SO	10/23/2009	13:05	10/27/2009	1	0.005	0.023	0.09	ND	
LL1CB10-SB-069SN-0004-SO	10/23/2009	13:05	10/27/2009	1	0.005	0.018	-0.06	ND	
LL1CB10-SB-070SN-0001-SO	10/23/2009	12:10	10/27/2009	1	0.005	0.012	-0.25	ND	
LL1CB10-SB-070SN-0002-SO	10/23/2009	12:10	10/27/2009	1	0.000	0.003	0.09	ND	
LL1CB10-SB-070SN-0003-SO	10/23/2009	12:10	10/27/2009	1	0.019	0.055	-0.65	ND	
LL1CB10-SB-071SN-0001-SO	10/23/2009	13:10	10/27/2009	1	0.003	0.008	-0.12	ND	
LL1CB10-SB-071SN-0002-SO	10/23/2009	13:10	10/27/2009	1	0.003	0.012	0.00	ND	
LL1CB10-SB-071SN-0002-SO-DUP	10/23/2009	13:10	10/27/2009	1	0.002	0.010	0.06	ND	
LL1CB10-SB-071SN-0003-SO	10/23/2009	13:10	10/27/2009	1	0.237	0.407	-16.75	ND	
LL1CB10-SB-072SN-0001-SO	10/23/2009	12:55	10/27/2009	1	0.001	0.007	0.09	ND	
LL1CB10-SB-072SN-0002-SO	10/23/2009	12:55	10/27/2009	1	0.002	0.003	-0.15	ND	
LL1CB10-SB-072SN-0003-SO	10/23/2009	12:55	10/27/2009	1	0.000	0.001	0.03	ND	
LL1CB10-SB-073SN-0001-SO	10/23/2009	13:42	10/27/2009	1	0.019	0.043	-1.02	ND	
LL1CB10-SB-073SN-0002-SO	10/23/2009	13:42	10/27/2009	1	0.004	0.022	0.19	ND	
LL1CB10-SB-073SN-0003-SO	10/23/2009	13:42	10/27/2009	1	0.004	0.017	0.03	ND	
LL1CB10-SB-073SN-0004-SO	10/23/2009	13:42	10/27/2009	1	0.000	0.003	0.09	ND	
LL1CB10-SB-074SN-0001-SO	10/23/2009	13:25	10/27/2009	1	0.022	0.040	-1.49	ND	
LL1CB10-SB-074SN-0002-SO	10/23/2009	13:25	10/27/2009	1	0.010	0.036	-0.12	ND	
LL1CB10-SB-074SN-0003-SO	10/23/2009	13:25	10/27/2009	1	0.000	0.005	0.15	ND	
LL1CB10VP1-SB-075SN-0001-SO	10/26/2009	16:12	10/27/2009	1	0.006	0.010	-0.43	ND	
LL1CB10VP1-SB-075SN-0002-SO	10/26/2009	16:12	10/27/2009	1	0.007	0.008	-0.62	ND	
LL1CB10VP1-SB-075SN-0003-SO	10/26/2009	16:12	10/27/2009	1	0.000	0.002	0.06	ND	
LL1CB10VP1-SB-075SN-0004-SO	10/26/2009	16:12	10/27/2009	1	0.002	0.003	-0.15	ND	
LL1CB10VP2-SB-076SN-0001-SO	10/26/2009	16:49	10/27/2009	1	0.006	0.212	5.82	5.8	LIGHT PINK
LL1CB10VP2-SB-076SN-0002-SO	10/26/2009	16:49	10/27/2009	1	0.008	0.042	0.31	ND	
LL1CB10VP2-SB-076SN-0003-SO	10/26/2009	16:49	10/27/2009	1	0.005	0.049	0.90	0.9	
LL1CB10VP3-SB-077SN-0001-SO	10/26/2009	16:30	10/27/2009	1	0.011	0.018	-0.80	ND	
LL1CB10VP3-SB-077SN-0002-SO	10/26/2009	16:30	10/27/2009	1	0.005	0.009	-0.34	ND	
LL1CB10VP3-SB-077SN-0002-SO-DUP	10/26/2009	16:30	10/27/2009	1	0.007	0.012	-0.50	ND	
LL1CB10VP3-SB-077SN-0003-SO	10/26/2009	16:30	10/27/2009	1	0.005	0.006	-0.43	ND	
LL1CB10VP3-SB-077SN-0004-SO	10/26/2009	16:30	10/27/2009	1	0.001	0.006	0.06	ND	
LL1CA17-SB-104SN-0001-SO	10/26/2009	15:51	10/27/2009	1	0.008	0.018	-0.43	ND	
LL1CA17-SB-104SN-0002-SO	10/26/2009	15:51	10/27/2009	1	0.000	0.006	0.19	ND	
LL1CA17-SB-104SN-0003-SO	10/26/2009	15:51	10/27/2009	1	0.000	0.004	0.12	ND	
LL1CA17-SB-104SN-0004-SO	10/26/2009	15:51	10/27/2009	1	0.006	0.007	-0.53	ND	
LL1CA17-SB-105SN-0001-SO	10/26/2009	15:40	10/27/2009	1	0.002	0.016	0.25	ND	
LL1CA17-SB-105SN-0002-SO	10/26/2009	15:40	10/27/2009	1	0.010	0.020	-0.62	ND	
LL1CA17-SB-105SN-0003-SO	10/26/2009	15:40	10/27/2009	1	0.003	0.007	-0.15	ND	
LL1CA17-SB-105SN-0004-SO	10/26/2009	15:40	10/27/2009	1	0.004	0.005	-0.34	ND	
LL1CA17-SB-105SN-0005-SO	10/26/2009	15:40	10/27/2009	1	0.005	0.007	-0.40	ND	
LL1CA17-SB-106SN-0001-SO	10/26/2009	15:21	10/27/2009	1	0.012	0.024	-0.74	ND	
LL1CA17-SB-106SN-0002-SO	10/26/2009	15:21	10/27/2009	1	0.006	0.011	-0.40	ND	
LL1CA17-SB-106SN-0003-SO	10/26/2009	15:21	10/27/2009	1	0.008	0.013	-0.59	ND	
LL1CA17-SB-106SN-0004-SO	10/26/2009	15:21	10/27/2009	1	0.000	0.000	0.00	ND	
LL1CA17-SB-107SN-0001-SO	10/26/2009	14:51	10/27/2009	1	0.013	0.037	-0.46	ND	
LL1CA17-SB-107SN-0002-SO	10/26/2009	14:51	10/27/2009	1	0.018	0.020	-1.61	ND	

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Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	$Abs_{"initial"}$	$Abs_{"sample"}$	Result	TNT Conc. (ppm) (Cleanup Level: 878 ppm)	Comments
LL1CA17-SB-107SN-0003-SO	10/26/2009	14:51	10/27/2009	1	0.000	0.004	0.12	ND	
LL1CA17-SB-107SN-0004-SO	10/26/2009	14:51	10/27/2009	1	0.008	0.016	-0.50	ND	
LL1CA17-SB-107SN-0005-SO	10/26/2009	14:51	10/27/2009	1	0.009	0.015	-0.65	ND	
LL1CA17-SB-107SN-0005-SO-DUP	10/26/2009	14:51	10/27/2009	1	0.010	0.011	-0.90	ND	
LL1CA17-SB-108SN-0001-SO	10/26/2009	15:19	10/28/2009	1	0.000	0.015	0.46	ND	
LL1CA17-SB-108SN-0002-SO	10/26/2009	15:19	10/28/2009	1	0.008	0.038	0.19	ND	
LL1CA17-SB-108SN-0003-SO	10/26/2009	15:19	10/28/2009	1	0.000	0.001	0.03	ND	
LL1CA17-SB-108SN-0004-SO	10/26/2009	15:19	10/28/2009	1	0.004	0.009	-0.22	ND	
LL1CA17-SB-109SN-0001-SO	10/26/2009	15:38	10/28/2009	1	0.000	0.001	0.03	ND	
LL1CA17-SB-109SN-0002-SO	10/26/2009	15:38	10/28/2009	1	0.000	0.002	0.06	ND	
LL1CA17-SB-109SN-0003-SO	10/26/2009	15:38	10/28/2009	1	0.000	0.003	0.09	ND	
LL1CA17-SB-109SN-0004-SO	10/26/2009	15:38	10/28/2009	1	0.000	0.003	0.09	ND	
LL1CA17-SB-109SN-0005-SO	10/26/2009	15:38	10/28/2009	1	0.001	0.002	-0.06	ND	
LL1CA17-SB-110SN-0001-SO	10/26/2009	15:23	10/28/2009	1	0.004	0.005	-0.34	ND	
LL1CA17-SB-110SN-0002-SO	10/26/2009	15:23	10/28/2009	1	0.003	0.005	-0.22	ND	
LL1CA17-SB-110SN-0003-SO	10/26/2009	15:23	10/28/2009	1	0.003	0.009	-0.09	ND	
LL1CA17-SB-111SN-0001-SO	10/26/2009	15:05	10/28/2009	1	0.014	0.016	-1.24	ND	
LL1CA17-SB-111SN-0002-SO	10/26/2009	15:05	10/28/2009	1	0.000	0.001	0.03	ND	
LL1CA17-SB-111SN-0003-SO	10/26/2009	15:05	10/28/2009	1	0.000	0.001	0.03	ND	
LL1CA17-SB-111SN-0004-SO	10/26/2009	15:05	10/28/2009	1	0.000	0.000	0.01	ND	
LL1CA17-SB-111SN-0005-SO	10/26/2009	15:05	10/28/2009	1	0.000	0.001	0.03	ND	
LL1CA17-SB-112SN-0001-SO	10/26/2009	14:54	10/28/2009	1	0.003	0.011	-0.03	ND	
LL1CA17-SB-112SN-0002-SO	10/26/2009	14:54	10/28/2009	1	0.000	0.008	0.25	ND	
LL1CA17-SB-112SN-0003-SO	10/26/2009	14:54	10/28/2009	1	0.000	0.001	0.03	ND	
LL1CA17-SB-112SN-0003-SO-DUP	10/26/2009	14:54	10/28/2009	1	0.000	0.001	0.03	ND	
LL1CA17-SB-112SN-0004-SO	10/26/2009	14:54	10/28/2009	1	0.000	0.000	0.00	ND	
LL1CA17-SB-112SN-0005-SO	10/26/2009	14:54	10/28/2009	1	0.000	0.001	0.03	ND	
LL1CA17-SB-113SN-0001-SO	10/26/2009	16:01	10/28/2009	1	0.009	0.024	-0.37	ND	
LL1CA17-SB-113SN-0002-SO	10/26/2009	16:01	10/28/2009	1	0.000	0.003	0.09	ND	
LL1CA17-SB-113SN-0003-SO	10/26/2009	16:01	10/28/2009	1	0.000	0.002	0.06	ND	
LL1CA17-SB-113SN-0004-SO	10/26/2009	16:01	10/28/2009	1	0.000	0.000	0.00	ND	
LL1CA17-SB-113SN-0005-SO	10/26/2009	16:01	10/28/2009	1	0.000	0.002	0.06	ND	
LL1CB4-SB-048SN-0001-SO	10/27/2009	9:24	10/28/2009	1	0.013	0.070	0.56	ND	
LL1CB4-SB-048SN-0002-SO	10/27/2009	9:24	10/28/2009	1	0.007	0.019	-0.28	ND	
LL1CB4-SB-048SN-0003-SO	10/27/2009	9:24	10/28/2009	1	0.001	0.003	-0.03	ND	
LL1CB4-SB-049SN-0001-SO	10/27/2009	9:44	10/28/2009	1	0.003	0.012	0.00	ND	
LL1CB4-SB-049SN-0002-SO	10/27/2009	9:44	10/28/2009	1	0.006	0.013	-0.34	ND	
LL1CB4-SB-049SN-0003-SO	10/27/2009	9:44	10/28/2009	1	0.003	0.019	0.22	ND	
LL1CB4-SB-050SN-0001-SO	10/27/2009	9:34	10/28/2009	1	0.009	0.010	-0.80	ND	
LL1CB4-SB-050SN-0002-SO	10/27/2009	9:34	10/28/2009	1	0.020	0.202	3.78	3.8	BLUE GREEN
LL1CB4-SB-050SN-0003-SO	10/27/2009	9:34	10/28/2009	1	0.008	0.010	-0.68	ND	
LL1CB4-SB-051SN-0001-SO	10/27/2009	9:50	10/28/2009	1	0.004	0.015	-0.03	ND	
LL1CB4-SB-051SN-0002-SO	10/27/2009	9:50	10/28/2009	1	0.003	0.010	-0.06	ND	
LL1CB4-SB-051SN-0003-SO	10/27/2009	9:50	10/28/2009	1	0.000	0.002	0.06	ND	
LL1CB4-SB-051SN-0004-SO	10/27/2009	9:50	10/28/2009	1	0.002	0.019	0.34	ND	
LL1CB4-SB-051SN-0004-SO-DUP	10/27/2009	9:50	10/28/2009	1	0.003	0.018	0.19	ND	
LL1CB4-SB-052SN-0001-SO	10/27/2009	10:35	10/28/2009	1	0.000	0.010	0.31	ND	
LL1CB4-SB-052SN-0002-SO	10/27/2009	10:35	10/28/2009	1	0.000	0.004	0.12	ND	
LL1CB4-SB-052SN-0003-SO	10/27/2009	10:35	10/28/2009	1	0.002	0.015	0.22	ND	
LL1CB4-SB-053SN-0001-SO	10/27/2009	10:22	10/28/2009	1	0.000	0.003	0.09	ND	
LL1CB4-SB-053SN-0002-SO	10/27/2009	10:22	10/28/2009	1	0.003	0.004	-0.25	ND	
LL1CB4-SB-054SN-0001-SO	10/27/2009	10:48	10/28/2009	1	0.008	0.025	-0.22	ND	
LL1CB4-SB-054SN-0002-SO	10/27/2009	10:48	10/28/2009	1	0.009	0.023	-0.40	ND	

Table D-1
TNT Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	$Abs_{"initial"}$	$Abs_{"sample"}$	Result	TNT Conc. (ppm) (Cleanup Level: 878 ppm)	Comments
LL1CB4-SB-054SN-0003-SO	10/27/2009	10:48	10/28/2009	1	0.008	0.029	-0.09	ND	
LL1CB4-SB-055SN-0001-SO	10/27/2009	11:18	10/28/2009	1	0.005	0.009	-0.34	ND	
LL1CB4-SB-055SN-0002-SO	10/27/2009	11:18	10/28/2009	1	0.013	0.036	-0.50	ND	
LL1CB4-SB-055SN-0003-SO	10/27/2009	11:18	10/28/2009	1	0.001	0.002	-0.06	ND	
LL1CB4-SB-056SN-0001-SO	10/27/2009	11:11	10/28/2009	1	0.000	0.005	0.15	ND	
LL1CB4-SB-056SN-0002-SO	10/27/2009	11:11	10/28/2009	1	0.001	0.002	-0.06	ND	
LL1CB4-SB-056SN-0003-SO	10/27/2009	11:11	10/28/2009	1	0.000	0.003	0.09	ND	
LL1CB4-SB-057SN-0001-SO	10/27/2009	12:00	10/28/2009	1	0.028	0.293	5.60	5.6	PINK
LL1CB4-SB-057SN-0002-SO	10/27/2009	12:00	10/28/2009	1	0.016	0.108	1.36	1.4	LIGHT PINK
LL1CB4-SB-058SN-0001-SO	10/27/2009	11:53	10/28/2009	1	0.008	0.044	0.37	ND	
LL1CB4-SB-058SN-0002-SO	10/27/2009	11:53	10/28/2009	1	0.007	0.027	-0.03	ND	
LL1CB4-SB-058SN-0003-SO	10/27/2009	11:53	10/28/2009	1	0.040	0.475	9.75	9.8	
LL1CB4-SB-059SN-0001-SO	10/27/2009	12:32	10/28/2009	1	0.011	0.279	7.28	7.3	
LL1CB4-SB-059SN-0001-SO-DUP	10/27/2009	12:32	10/28/2009	1	0.015	0.489	13.28	13.3	
LL1CB4-SB-059SN-0002-SO	10/27/2009	12:32	10/28/2009	1	0.012	0.032	-0.50	ND	
LL1CB4-SB-059SN-0003-SO	10/27/2009	12:32	10/28/2009	1	0.091	2.945	79.91	79.9	light orange/red
LL1CB4-SB-059SN-0003-SO DL	10/27/2009	12:32	10/28/2009	50	0.008	0.253	342.11	342.1	
LL1CB4-SB-059SN-0004-SO	10/27/2009	12:32	10/28/2009	1	0.032	0.737	18.85	18.9	
LL1CB4-SB-059SN-0004-SO DL	10/27/2009	12:32	10/28/2009	2	0.022	0.395	19.01	19.0	
LL1CB4-SB-059SN-0005-SO	10/27/2009	12:32	10/28/2009	1	0.003	0.030	0.56	ND	
LL1CB4-SB-059SN-0005-SO-DUP	10/27/2009	12:32	10/28/2009	1	0.009	0.026	-0.31	ND	
LL1CB4WS-SB-046SN-0001-SO	10/28/2009	11:00	10/29/2009	1	0.010	0.021	-0.59	ND	
LL1CB4WS-SB-046SN-0002-SO	10/28/2009	11:00	10/29/2009	1	0.000	0.006	0.19	ND	
LL1CB4WS-SB-046SN-0003-SO	10/28/2009	11:00	10/29/2009	1	0.012	0.086	1.18	1.2	
LL1CB4WS-SB-046SN-0003-SO	10/28/2009	11:00	10/29/2009	1	0.002	0.025	0.53	ND	
LL1CB4WS-SB-046SN-0005-SO	10/28/2009	11:00	10/29/2009	1	0.004	0.271	7.89	7.9	BLUE GREEN
LL1CB4WS-SB-047SN-0001-SO	10/28/2009	10:50	10/29/2009	1	0.004	0.045	0.90	0.9	
LL1CB4WS-SB-047SN-0002-SO	10/28/2009	10:50	10/29/2009	1	0.004	0.036	0.62	ND	
LL1CB4WS-SB-047SN-0003-SO	10/28/2009	10:50	10/29/2009	1	0.081	3.004	82.97	83.0	RED/DARK RED
LL1CB4WS-SB-047SN-0003-SO DL1	10/28/2009	10:50	10/29/2009	50	0.005	0.134	176.47	176.5	
LL1CB4WS-SB-047SN-0003-SO DL2	10/28/2009	10:50	10/29/2009	25	0.008	0.256	173.37	173.4	
LL1CB4WS-SB-047SN-0004-SO	10/28/2009	10:50	10/29/2009	1	0.027	0.346	7.37	7.4	PINK
LL1CB4WN-SB-060SN-0001-SO	10/28/2009	10:30	10/29/2009	1	0.006	0.027	0.09	ND	
LL1CB4WN-SB-060SN-0002-SO	10/28/2009	10:30	10/29/2009	1	0.017	0.146	2.41	2.4	
LL1CB4WN-SB-060SN-0003-SO	10/28/2009	10:30	10/29/2009	1	0.019	0.444	11.39	11.4	PINK
LL1CB4WN-SB-061SN-0001-SO	10/28/2009	10:06	10/29/2009	1	0.009	0.051	0.46	ND	
LL1CB4WN-SB-061SN-0002-SO	10/28/2009	10:06	10/29/2009	1	0.006	0.018	-0.19	ND	
LL1CB4WN-SB-061SN-0003-SO	10/28/2009	10:06	10/29/2009	1	0.021	0.691	18.79	18.8	PINK
LL1CB4WN-SB-061SN-0004-SO	10/28/2009	10:06	10/29/2009	1	0.077	0.313	0.15	ND	
LL1CB4WN-SB-061SN-0005-SO	10/28/2009	10:06	10/29/2009	1	0.331	3.315	61.64	61.6	BROWN/DARK RED
LL1CB4WN-SB-061SN-0005-SO DL1	10/28/2009	10:06	10/29/2009	50	0.011	1.778	2684.21	2684.2	
LL1CB4WN-SB-061SN-0005-SO DL2	10/28/2009	10:06	10/29/2009	100	0.008	0.917	2739.94	2739.9	
LL1CB4WN-SB-061SN-0005-SO DL3	10/28/2009	10:06	10/29/2009	200	0.007	0.452	2625.39	2625.4	
LL1CB4VP1-SB-062SN-0001-SO	10/28/2009	11:44	10/29/2009	1	0.087	0.141	-6.41	ND	
LL1CB4VP1-SB-062SN-0002-SO	10/28/2009	11:44	10/29/2009	1	0.003	0.005	-0.22	ND	
LL1CB4VP1-SB-062SN-0003-SO	10/28/2009	11:44	10/29/2009	1	0.000	0.000	0.00	ND	
LL1CB4VP1-SB-062SN-0003-SO-DUP	10/28/2009	11:44	10/29/2009	1	0.000	0.000	0.00	ND	
LL1CB4VP1-SB-062SN-0004-SO	10/28/2009	11:44	10/29/2009	1	0.000	0.000	0.00	ND	
LL1CB13-SB-078SN-0001-SO	10/28/2009	14:17	10/29/2009	1	0.000	0.004	0.12	ND	
LL1CB13-SB-078SN-0002-SO	10/28/2009	14:17	10/29/2009	1	0.000	0.006	0.19	ND	
LL1CB13-SB-078SN-0003-SO	10/28/2009	14:17	10/29/2009	1	0.002	0.004	-0.12	ND	
LL1CB13-SB-078SN-0004-SO	10/28/2009	14:17	10/29/2009	1	0.001	0.006	0.06	ND	
LL1CB13-SB-078SN-0005-SO	10/28/2009	14:17	10/29/2009	1	0.000	0.018	0.56	ND	

Table D-1
TNT Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	$Abs_{"initial"}$	$Abs_{"sample"}$	Result	TNT Conc. (ppm) (Cleanup Level: 878 ppm)	Comments
LL1CB13-SB-079SN-0001-SO	10/28/2009	14:39	10/29/2009	1	0.001	0.007	0.09	ND	
LL1CB13-SB-079SN-0002-SO	10/28/2009	14:39	10/29/2009	1	0.000	0.001	0.03	ND	
LL1CB13-SB-079SN-0003-SO	10/28/2009	14:39	10/29/2009	1	0.000	0.002	0.06	ND	
LL1CB13-SB-079SN-0004-SO	10/28/2009	14:39	10/29/2009	1	0.000	0.002	0.06	ND	
LL1CB13-SB-079SN-0005-SO	10/28/2009	14:39	10/29/2009	1	0.001	0.003	-0.03	ND	
LL1CB13-SB-080SN-0001-SO	10/28/2009	16:05	10/29/2009	1	0.002	0.006	-0.06	ND	
LL1CB13-SB-080SN-0002-SO	10/28/2009	16:05	10/29/2009	1	0.002	0.007	-0.03	ND	
LL1CB13-SB-080SN-0003-SO	10/28/2009	16:05	10/29/2009	1	0.000	0.003	0.09	ND	
LL1CB13-SB-080SN-0004-SO	10/28/2009	16:05	10/29/2009	1	0.002	0.012	0.12	ND	
LL1CB13-SB-080SN-0005-SO	10/28/2009	16:05	10/29/2009	1	0.000	0.002	0.06	ND	
LL1CB13-SB-081SN-0001-SO	10/28/2009	14:55	10/29/2009	1	0.000	0.007	0.22	ND	
LL1CB13-SB-081SN-0002-SO	10/28/2009	14:55	10/29/2009	1	0.000	0.005	0.15	ND	
LL1CB13-SB-081SN-0003-SO	10/28/2009	14:55	10/29/2009	1	0.000	0.003	0.09	ND	
LL1CB13-SB-081SN-0004-SO	10/28/2009	14:55	10/29/2009	1	0.000	0.004	0.12	ND	
LL1CB13-SB-081SN-0004-SO-DUP	10/28/2009	14:55	10/29/2009	1	0.000	0.006	0.19	ND	
LL1CB13-SB-081SN-0005-SO	10/28/2009	14:55	10/29/2009	1	0.000	0.001	0.03	ND	
LL1CB13-SB-082SN-0001-SO	10/28/2009	14:30	10/29/2009	1	0.000	0.007	0.22	ND	
LL1CB13-SB-082SN-0002-SO	10/28/2009	14:30	10/29/2009	1	0.000	0.002	0.06	ND	
LL1CB13-SB-082SN-0003-SO	10/28/2009	14:30	10/29/2009	1	0.002	0.007	-0.03	ND	
LL1CB13-SB-082SN-0004-SO	10/28/2009	14:30	10/29/2009	1	0.001	0.008	0.12	ND	
LL1CB13-SB-082SN-0005-SO	10/28/2009	14:30	10/29/2009	1	0.000	0.004	0.12	ND	
LL1CB13-SB-083SN-0001-SO	10/28/2009	15:02	10/29/2009	1	0.003	0.011	-0.03	ND	
LL1CB13-SB-083SN-0002-SO	10/28/2009	15:02	10/29/2009	1	0.001	0.005	0.03	ND	
LL1CB13-SB-083SN-0003-SO	10/28/2009	15:02	10/29/2009	1	0.000	0.004	0.12	ND	
LL1CB13-SB-083SN-0004-SO	10/28/2009	15:02	10/29/2009	1	0.000	0.005	0.15	ND	
LL1CB13-SB-083SN-0005-SO	10/28/2009	15:02	10/29/2009	1	0.005	0.018	-0.06	ND	
LL1CB13-SB-084SN-0001-SO	10/28/2009	15:10	10/29/2009	1	0.001	0.007	0.09	ND	
LL1CB13-SB-084SN-0002-SO	10/28/2009	15:10	10/29/2009	1	0.001	0.005	0.03	ND	
LL1CB13-SB-084SN-0003-SO	10/28/2009	15:10	10/29/2009	1	0.000	0.002	0.06	ND	
LL1CB13-SB-084SN-0004-SO	10/28/2009	15:10	10/29/2009	1	0.000	0.004	0.12	ND	
LL1CB13-SB-084SN-0005-SO	10/28/2009	15:10	10/29/2009	1	0.000	0.006	0.19	ND	
LL1CB13A-SB-085SN-0001-SO	10/28/2009	16:45	10/29/2009	1	0.000	0.004	0.12	ND	
LL1CB13A-SB-085SN-0002-SO	10/28/2009	16:45	10/29/2009	1	0.000	0.002	0.06	ND	
LL1CB13A-SB-085SN-0003-SO	10/28/2009	16:45	10/29/2009	1	0.000	0.004	0.12	ND	
LL1CB13A-SB-085SN-0004-SO	10/28/2009	16:45	10/29/2009	1	0.000	0.002	0.06	ND	
LL1CB13A-SB-085SN-0004-SO-DUP	10/28/2009	16:45	10/29/2009	1	0.001	0.004	0.00	ND	
LL1CB13A-SB-085SN-0005-SO	10/28/2009	16:45	10/30/2009	1	0.000	0.001	0.03	ND	
LL1CB13A-SB-086SN-0001-SO	10/28/2009	16:15	10/30/2009	1	0.003	0.009	-0.09	ND	
LL1CB13A-SB-086SN-0002-SO	10/28/2009	16:15	10/30/2009	1	0.006	0.013	-0.34	ND	
LL1CB13A-SB-086SN-0003-SO	10/28/2009	16:15	10/30/2009	1	0.003	0.008	-0.12	ND	
LL1CB13A-SB-086SN-0004-SO	10/28/2009	16:15	10/30/2009	1	0.005	0.012	-0.25	ND	
LL1CB13A-SB-086SN-0005-SO	10/28/2009	16:15	10/30/2009	1	0.005	0.014	-0.19	ND	
LL1CB13A-SB-087SN-0001-SO	10/28/2009	16:02	10/30/2009	1	0.015	0.039	-0.65	ND	
LL1CB13A-SB-087SN-0002-SO	10/28/2009	16:02	10/30/2009	1	0.002	0.009	0.03	ND	
LL1CB13A-SB-087SN-0003-SO	10/28/2009	16:02	10/30/2009	1	0.001	0.024	0.62	ND	
LL1CB13A-SB-087SN-0004-SO	10/28/2009	16:02	10/30/2009	1	0.013	0.031	-0.65	ND	
LL1CB13A-SB-087SN-0005-SO	10/28/2009	16:02	10/30/2009	1	0.095	0.202	-5.51	ND	
LL1CB13A-SB-088SN-0001-SO	10/28/2009	16:50	10/30/2009	1	0.005	0.016	-0.12	ND	
LL1CB13A-SB-088SN-0002-SO	10/28/2009	16:50	10/30/2009	1	0.000	0.005	0.15	ND	
LL1CB13A-SB-088SN-0003-SO	10/28/2009	16:50	10/30/2009	1	0.001	0.002	-0.06	ND	
LL1CB13A-SB-088SN-0004-SO	10/28/2009	16:50	10/30/2009	1	0.001	0.003	-0.03	ND	
LL1CB13A-SB-088SN-0005-SO	10/28/2009	16:50	10/30/2009	1	0.000	0.005	0.15	ND	
LL1CB13A-SB-089SN-0001-SO	10/28/2009	16:44	10/30/2009	1	0.006	0.013	-0.34	ND	

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TNT Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	$Abs_{"initial"}$	$Abs_{"sample"}$	Result	TNT Conc. (ppm) (Cleanup Level: 878 ppm)	Comments
LL1CB13A-SB-089SN-0002-SO	10/28/2009	16:44	10/30/2009	1	0.007	0.019	-0.28	ND	
LL1CB13A-SB-089SN-0003-SO	10/28/2009	16:44	10/30/2009	1	0.007	0.009	-0.59	ND	
LL1CB13A-SB-089SN-0004-SO	10/28/2009	16:44	10/30/2009	1	0.001	0.056	1.61	1.6	BLUE GREEN
LL1CB13A-SB-089SN-0004-SO-DUP	10/28/2009	16:44	10/30/2009	1	0.001	0.045	1.27	1.3	BLUE GREEN
LL1CB13A-SB-089SN-0005-SO	10/28/2009	16:44	10/30/2009	1	0.000	0.085	2.63	2.6	BLUE GREEN
LL1CB13A-SB-090SN-0001-SO	10/28/2009	16:31	10/30/2009	1	0.006	0.012	-0.37	ND	
LL1CB13A-SB-090SN-0002-SO	10/28/2009	16:31	10/30/2009	1	0.004	0.006	-0.31	ND	
LL1CB13A-SB-090SN-0003-SO	10/28/2009	16:31	10/30/2009	1	0.004	0.009	-0.22	ND	
LL1CB13A-SB-090SN-0004-SO	10/28/2009	16:31	10/30/2009	1	0.004	0.012	-0.12	ND	
LL1CB13A-SB-090SN-0005-SO	10/28/2009	16:31	10/30/2009	1	0.002	0.006	-0.06	ND	
LL1CB13B-SB-094SN-0001-SO	10/29/2009	16:16	10/30/2009	1	0.005	0.011	-0.28	ND	
LL1CB13B-SB-094SN-0002-SO	10/29/2009	16:16	10/30/2009	1	0.000	0.011	0.34	ND	
LL1CB13B-SB-094SN-0003-SO	10/29/2009	16:16	10/30/2009	1	0.000	0.026	0.80	0.8	LIGHT BLUE
LL1CB13B-SB-094SN-0004-SO	10/29/2009	16:16	10/30/2009	1	0.000	0.020	0.62	ND	LIGHT BLUE
LL1CB13B-SB-094SN-0005-SO	10/29/2009	16:16	10/30/2009	1	0.005	0.037	0.53	ND	LIGHT BLUE
LL1CB13B-SB-095SN-0001-SO	10/29/2009	16:31	10/30/2009	1	0.006	0.010	-0.43	ND	
LL1CB13B-SB-095SN-0002-SO	10/29/2009	16:31	10/30/2009	1	0.002	0.050	1.30	1.3	LIGHT BLUE
LL1CB13B-SB-095SN-0003-SO	10/29/2009	16:31	10/30/2009	1	0.003	0.028	0.50	ND	LIGHT BLUE GREEN
LL1CB13B-SB-095SN-0004-SO	10/29/2009	16:31	10/30/2009	1	0.007	0.031	0.09	ND	LIGHT BLUE GREEN
LL1CB13B-SB-095SN-0005-SO	10/29/2009	16:31	10/30/2009	1	0.009	0.017	-0.59	ND	LIGHT BLUE GREEN
LL1CB13B-SB-096SN-0001-SO	10/29/2009	15:15	10/30/2009	1	0.000	0.002	0.06	ND	
LL1CB13B-SB-096SN-0002-SO	10/29/2009	15:15	10/30/2009	1	0.002	0.003	-0.15	ND	
LL1CB13B-SB-096SN-0003-SO	10/29/2009	15:15	10/30/2009	1	0.000	0.000	0.00	ND	
LL1CB13B-SB-096SN-0004-SO	10/29/2009	15:15	10/30/2009	1	0.000	0.002	0.06	ND	
LL1CB13B-SB-096SN-0004-SO-DUP	10/29/2009	15:15	10/30/2009	1	0.000	0.003	0.09	ND	
LL1CB13B-SB-096SN-0005-SO	10/29/2009	15:15	10/30/2009	1	0.010	0.087	1.46	1.5	LIGHT BLUE
LL1CB13B-SB-097SN-0001-SO	10/29/2009	15:22	10/30/2009	1	0.006	0.016	-0.25	ND	
LL1CB13B-SB-097SN-0002-SO	10/29/2009	15:22	10/30/2009	1	0.004	0.005	-0.34	ND	
LL1CB13B-SB-097SN-0003-SO	10/29/2009	15:22	10/30/2009	1	0.001	0.002	-0.06	ND	
LL1CB13B-SB-098SN-0001-SO	10/29/2009	14:32	10/30/2009	1	0.010	0.022	-0.56	ND	
LL1CB13B-SB-098SN-0002-SO	10/29/2009	14:32	10/30/2009	1	0.002	0.009	0.03	ND	
LL1CB13B-SB-098SN-0003-SO	10/29/2009	14:32	10/30/2009	1	0.004	0.010	-0.19	ND	
LL1CB13B-SB-098SN-0004-SO	10/29/2009	14:32	10/30/2009	1	0.001	0.006	0.06	ND	
LL1CB13B-SB-098SN-0005-SO	10/29/2009	14:32	10/30/2009	1	0.007	0.034	0.19	ND	LIGHT BLUE
LL1CB13B-SB-099SN-0001-SO	10/29/2009	11:10	10/30/2009	1	0.008	0.033	0.03	ND	LIGHT BLUE
LL1CB13B-SB-099SN-0002-SO	10/29/2009	11:10	10/30/2009	1	0.015	0.051	-0.28	ND	LIGHT GREEN
LL1CB13B-SB-099SN-0003-SO	10/29/2009	11:10	10/30/2009	1	0.006	0.012	-0.37	ND	
LL1CB13B-SB-099SN-0004-SO	10/29/2009	11:10	10/30/2009	1	0.013	0.049	-0.09	ND	LIGHT GREEN
LL1CB13B-SB-099SN-0005-SO	10/29/2009	11:10	10/30/2009	1	0.013	0.225	5.36	5.4	BLUE GREEN
LL1CB13B-SB-100SN-0001-SO	10/29/2009	14:36	10/30/2009	1	0.003	0.005	-0.22	ND	
LL1CB13B-SB-100SN-0002-SO	10/29/2009	14:36	10/30/2009	1	0.002	0.004	-0.12	ND	
LL1CB13B-SB-100SN-0003-SO	10/29/2009	14:36	10/30/2009	1	0.004	0.005	-0.34	ND	
LL1CB13B-SB-101SN-0001-SO	10/29/2009	11:55	10/30/2009	1	0.006	0.010	-0.43	ND	
LL1CB13B-SB-101SN-0002-SO	10/29/2009	11:55	10/30/2009	1	0.003	0.004	-0.25	ND	
LL1CB13B-SB-101SN-0003-SO	10/29/2009	11:55	10/30/2009	1	0.001	0.002	-0.06	ND	
LL1CB13B-SB-101SN-0003-SO-DUP	10/29/2009	11:55	10/30/2009	1	0.002	0.003	-0.15	ND	
LL1CB13B-SB-101SN-0004-SO	10/29/2009	11:55	11/2/2009	1	0.071	0.080	-6.32	ND	CLOUDY
LL1CB13B-SB-102SN-0001-SO	10/29/2009	11:50	11/2/2009	1	0.004	0.008	-0.25	ND	
LL1CB13B-SB-102SN-0002-SO	10/29/2009	11:50	11/2/2009	1	0.002	0.005	-0.09	ND	
LL1CB13B-SB-102SN-0003-SO	10/29/2009	11:50	11/2/2009	1	0.000	0.005	0.15	ND	
LL1CB13B-SB-102SN-0004-SO	10/29/2009	11:50	11/2/2009	1	0.007	0.009	-0.59	ND	
LL1CB13B-SB-103SN-0001-SO	10/29/2009	16:05	11/2/2009	1	0.037	0.069	-2.45	ND	
LL1CB13B-SB-103SN-0002-SO	10/29/2009	16:05	11/2/2009	1	0.000	0.006	0.19	ND	

Table D-1
TNT Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	$Abs_{"initial"}$	$Abs_{"sample"}$	Result	TNT Conc. (ppm) (Cleanup Level: 878 ppm)	Comments
LL1CB13B-SB-103SN-0003-SO	10/29/2009	16:05	11/2/2009	1	0.000	0.001	0.03	ND	
LL1CB13B-SB-103SN-0004-SO	10/29/2009	16:05	11/2/2009	1	0.000	0.002	0.06	ND	
LL1CB13B-SB-103SN-0005-SO	10/29/2009	16:05	11/2/2009	1	0.008	0.026	-0.19	ND	
LL1CB13B-SB-092SN-0001-SO	10/30/2009	9:30	11/2/2009	1	0.003	0.005	-0.22	ND	
LL1CB13B-SB-092SN-0002-SO	10/30/2009	9:30	11/2/2009	1	0.001	0.003	-0.03	ND	
LL1CB13B-SB-092SN-0003-SO	10/30/2009	9:30	11/2/2009	1	0.004	0.020	0.12	ND	LIGHT BLUE
LL1CB13B-SB-092SN-0004-SO	10/30/2009	9:30	11/2/2009	1	0.000	0.027	0.84	0.8	LIGHT BLUE
LL1CB13B-SB-091SN-0001-SO	10/30/2009	9:11	11/2/2009	1	0.009	0.011	-0.77	ND	
LL1CB13B-SB-091SN-0002-SO	10/30/2009	9:11	11/2/2009	1	0.003	0.014	0.06	ND	
LL1CB13B-SB-091SN-0003-SO	10/30/2009	9:11	11/2/2009	1	0.002	0.009	0.03	ND	
LL1CB13B-SB-091SN-0004-SO	10/30/2009	9:11	11/2/2009	1	0.000	0.004	0.12	ND	
LL1CB13B-SB-091SN-0005-SO	10/30/2009	9:11	11/2/2009	1	0.027	0.060	-1.49	ND	
LL1CB13B-SB-093SN-0001-SO	10/30/2009	9:42	11/2/2009	1	0.004	0.023	0.22	ND	LIGHT BLUE
LL1CB13B-SB-093SN-0001-SO-DUP	10/30/2009	9:42	11/2/2009	1	0.004	0.019	0.09	ND	LIGHT BLUE
LL1CB13B-SB-093SN-0002-SO	10/30/2009	9:42	11/2/2009	1	0.003	0.017	0.15	ND	
LL1CB13B-SB-093SN-0003-SO	10/30/2009	9:42	11/2/2009	1	0.000	0.003	0.09	ND	
LL1CA6-SB-114SN-0001-SO	10/30/2009	11:09	11/2/2009	1	0.001	0.009	0.15	ND	
LL1CA6-SB-114SN-0002-SO	10/30/2009	11:09	11/2/2009	1	0.000	0.001	0.03	ND	
LL1CA6-SB-114SN-0003-SO	10/30/2009	11:09	11/2/2009	1	0.000	0.004	0.12	ND	
LL1CA6-SB-114SN-0004-SO	10/30/2009	11:09	11/2/2009	1	0.006	0.026	0.06	ND	
LL1CA6-SB-114SN-0005-SO	10/30/2009	11:09	11/2/2009	1	0.001	0.013	0.28	ND	
LL1CA6-SB-115SN-0001-SO	10/30/2009	11:11	11/2/2009	1	0.002	0.011	0.09	ND	
LL1CA6-SB-115SN-0002-SO	10/30/2009	11:11	11/2/2009	1	0.000	0.008	0.25	ND	
LL1CA6-SB-115SN-0003-SO	10/30/2009	11:11	11/2/2009	1	0.000	0.008	0.25	ND	
LL1CA6-SB-115SN-0004-SO	10/30/2009	11:11	11/2/2009	1	0.003	0.004	-0.25	ND	
LL1CA6-SB-115SN-0005-SO	10/30/2009	11:11	11/2/2009	1	0.008	0.026	-0.19	ND	
LL1CA6-SB-116SN-0001-SO	10/30/2009	10:20	11/2/2009	1	0.006	0.019	-0.15	ND	
LL1CA6-SB-116SN-0002-SO	10/30/2009	10:20	11/2/2009	1	0.007	0.011	-0.53	ND	
LL1CA6-SB-116SN-0003-SO	10/30/2009	10:20	11/2/2009	1	0.007	0.019	-0.28	ND	
LL1CA6-SB-116SN-0004-SO	10/30/2009	10:20	11/2/2009	1	0.006	0.013	-0.34	ND	
LL1CA6-SB-116SN-0005-SO	10/30/2009	10:20	11/2/2009	1	0.005	0.011	-0.28	ND	
LL1CA6-SB-117SN-0001-SO	10/30/2009	10:44	11/2/2009	1	0.005	0.010	-0.31	ND	
LL1CA6-SB-117SN-0002-SO	10/30/2009	10:44	11/2/2009	1	0.002	0.005	-0.09	ND	
LL1CA6-SB-117SN-0003-SO	10/30/2009	10:44	11/2/2009	1	0.004	0.011	-0.15	ND	
LL1CA6-SB-117SN-0003-SO-DUP	10/30/2009	10:44	11/2/2009	1	0.002	0.008	0.00	ND	
LL1CA6-SB-117SN-0004-SO	10/30/2009	10:44	11/2/2009	1	0.004	0.020	0.12	ND	
LL1CA6-SB-117SN-0005-SO	10/30/2009	10:44	11/2/2009	1	0.002	0.010	0.06	ND	
LL1CA6-SB-118SN-0001-SO	10/30/2009	10:16	11/2/2009	1	0.005	0.386	11.33	11.3	PINK
LL1CA6-SB-118SN-0002-SO	10/30/2009	10:16	11/2/2009	1	0.005	0.016	-0.12	ND	
LL1CA6-SB-118SN-0003-SO	10/30/2009	10:16	11/2/2009	1	0.004	0.014	-0.06	ND	
LL1CA6-SB-118SN-0004-SO	10/30/2009	10:16	11/2/2009	1	0.001	0.004	0.00	ND	
LL1CA6-SB-118SN-0005-SO	10/30/2009	10:16	11/2/2009	1	0.030	0.105	-0.46	ND	
LL1CA6A-SB-119SN-0001-SO	10/30/2009	13:00	11/2/2009	1	0.000	0.004	0.12	ND	
LL1CA6A-SB-119SN-0002-SO	10/30/2009	13:00	11/2/2009	1	0.000	0.007	0.22	ND	
LL1CA6A-SB-119SN-0003-SO	10/30/2009	13:00	11/2/2009	1	0.004	0.102	2.66	2.7	LIGHT PINK
LL1CA6A-SB-119SN-0004-SO	10/30/2009	13:00	11/2/2009	1	0.022	0.051	-1.15	ND	
LL1CA6A-SB-119SN-0005-SO	10/30/2009	13:00	11/2/2009	1	0.001	0.004	0.00	ND	
LL1CA6A-SB-120SN-0001-SO	10/30/2009	12:00	11/2/2009	1	0.002	0.006	-0.06	ND	
LL1CA6A-SB-120SN-0002-SO	10/30/2009	12:00	11/2/2009	1	0.001	0.008	0.12	ND	
LL1CA6A-SB-120SN-0003-SO	10/30/2009	12:00	11/2/2009	1	0.055	2.984	85.57	85.6	LIGHT ORANGE/RED
LL1CA6A-SB-120SN-0003-SO DL1	10/30/2009	12:00	11/2/2009	50	0.003	0.151	215.17	215.2	
LL1CA6A-SB-120SN-0003-SO DL2	10/30/2009	12:00	11/2/2009	10	0.005	0.926	280.50	280.5	
LL1CA6A-SB-120SN-0003-SO DL3	10/30/2009	12:00	11/2/2009	20	0.002	0.455	276.78	276.8	

Table D-1
TNT Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	$Abs_{"initial"}$	$Abs_{"sample"}$	Result	TNT Conc. (ppm) (Cleanup Level: 878 ppm)	Comments
LL1CA6A-SB-120SN-0004-SO	10/30/2009	12:00	11/2/2009	1	0.022	0.069	-0.59	ND	LIGHT PINK
LL1CA6A-SB-120SN-0005-SO	10/30/2009	12:00	11/2/2009	1	0.000	0.008	0.25	ND	
LL1CA6A-SB-121SN-0001-SO	10/30/2009	11:40	11/2/2009	1	0.007	0.042	0.43	ND	LIGHT PINK
LL1CA6A-SB-121SN-0002-SO	10/30/2009	11:40	11/2/2009	1	0.016	0.068	0.12	ND	
LL1CA6A-SB-121SN-0003-SO	10/30/2009	11:40	11/2/2009	1	0.009	0.063	0.84	0.8	
LL1CA6A-SB-121SN-0003-SO-DUP	10/30/2009	11:40	11/2/2009	1	0.007	0.058	0.93	0.9	
LL1CA6A-SB-121SN-0004-SO	10/30/2009	11:40	11/3/2009	1	0.009	0.082	1.42	1.4	LIGHT PINK
LL1CA6A-SB-121SN-0005-SO	10/30/2009	11:40	11/3/2009	1	2.000	0.004	-247.55	ND	
LL1CA6A-SB-122SN-0001-SO	10/30/2009	13:13	11/3/2009	1	0.005	0.028	0.25	ND	
LL1CA6A-SB-122SN-0002-SO	10/30/2009	13:13	11/3/2009	1	0.004	0.026	0.31	ND	
LL1CA6A-SB-122SN-0003-SO	10/30/2009	13:13	11/3/2009	1	0.003	0.010	-0.06	ND	
LL1CA6A-SB-122SN-0004-SO	10/30/2009	13:13	11/3/2009	1	0.005	0.010	-0.31	ND	
LL1CA6A-SB-122SN-0005-SO	10/30/2009	13:13	11/3/2009	1	0.002	0.006	-0.06	ND	
LL1CA6A-SB-123SN-0001-SO	10/30/2009	12:11	11/3/2009	1	0.005	0.013	-0.22	ND	
LL1CA6A-SB-123SN-0002-SO	10/30/2009	12:11	11/3/2009	1	0.000	0.005	0.15	ND	
LL1CA6A-SB-123SN-0003-SO	10/30/2009	12:11	11/3/2009	1	0.005	0.009	-0.34	ND	
LL1CA6A-SB-123SN-0004-SO	10/30/2009	12:11	11/3/2009	1	0.010	0.031	-0.28	ND	
LL1CA6A-SB-123SN-0005-SO	10/30/2009	12:11	11/3/2009	1	0.005	0.014	-0.19	ND	
LL1CA14-SB-130SN-0001-SO	11/2/2009	12:40	11/3/2009	1	0.003	0.010	-0.06	ND	
LL1CA14-SB-130SN-0002-SO	11/2/2009	12:40	11/3/2009	1	0.002	0.007	-0.03	ND	
LL1CA14-SB-130SN-0003-SO	11/2/2009	12:40	11/3/2009	1	0.006	0.009	-0.46	ND	
LL1CA14-SB-130SN-0004-SO	11/2/2009	12:40	11/3/2009	1	0.002	0.003	-0.15	ND	
LL1CA14-SB-130SN-0005-SO	11/2/2009	12:40	11/3/2009	1	0.002	0.004	-0.12	ND	
LL1CA14-SB-131SN-0001-SO	11/2/2009	12:25	11/3/2009	1	0.008	0.023	-0.28	ND	
LL1CA14-SB-131SN-0002-SO	11/2/2009	12:25	11/3/2009	1	0.001	0.005	0.03	ND	
LL1CA14-SB-131SN-0003-SO	11/2/2009	12:25	11/3/2009	1	0.002	0.004	-0.12	ND	
LL1CA14-SB-131SN-0003-SO-DUP	11/2/2009	12:25	11/3/2009	1	0.002	0.003	-0.15	ND	
LL1CA14-SB-131SN-0004-SO	11/2/2009	12:25	11/3/2009	1	0.000	0.001	0.03	ND	
LL1CA14-SB-132SN-0001-SO	11/2/2009	12:05	11/3/2009	1	0.002	0.009	0.03	ND	
LL1CA14-SB-132SN-0002-SO	11/2/2009	12:05	11/3/2009	1	0.008	0.044	0.37	ND	LIGHT GREEN
LL1CA14-SB-132SN-0003-SO	11/2/2009	12:05	11/3/2009	1	0.001	0.003	-0.03	ND	
LL1CA14-SB-132SN-0004-SO	11/2/2009	12:05	11/3/2009	1	0.000	0.001	0.03	ND	
LL1CA14-SB-133SN-0001-SO	11/2/2009	11:55	11/3/2009	1	0.017	0.037	-0.96	ND	
LL1CA14-SB-133SN-0002-SO	11/2/2009	11:55	11/3/2009	1	0.002	0.009	0.03	ND	
LL1CA14-SB-133SN-0003-SO	11/2/2009	11:55	11/3/2009	1	0.181	0.349	-11.61	ND	
LL1CA14-SB-133SN-0004-SO	11/2/2009	11:55	11/3/2009	1	0.000	0.002	0.06	ND	
LL1CA14-SB-133SN-0005-SO	11/2/2009	11:55	11/3/2009	1	0.000	0.001	0.03	ND	
LL1CA14-SB-134SN-0001-SO	11/2/2009	11:35	11/3/2009	1	0.014	0.026	-0.93	ND	
LL1CA14-SB-134SN-0002-SO	11/2/2009	11:35	11/3/2009	1	0.007	0.016	-0.37	ND	
LL1CA14-SB-134SN-0003-SO	11/2/2009	11:35	11/3/2009	1	0.000	0.002	0.06	ND	
LL1CA14-SB-135SN-0001-SO	11/2/2009	10:35	11/3/2009	1	0.003	0.007	-0.15	ND	
LL1CA14-SB-135SN-0002-SO	11/2/2009	10:35	11/3/2009	1	0.001	0.003	-0.03	ND	
LL1CA14-SB-135SN-0003-SO	11/2/2009	10:35	11/3/2009	1	0.005	0.044	0.74	0.7	LIGHT GREEN
LL1CA14-SB-135SN-0004-SO	11/2/2009	10:35	11/3/2009	1	0.000	0.012	0.37	ND	LIGHT GREEN
LL1CA14-SB-135SN-0005-SO	11/2/2009	10:35	11/3/2009	1	0.001	0.014	0.31	ND	LIGHT GREEN
LL1CA14-SB-136SN-0001-SO	11/2/2009	10:15	11/3/2009	1	0.011	0.022	-0.68	ND	
LL1CA14-SB-136SN-0002-SO	11/2/2009	10:15	11/3/2009	1	0.001	0.002	-0.06	ND	
LL1CA14-SB-136SN-0002-SO-DUP	11/2/2009	10:15	11/3/2009	1	0.002	0.004	-0.12	ND	
LL1CA14-SB-136SN-0003-SO	11/2/2009	10:15	11/3/2009	1	0.000	0.001	0.03	ND	
LL1CA14-SB-136SN-0004-SO	11/2/2009	10:15	11/3/2009	1	0.001	0.002	-0.06	ND	
LL1CA14-SB-137SN-0001-SO	11/2/2009	10:55	11/3/2009	1	0.003	0.011	-0.03	ND	
LL1CA14-SB-137SN-0002-SO	11/2/2009	10:55	11/3/2009	1	0.002	0.070	1.92	1.9	LIGHT BLUE
LL1CA14-SB-137SN-0003-SO	11/2/2009	10:55	11/3/2009	1	0.000	0.002	0.06	ND	

Table D-1
TNT Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	$Abs_{"initial"}$	$Abs_{"sample"}$	Result	TNT Conc. (ppm) (Cleanup Level: 878 ppm)	Comments
LL1CA14-SB-138SN-0001-SO	11/2/2009	10:55	11/3/2009	1	0.002	0.013	0.15	ND	
LL1CA14-SB-138SN-0002-SO	11/2/2009	10:55	11/3/2009	1	0.003	0.006	-0.19	ND	
LL1CA14-SB-138SN-0003-SO	11/2/2009	10:55	11/3/2009	1	0.002	0.003	-0.15	ND	
LL1CA14-SB-138SN-0004-SO	11/2/2009	10:55	11/3/2009	1	0.000	0.001	0.03	ND	
LL1CA14-SB-138SN-0005-SO	11/2/2009	10:55	11/3/2009	1	0.001	0.002	-0.06	ND	
LL1CA14-SB-139SN-0001-SO	11/2/2009	11:41	11/3/2009	1	0.004	0.008	-0.25	ND	
LL1CA14-SB-139SN-0002-SO	11/2/2009	11:41	11/3/2009	1	0.000	0.001	0.03	ND	
LL1CA14-SB-139SN-0003-SO	11/2/2009	11:41	11/3/2009	1	0.001	0.006	0.06	ND	
LL1CA14-SB-139SN-0004-SO	11/2/2009	11:41	11/3/2009	1	0.000	0.001	0.03	ND	
LL1CA14-SB-140SN-0001-SO	11/2/2009	12:26	11/3/2009	1	0.003	0.010	-0.06	ND	
LL1CA14-SB-140SN-0002-SO	11/2/2009	12:26	11/3/2009	1	0.000	0.005	0.15	ND	
LL1CA14-SB-140SN-0003-SO	11/2/2009	12:26	11/3/2009	1	0.000	0.001	0.03	ND	
LL1CA14-SB-140SN-0004-SO	11/2/2009	12:26	11/3/2009	1	0.001	0.030	0.80	0.8	LIGHT BLUE
LL1CA14-SB-140SN-0005-SO	11/2/2009	12:26	11/3/2009	1	0.000	0.011	0.34	ND	LIGHT BLUE
LL1CA14-SB-141SN-0001-SO	11/2/2009	12:02	11/3/2009	1	0.004	0.014	-0.06	ND	
LL1CA14-SB-141SN-0001-SO-DUP	11/2/2009	12:02	11/3/2009	1	0.003	0.009	-0.09	ND	
LL1CA14-SB-141SN-0002-SO	11/2/2009	12:02	11/4/2009	1	0.000	0.002	0.06	ND	
LL1CA14-SB-141SN-0003-SO	11/2/2009	12:02	11/4/2009	1	0.000	0.001	0.03	ND	
LL1CA14-SB-141SN-0004-SO	11/2/2009	12:02	11/4/2009	1	0.001	0.002	-0.06	ND	
LL1CA14-SB-142SN-0001-SO	11/2/2009	12:47	11/4/2009	1	0.004	0.008	-0.25	ND	
LL1CA14-SB-142SN-0002-SO	11/2/2009	12:47	11/4/2009	1	0.003	0.004	-0.25	ND	
LL1CA14-SB-142SN-0003-SO	11/2/2009	12:47	11/4/2009	1	0.002	0.004	-0.12	ND	
LL1CA14-SB-142SN-0004-SO	11/2/2009	12:47	11/4/2009	1	0.001	0.002	-0.06	ND	
LL1CA14-SB-128SN-0001-SO	11/2/2009	15:00	11/4/2009	1	0.001	0.003	-0.03	ND	
LL1CA14-SB-128SN-0002-SO	11/2/2009	15:00	11/4/2009	1	0.003	0.007	-0.15	ND	
LL1CA14-SB-128SN-0003-SO	11/2/2009	15:00	11/4/2009	1	0.002	0.005	-0.09	ND	
LL1CA14-SB-128SN-0004-SO	11/2/2009	15:00	11/4/2009	1	0.003	0.012	0.00	ND	
LL1CA14-SB-128SN-0005-SO	11/2/2009	15:00	11/4/2009	1	0.013	0.024	-0.87	ND	
LL1CA14-SB-129SN-0001-SO	11/2/2009	14:58	11/4/2009	1	0.010	0.021	-0.59	ND	
LL1CA14-SB-129SN-0002-SO	11/2/2009	14:58	11/4/2009	1	0.004	0.006	-0.31	ND	
LL1CA14-SB-129SN-0003-SO	11/2/2009	14:58	11/4/2009	1	0.003	0.009	-0.09	ND	
LL1CA14-SB-129SN-0004-SO	11/2/2009	14:58	11/4/2009	1	0.003	0.052	1.24	1.2	LIGHT BLUE
LL1CA14-SB-129SN-0005-SO	11/2/2009	14:58	11/4/2009	1	0.001	0.005	0.03	ND	
F16-SB-143SN-0001-SO	11/2/2009	16:06	11/4/2009	1	0.008	0.011	-0.65	ND	
F16-SB-143SN-0002-SO	11/2/2009	16:06	11/4/2009	1	0.003	0.004	-0.25	ND	
F16-SB-143SN-0003-SO	11/2/2009	16:06	11/4/2009	1	0.003	0.005	-0.22	ND	
F16-SB-143SN-0003-SO-DUP	11/2/2009	16:06	11/4/2009	1	0.002	0.003	-0.15	ND	
F16-SB-143SN-0004-SO	11/2/2009	16:06	11/4/2009	1	0.000	0.000	0.00	ND	
F16-SB-143SN-0005-SO	11/2/2009	16:06	11/4/2009	1	0.000	0.000	0.00	ND	
F16-SB-144SN-0001-S0	11/2/2009	1621	11/4/2009	1	0.010	0.138	3.03	3.0	GREEN
F16-SB-144SN-0002-S0	11/2/2009	1621	11/4/2009	1	0.001	0.012	0.25	ND	
F16-SB-144SN-0003-S0	11/2/2009	1621	11/4/2009	1	0.000	0.005	0.15	ND	
F16-SB-144SN-0004-S0	11/2/2009	1621	11/4/2009	1	0.009	0.026	-0.31	ND	
F16-SB-144SN-0005-S0	11/2/2009	1621	11/4/2009	1	0.009	0.023	-0.40	ND	
F16-SB-145SN-0001-S0	11/2/2009	1400	11/4/2009	1	0.005	0.009	-0.34	ND	
F16-SB-145SN-0002-S0	11/2/2009	1400	11/4/2009	1	0.003	0.004	-0.25	ND	
F16-SB-145SN-0003-S0	11/2/2009	1400	11/4/2009	1	0.030	0.167	1.46	1.5	GREEN
F16-SB-145SN-0004-S0	11/2/2009	1400	11/4/2009	1	0.005	0.010	-0.31	ND	
F16-SB-145SN-0005-S0	11/2/2009	1400	11/4/2009	1	0.006	0.007	-0.53	ND	
F16-SB-146SN-0001-SO	11/2/2009	1625	11/4/2009	1	0.017	0.055	-0.40	ND	LIGHT PINK
F16-SB-146SN-0002-SO	11/2/2009	1625	11/4/2009	1	0.005	0.008	-0.37	ND	
F16-SB-146SN-0003-SO	11/2/2009	1625	11/4/2009	1	0.004	0.021	0.15	ND	
F16-SB-146SN-0004-SO	11/2/2009	1625	11/4/2009	1	0.002	0.007	-0.03	ND	

Table D-1
TNT Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	$Abs_{"initial"}$	$Abs_{"sample"}$	Result	**TNT Conc. (ppm)** (Cleanup Level: 878 ppm)	Comments
F16-SB-146SN-0005-SO	11/2/2009	1625	11/4/2009	1	0.005	0.009	-0.34	ND	
F15-SB-147SN-0001-SO	11/2/2009	1705	11/4/2009	1	0.011	0.019	-0.77	ND	
F15-SB-147SN-0002-SO	11/2/2009	1705	11/4/2009	1	0.007	0.014	-0.43	ND	
F15-SB-147SN-0003-SO	11/2/2009	1705	11/4/2009	1	0.007	0.009	-0.59	ND	
F15-SB-147SN-0003-SO-DUP	11/2/2009	1705	11/4/2009	1	0.005	0.007	-0.40	ND	
F15-SB-147SN-0004-SO	11/2/2009	1705	11/4/2009	1	0.001	0.002	-0.06	ND	
F15-SB-147SN-0005-SO	11/2/2009	1705	11/4/2009	1	0.000	0.002	0.06	ND	
F15-SB-148SN-0001-SO	11/2/2009	1725	11/4/2009	1	0.012	0.019	-0.90	ND	
F15-SB-148SN-0002-SO	11/2/2009	1725	11/4/2009	1	0.001	0.003	-0.03	ND	
F15-SB-148SN-0003-SO	11/2/2009	1725	11/4/2009	1	0.000	0.000	0.00	ND	
F15-SB-148SN-0004-SO	11/2/2009	1725	11/4/2009	1	0.000	0.000	0.00	ND	
F15-SB-148SN-0005-SO	11/2/2009	1725	11/4/2009	1	0.000	0.000	0.00	ND	
F15-SB-149SN-0001-SO	11/2/2009	1700	11/4/2009	1	0.001	0.002	-0.06	ND	
F15-SB-149SN-0002-SO	11/2/2009	1700	11/4/2009	1	0.000	0.002	0.06	ND	
F15-SB-149SN-0003-SO	11/2/2009	1700	11/4/2009	1	0.001	0.004	0.00	ND	
F15-SB-149SN-0004-SO	11/2/2009	1700	11/4/2009	1	0.000	0.001	0.03	ND	
F15-SB-149SN-0005-SO	11/2/2009	1700	11/4/2009	1	0.001	0.003	-0.03	ND	
F15-SB-150SN-0001-SO	11/2/2009	1725	11/4/2009	1	0.011	0.021	-0.71	ND	
F15-SB-150SN-0002-SO	11/2/2009	1725	11/4/2009	1	0.002	0.021	0.40	ND	LIGHT BLUE
F15-SB-150SN-0003-SO	11/2/2009	1725	11/4/2009	1	0.000	0.003	0.09	ND	
F15-SB-150SN-0004-SO	11/2/2009	1725	11/4/2009	1	0.000	0.001	0.03	ND	
F15-SB-150SN-0005-SO	11/2/2009	1725	11/4/2009	1	0.001	0.002	-0.06	ND	
F15-SB-150SN-0005-SO-DUP	11/2/2009	1725	11/4/2009	1	0.000	0.000	0.00	ND	

Table D-2
RDX Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDX Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL1CB10-SB-063-SN-0001-SO	10/19/2009	17:00	10/20/2009	1	0.021	0.31	ND	
LL1CB10-SB-063-SN-0002-SO	10/19/2009	17:00	10/20/2009	1	0.011	-0.13	ND	
LL1CB10-SB-063-SN-0003-SO	10/19/2009	17:00	10/20/2009	1	0.021	0.31	ND	
LL1CB10-SB-063-SN-0004-SO	10/19/2009	17:00	10/20/2009	1	0.010	-0.18	ND	
LL1CB10-SB-063-SN-0005-SO	10/19/2009	17:00	10/20/2009	1	0.018	0.18	ND	
LL1CC1-SS-001-SN-0001-SO	10/19/2009	15:45	10/20/2009	1	0.027	0.58	ND	Dark Yellow Extract
LL1CB801-SS-002-SN-0001-SO	10/19/2009	9:55	10/20/2009	1	0.028	0.62	ND	
LL1CB19-SS-003-SN-0001-SO	10/19/2009	10:30	10/20/2009	1	0.016	0.09	ND	
LL1CB2-SS-004-SN-0001-SO	10/19/2009	10:55	10/20/2009	1	0.018	0.18	ND	
LL1CB20-SS-005-SN-0001-SO	10/19/2009	11:20	10/20/2009	1	0.027	0.58	ND	
LL1CB3-SS-006-SN-0001-SO	10/20/2009	12:05	10/20/2009	1	0.010	-0.18	ND	
LL1CB3-SS-007-SN-0001-SO	10/20/2009	12:10	10/20/2009	1	0.013	-0.04	ND	
LL1CB3-SS-008-SN-0001-SO	10/20/2009	12:15	10/20/2009	1	0.014	0.00	ND	
LL1CB3-SS-009-SN-0001-SO	10/20/2009	12:20	10/20/2009	1	0.012	-0.09	ND	
LL1CB3-SS-009-SN-0001-DUP	10/20/2009	12:20	10/20/2009	1	0.013	-0.04	ND	
LL1CB8-SS-015SN-0001-SO	10/20/2009	15:15	10/22/2009	1	0.012	-0.09	ND	
LL1151-SS-016SN-0001-SO	10/20/2009	15:35	10/22/2009	1	0.011	-0.13	ND	light yellow
LL1151A-SS-017SN-0001-SO	10/20/2009	15:38	10/22/2009	1	0.010	-0.18	ND	light yellow
LL1CB9-SS-018SN-0001-SO	10/20/2009	16:05	10/22/2009	1	0.011	-0.13	ND	
LL1CB25-SS-010SN-0001-SO	10/20/2009	16:40	10/22/2009	1	0.018	0.18	ND	
LL1CB25-SS-011SN-0001-SO	10/20/2009	16:43	10/22/2009	1	0.013	-0.04	ND	
LL1CB25-SS-012SN-0001-SO	10/20/2009	16:48	10/22/2009	1	0.019	0.22	ND	
LL1CB25-SS-013SN-0001-SO	10/20/2009	16:52	10/22/2009	1	0.017	0.13	ND	
LL1CB25-SS-014SN-0001-SO	10/20/2009	16:59	10/22/2009	1	0.018	0.18	ND	yellow
LL1T4801-SS-019SN-0001-SO	10/21/2009	10:15	10/22/2009	1	0.020	0.27	ND	light yellow
LL1CA15-SS-021SN-0001-SO	10/21/2009	10:43	10/22/2009	1	0.002	-0.53	ND	light yellow
LL1CA16-SS-020SN-0001-SO	10/21/2009	10:45	10/22/2009	1	0.005	-0.40	ND	
LL1CA21-SS-023SN-0001-SO	10/21/2009	11:16	10/22/2009	1	0.000	-0.62	ND	
LL1CA7-SS-022SN-0001-SO	10/21/2009	11:25	10/22/2009	1	0.011	-0.13	ND	
LL1CA28-SS-024SN-0001-SO	10/21/2009	14:33	10/22/2009	1	0.004	-0.44	ND	
LL1CA28A-SS-025SN-0001-SO	10/21/2009	14:43	10/22/2009	1	0.018	0.18	ND	
LL1CA5-SS-026SN-0001-SO	10/21/2009	14:45	10/22/2009	1	0.018	0.18	ND	
LL1CB4B-SS-027SN-0001-SO	10/21/2009	14:49	10/22/2009	1	0.005	-0.40	ND	
LL1CB11-SS-028SN-0001-SO	10/21/2009	15:17	10/22/2009	1	0.000	-0.62	ND	
LL1CB11-SS-028SN-0001-SO-DUP	10/21/2009	15:17	10/22/2009	1	0.005	-0.40	ND	
LL3EB803-SS-001SN-0001-SO	10/21/2009	16:20	10/22/2009	1	0.005	-0.40	ND	
LL4G1-SS-001SN-0001-SO	10/21/2009	17:00	10/22/2009	1	0.010	-0.18	ND	
LL4G1A-SS-002SN-0001-SO	10/21/2009	17:55	10/22/2009	1	0.014	0.00	ND	
LL4G3-SS-003SN-0001-SO	10/21/2009	18:05	10/22/2009	1	0.009	-0.22	ND	
LL1CB4A-SB-032SN-0001-SO	10/22/2009	1148	10/23/2009	1	0.012	-0.09	ND	
LL1CB4A-SB-032SN-0002-SO	10/22/2009	1148	10/23/2009	1	0.027	0.58	ND	
LL1CB4A-SB-032SN-0003-SO	10/22/2009	1148	10/23/2009	1	0.010	-0.18	ND	
LL1CB4A-SB-033SN-0001-SO	10/22/2009	1155	10/23/2009	1	0.018	0.18	ND	
LL1CB4A-SB-033SN-0002-SO	10/22/2009	1155	10/23/2009	1	0.010	-0.18	ND	
LL1CB4A-SB-033SN-0003-SO	10/22/2009	1155	10/23/2009	1	0.011	-0.13	ND	
LL1CB4A-SB-034SN-0001-SO	10/22/2009	1500	10/23/2009	1	0.013	-0.04	ND	
LL1CB4A-SB-034SN-0002-SO	10/22/2009	1500	10/23/2009	1	0.018	0.18	ND	
LL1CB4A-SB-034SN-0003-SO	10/22/2009	1500	10/23/2009	1	0.012	-0.09	ND	
LL1CB4A-SB-035SN-0001-SO	10/22/2009	1530	10/23/2009	1	0.015	0.04	ND	
LL1CB4A-SB-035SN-0002-SO	10/22/2009	1530	10/23/2009	1	0.007	-0.31	ND	
LL1CB4A-SB-035SN-0003-SO	10/22/2009	1530	10/23/2009	1	0.008	-0.27	ND	
LL1CB4A-SB-036SN-0001-SO	10/22/2009	1435	10/23/2009	1	0.006	-0.36	ND	
LL1CB4A-SB-036SN-0002-SO	10/22/2009	1435	10/23/2009	1	0.012	-0.09	ND	
LL1CB4A-SB-036SN-0003-SO	10/22/2009	1435	10/23/2009	1	0.019	0.22	ND	
LL1CB4A-SB-037SN-0001-SO	10/22/2009	1503	10/23/2009	1	0.007	-0.31	ND	
LL1CB4A-SB-037SN-0002-SO	10/22/2009	1503	10/23/2009	1	0.010	-0.18	ND	
LL1CB4A-SB-037SN-0003-SO	10/22/2009	1503	10/23/2009	1	0.015	0.04	ND	

Table D-2
RDX Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDX Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL1CB4A-SB-038SN-0001-SO	10/22/2009	1534	10/23/2009	1	0.006	-0.36	ND	
LL1CB4A-SB-038SN-0002-SO	10/22/2009	1534	10/23/2009	1	0.010	-0.18	ND	
LL1CB4A-SB-038SN-0002-SO-DUP	10/22/2009	1534	10/23/2009	1	0.010	-0.18	ND	
LL1CB4A-SB-038SN-0003-SO	10/22/2009	1534	10/23/2009	1	0.019	0.22	ND	
LL1CB4A-SB-039SN-0001-SO	10/22/2009	1545	10/23/2009	1	0.009	-0.22	ND	
LL1CB4A-SB-039SN-0002-SO	10/22/2009	1545	10/23/2009	1	0.011	-0.13	ND	
LL1CB4A-SB-039SN-0003-SO	10/22/2009	1545	10/23/2009	1	0.019	0.22	ND	
LL1CB4A-SB-040SN-0001-SO	10/22/2009	1605	10/23/2009	1	0.011	-0.13	ND	
LL1CB4A-SB-040SN-0002-SO	10/22/2009	1605	10/23/2009	1	0.013	-0.04	ND	
LL1CB4A-SB-040SN-0003-SO	10/22/2009	1605	10/23/2009	1	0.011	-0.13	ND	
LL1CB4A-SB-041SN-0001-SO	10/22/2009	1611	10/23/2009	1	0.015	0.04	ND	
LL1CB4A-SB-041SN-0002-SO	10/22/2009	1611	10/23/2009	1	0.019	0.22	ND	
LL1CB4A-SB-041SN-0003-SO	10/22/2009	1611	10/23/2009	1	0.012	-0.09	ND	
LL1CB4A-SB-042SN-0001-SO	10/22/2009	1629	10/23/2009	1	0.013	-0.04	ND	
LL1CB4A-SB-042SN-0002-SO	10/22/2009	1629	10/23/2009	1	0.017	0.13	ND	
LL1CB4A-SB-042SN-0003-SO	10/22/2009	1629	10/23/2009	1	0.006	-0.36	ND	
LL1CB4A-SB-042SN-0004-SO	10/22/2009	1629	10/23/2009	1	0.012	-0.09	ND	
LL1CB4A-SB-043SN-0001-SO	10/22/2009	1625	10/23/2009	1	0.669	29.11	29.1	
LL1CB4A-SB-043SN-0002-SO	10/22/2009	1625	10/23/2009	1	0.107	4.13	4.1	
LL1CB4A-SB-043SN-0003-SO	10/22/2009	1625	10/23/2009	1	0.036	0.98	1.0	
LL1CB4A-SB-043SN-0004-SO	10/22/2009	1625	10/23/2009	1	0.033	0.84	0.8	
LL1CB4A-SB-043SN-0004-SO-DUP	10/22/2009	1625	10/23/2009	1	0.038	1.07	1.1	
LL1CB4AVP1-SB-029SN-0001-SO	10/22/2009	10:49	10/26/2009	1	0.027	0.58	ND	dark yellow
LL1CB4AVP1-SB-029SN-0002-S0	10/22/2009	10:49	10/26/2009	1	0.011	-0.13	ND	light yellow
LL1CB4AVP1-SB-029SN-0003-SO	10/22/2009	10:49	10/26/2009	1	0.032	0.80	0.8	
LL1CB4AWS-SB-030SN-0001-SO	10/22/2009	9:45	10/26/2009	1	0.008	-0.27	ND	
LL1CB4AWS-SB-030SN-0002-SO	10/22/2009	9:45	10/26/2009	1	0.017	0.13	ND	
LL1CB4AWS-SB-030SN-0003-SO	10/22/2009	9:45	10/26/2009	1	1.252	55.02	55.0	
LL1CB4AWS-SB-030SN-0003-SO DL1	10/22/2009	9:45	10/26/2009	2	0.098	7.47	7.5	
LL1CB4AWS-SB-030SN-0003-SO DL2	10/22/2009	9:45	10/27/2009	2	1.212	106.49	106.5	Re-analyzed on 10-27
LL1CB4AWS-SB-030SN-0003-SO DL3	10/22/2009	9:45	10/27/2009	3	0.559	72.67	72.7	Re-analyzed on 10-27
LL1CB4AWS-SB-031SN-0001-SO	10/22/2009	9:51	10/26/2009	1	0.079	2.89	2.9	
LL1CB4AWS-SB-031SN-0002-SO	10/22/2009	9:51	10/26/2009	1	0.046	1.42	1.4	
LL1CB4AWS-SB-031SN-0003-SO	10/22/2009	9:51	10/26/2009	1	0.209	8.67	8.7	
LL1CB4AWN-SB-044SN-0001-SO	10/22/2009	10:25	10/26/2009	1	0.006	-0.36	ND	
LL1CB4AWN-SB-044SN-0002-SO	10/22/2009	10:25	10/26/2009	1	0.011	-0.13	ND	light yellow
LL1CB4AWN-SB-044SN-0003-SO	10/22/2009	10:25	10/26/2009	1	0.017	0.13	ND	
LL1CB4AWN-SB-045SN-0001-SO	10/22/2009	10:19	10/26/2009	1	0.014	0.00	ND	
LL1CB4AWN-SB-045SN-0002-SO	10/22/2009	10:19	10/26/2009	1	0.010	-0.18	ND	
LL1CB4AWN-SB-045SN-0003-SO	10/22/2009	10:19	10/26/2009	1	0.006	-0.36	ND	
LL1CB10-SB-064SN-0001-SO	10/22/2009	10:23	10/26/2009	1	0.011	-0.13	ND	
LL1CB10-SB-064SN-0002-S0	10/22/2009	10:23	10/26/2009	1	0.013	-0.04	ND	
LL1CB10-SB-064SN-0003-SO	10/22/2009	10:23	10/26/2009	1	0.013	-0.04	ND	
LL1CB10-SB-065SN-0001-S0	10/22/2009	11:20	10/26/2009	1	0.010	-0.18	ND	
LL1CB10-SB-065SN-0002-S0	10/22/2009	11:20	10/26/2009	1	0.007	-0.31	ND	
LL1CB10-SB-065SN-0002-S0-DUP	10/22/2009	11:20	10/26/2009	1	0.011	-0.13	ND	
LL1CB10-SB-066SN-0001-SO	10/23/2009	11:35	10/27/2009	1	0.010	-0.18	ND	
LL1CB10-SB-066SN-0002-SO	10/23/2009	11:35	10/27/2009	1	0.013	-0.04	ND	
LL1CB10-SB-066SN-0003-SO	10/23/2009	11:35	10/27/2009	1	0.012	-0.09	ND	
LL1CB10-SB-066SN-0004-SO	10/23/2009	11:35	10/27/2009	1	0.013	-0.04	ND	
LL1CB10-SB-067SN-0001-SO	10/23/2009	11:49	10/27/2009	1	0.046	1.42	1.4	
LL1CB10-SB-067SN-0002-SO	10/23/2009	11:49	10/27/2009	1	0.017	0.13	ND	
LL1CB10-SB-067SN-0003-SO	10/23/2009	11:49	10/27/2009	1	0.016	0.09	ND	
LL1CB10-SB-068SN-0001-SO	10/23/2009	12:05	10/27/2009	1	0.016	0.09	ND	

Table D-2
RDX Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDX Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL1CB10-SB-068SN-0002-SO	10/23/2009	12:05	10/27/2009	1	0.020	0.27	ND	
LL1CB10-SB-068SN-0003-SO	10/23/2009	12:05	10/27/2009	1	0.014	0.00	ND	
LL1CB10-SB-068SN-0004-SO	10/23/2009	12:05	10/27/2009	1	0.010	-0.18	ND	
LL1CB10-SB-069SN-0001-SO	10/23/2009	13:05	10/27/2009	1	0.015	0.04	ND	
LL1CB10-SB-069SN-0002-SO	10/23/2009	13:05	10/27/2009	1	0.016	0.09	ND	
LL1CB10-SB-069SN-0003-SO	10/23/2009	13:05	10/27/2009	1	0.020	0.27	ND	
LL1CB10-SB-069SN-0004-SO	10/23/2009	13:05	10/27/2009	1	0.015	0.04	ND	
LL1CB10-SB-070SN-0001-SO	10/23/2009	12:10	10/27/2009	1	0.013	-0.04	ND	
LL1CB10-SB-070SN-0002-SO	10/23/2009	12:10	10/27/2009	1	0.019	0.22	ND	
LL1CB10-SB-070SN-0003-SO	10/23/2009	12:10	10/27/2009	1	0.017	0.13	ND	LIGHT YELLOW
LL1CB10-SB-071SN-0001-SO	10/23/2009	13:10	10/27/2009	1	0.013	-0.04	ND	
LL1CB10-SB-071SN-0002-SO	10/23/2009	13:10	10/27/2009	1	0.048	1.51	1.5	
LL1CB10-SB-071SN-0002-SO-DUP	10/23/2009	13:10	10/27/2009	1	0.048	1.51	1.5	
LL1CB10-SB-071SN-0003-SO	10/23/2009	13:10	10/27/2009	1	0.016	0.09	ND	DARK YELLOW
LL1CB10-SB-072SN-0001-SO	10/23/2009	12:55	10/27/2009	1	0.012	-0.09	ND	
LL1CB10-SB-072SN-0002-SO	10/23/2009	12:55	10/27/2009	1	0.003	-0.49	ND	
LL1CB10-SB-072SN-0003-SO	10/23/2009	12:55	10/27/2009	1	0.006	-0.36	ND	
LL1CB10-SB-073SN-0001-SO	10/23/2009	13:42	10/27/2009	1	0.022	0.36	ND	
LL1CB10-SB-073SN-0002-SO	10/23/2009	13:42	10/27/2009	1	0.021	0.31	ND	
LL1CB10-SB-073SN-0003-SO	10/23/2009	13:42	10/27/2009	1	0.024	0.44	ND	
LL1CB10-SB-073SN-0004-SO	10/23/2009	13:42	10/27/2009	1	0.063	2.18	2.2	
LL1CB10-SB-074SN-0001-SO	10/23/2009	13:25	10/27/2009	1	0.016	0.09	ND	
LL1CB10-SB-074SN-0002-SO	10/23/2009	13:25	10/27/2009	1	0.030	0.71	ND	
LL1CB10-SB-074SN-0003-SO	10/23/2009	13:25	10/27/2009	1	0.017	0.13	ND	
LL1CB10VP1-SB-075SN-0001-SO	10/26/2009	16:12	10/27/2009	1	0.025	0.49	ND	
LL1CB10VP1-SB-075SN-0002-SO	10/26/2009	16:12	10/27/2009	1	0.019	0.22	ND	
LL1CB10VP1-SB-075SN-0003-SO	10/26/2009	16:12	10/27/2009	1	0.006	-0.36	ND	
LL1CB10VP1-SB-075SN-0004-SO	10/26/2009	16:12	10/27/2009	1	0.012	-0.09	ND	
LL1CB10VP2-SB-076SN-0001-SO	10/26/2009	16:49	10/27/2009	1	0.018	0.18	ND	
LL1CB10VP2-SB-076SN-0002-SO	10/26/2009	16:49	10/27/2009	1	0.012	-0.09	ND	
LL1CB10VP2-SB-076SN-0003-SO	10/26/2009	16:49	10/27/2009	1	0.010	-0.18	ND	
LL1CB10VP3-SB-077SN-0001-SO	10/26/2009	16:30	10/27/2009	1	0.032	0.80	0.8	
LL1CB10VP3-SB-077SN-0002-SO	10/26/2009	16:30	10/27/2009	1	0.019	0.22	ND	
LL1CB10VP3-SB-077SN-0002-SO-DUP	10/26/2009	16:30	10/27/2009	1	0.013	-0.04	ND	
LL1CB10VP3-SB-077SN-0003-SO	10/26/2009	16:30	10/27/2009	1	0.004	-0.44	ND	
LL1CB10VP3-SB-077SN-0004-SO	10/26/2009	16:30	10/27/2009	1	0.009	-0.22	ND	
LL1CA17-SB-104SN-0001-SO	10/26/2009	15:51	10/27/2009	1	0.006	-0.36	ND	
LL1CA17-SB-104SN-0002-SO	10/26/2009	15:51	10/27/2009	1	0.000	-0.62	ND	
LL1CA17-SB-104SN-0003-SO	10/26/2009	15:51	10/27/2009	1	0.002	-0.53	ND	
LL1CA17-SB-104SN-0004-SO	10/26/2009	15:51	10/27/2009	1	0.009	-0.22	ND	
LL1CA17-SB-105SN-0001-SO	10/26/2009	15:40	10/27/2009	1	0.030	0.71	ND	
LL1CA17-SB-105SN-0002-SO	10/26/2009	15:40	10/27/2009	1	0.096	3.64	3.6	
LL1CA17-SB-105SN-0003-SO	10/26/2009	15:40	10/27/2009	1	0.158	6.40	6.4	
LL1CA17-SB-105SN-0004-SO	10/26/2009	15:40	10/27/2009	1	0.039	1.11	1.1	
LL1CA17-SB-105SN-0005-SO	10/26/2009	15:40	10/27/2009	1	0.025	0.49	ND	
LL1CA17-SB-106SN-0001-SO	10/26/2009	15:21	10/27/2009	1	0.006	-0.36	ND	
LL1CA17-SB-106SN-0002-SO	10/26/2009	15:21	10/27/2009	1	0.034	0.89	0.9	
LL1CA17-SB-106SN-0003-SO	10/26/2009	15:21	10/27/2009	1	0.017	0.13	ND	
LL1CA17-SB-106SN-0004-SO	10/26/2009	15:21	10/27/2009	1	0.024	0.44	ND	
LL1CA17-SB-107SN-0001-SO	10/26/2009	14:51	10/27/2009	1	0.029	0.67	ND	
LL1CA17-SB-107SN-0002-SO	10/26/2009	14:51	10/27/2009	1	0.006	-0.36	ND	
LL1CA17-SB-107SN-0003-SO	10/26/2009	14:51	10/27/2009	1	0.010	-0.18	ND	
LL1CA17-SB-107SN-0004-SO	10/26/2009	14:51	10/27/2009	1	0.005	-0.40	ND	
LL1CA17-SB-107SN-0005-SO	10/26/2009	14:51	10/27/2009	1	0.031	0.76	ND	

Table D-2
RDX Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDX Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL1CA17-SB-107SN-0005-SO-DUP	10/26/2009	14:51	10/27/2009	1	0.007	-0.31	ND	
LL1CA17-SB-108SN-0001-SO	10/26/2009	15:19	10/28/2009	1	0.171	6.98	7.0	
LL1CA17-SB-108SN-0002-SO	10/26/2009	15:19	10/28/2009	1	0.055	1.82	1.8	
LL1CA17-SB-108SN-0003-SO	10/26/2009	15:19	10/28/2009	1	0.041	1.20	1.2	
LL1CA17-SB-108SN-0004-SO	10/26/2009	15:19	10/28/2009	1	0.041	1.20	1.2	
LL1CA17-SB-109SN-0001-SO	10/26/2009	15:38	10/28/2009	1	0.013	-0.04	ND	
LL1CA17-SB-109SN-0002-SO	10/26/2009	15:38	10/28/2009	1	0.042	1.24	1.2	
LL1CA17-SB-109SN-0003-SO	10/26/2009	15:38	10/28/2009	1	0.034	0.89	0.9	
LL1CA17-SB-109SN-0004-SO	10/26/2009	15:38	10/28/2009	1	0.015	0.04	ND	
LL1CA17-SB-109SN-0005-SO	10/26/2009	15:38	10/28/2009	1	0.013	-0.04	ND	
LL1CA17-SB-110SN-0001-SO	10/26/2009	15:23	10/28/2009	1	0.012	-0.09	ND	
LL1CA17-SB-110SN-0002-SO	10/26/2009	15:23	10/28/2009	1	0.012	-0.09	ND	
LL1CA17-SB-110SN-0003-SO	10/26/2009	15:23	10/28/2009	1	0.017	0.13	ND	
LL1CA17-SB-111SN-0001-SO	10/26/2009	15:05	10/28/2009	1	0.038	1.07	1.1	
LL1CA17-SB-111SN-0002-SO	10/26/2009	15:05	10/28/2009	1	0.054	1.78	1.8	
LL1CA17-SB-111SN-0003-SO	10/26/2009	15:05	10/28/2009	1	0.014	0.00	ND	
LL1CA17-SB-111SN-0004-SO	10/26/2009	15:05	10/28/2009	1	0.011	-0.13	ND	
LL1CA17-SB-111SN-0005-SO	10/26/2009	15:05	10/28/2009	1	0.018	0.18	ND	
LL1CA17-SB-112SN-0001-SO	10/26/2009	14:54	10/28/2009	1	0.017	0.13	ND	
LL1CA17-SB-112SN-0002-SO	10/26/2009	14:54	10/28/2009	1	0.013	-0.04	ND	
LL1CA17-SB-112SN-0003-SO	10/26/2009	14:54	10/28/2009	1	0.028	0.62	ND	
LL1CA17-SB-112SN-0003-SO-DUP	10/26/2009	14:54	10/28/2009	1	0.025	0.49	ND	
LL1CA17-SB-112SN-0004-SO	10/26/2009	14:54	10/28/2009	1	0.010	-0.18	ND	
LL1CA17-SB-112SN-0005-SO	10/26/2009	14:54	10/28/2009	1	0.016	0.09	ND	
LL1CA17-SB-113SN-0001-SO	10/26/2009	16:01	10/28/2009	1	0.022	0.36	ND	
LL1CA17-SB-113SN-0002-SO	10/26/2009	16:01	10/28/2009	1	0.015	0.04	ND	
LL1CA17-SB-113SN-0003-SO	10/26/2009	16:01	10/28/2009	1	0.050	1.60	1.6	
LL1CA17-SB-113SN-0004-SO	10/26/2009	16:01	10/28/2009	1	0.011	-0.13	ND	
LL1CA17-SB-113SN-0005-SO	10/26/2009	16:01	10/28/2009	1	0.031	0.76	ND	
LL1CB4-SB-048SN-0001-SO	10/27/2009	9:24	10/28/2009	1	0.019	0.22	ND	
LL1CB4-SB-048SN-0002-SO	10/27/2009	9:24	10/28/2009	1	0.013	-0.04	ND	
LL1CB4-SB-048SN-0003-SO	10/27/2009	9:24	10/28/2009	1	0.015	0.04	ND	
LL1CB4-SB-049SN-0001-SO	10/27/2009	9:44	10/28/2009	1	0.007	-0.31	ND	
LL1CB4-SB-049SN-0002-SO	10/27/2009	9:44	10/28/2009	1	0.011	-0.13	ND	
LL1CB4-SB-049SN-0003-SO	10/27/2009	9:44	10/28/2009	1	0.011	-0.13	ND	
LL1CB4-SB-050SN-0001-SO	10/27/2009	9:34	10/28/2009	1	0.013	-0.04	ND	
LL1CB4-SB-050SN-0002-SO	10/27/2009	9:34	10/28/2009	1	0.014	0.00	ND	
LL1CB4-SB-050SN-0003-SO	10/27/2009	9:34	10/28/2009	1	0.012	-0.09	ND	
LL1CB4-SB-051SN-0001-SO	10/27/2009	9:50	10/28/2009	1	0.008	-0.27	ND	
LL1CB4-SB-051SN-0002-SO	10/27/2009	9:50	10/28/2009	1	0.034	0.89	0.9	
LL1CB4-SB-051SN-0003-SO	10/27/2009	9:50	10/28/2009	1	0.020	0.27	ND	
LL1CB4-SB-051SN-0004-SO	10/27/2009	9:50	10/28/2009	1	0.017	0.13	ND	
LL1CB4-SB-051SN-0004-SO-DUP	10/27/2009	9:50	10/28/2009	1	0.008	-0.27	ND	
LL1CB4-SB-052SN-0001-SO	10/27/2009	10:35	10/28/2009	1	0.011	-0.13	ND	
LL1CB4-SB-052SN-0002-SO	10/27/2009	10:35	10/28/2009	1	0.019	0.22	ND	
LL1CB4-SB-052SN-0003-SO	10/27/2009	10:35	10/28/2009	1	0.019	0.22	ND	
LL1CB4-SB-053SN-0001-SO	10/27/2009	10:22	10/28/2009	1	0.009	-0.22	ND	
LL1CB4-SB-053SN-0002-SO	10/27/2009	10:22	10/28/2009	1	0.030	0.71	ND	
LL1CB4-SB-054SN-0001-SO	10/27/2009	10:48	10/28/2009	1	0.029	0.67	ND	
LL1CB4-SB-054SN-0002-SO	10/27/2009	10:48	10/28/2009	1	0.007	-0.31	ND	
LL1CB4-SB-054SN-0003-SO	10/27/2009	10:48	10/28/2009	1	0.010	-0.18	ND	
LL1CB4-SB-055SN-0001-SO	10/27/2009	11:18	10/28/2009	1	0.007	-0.31	ND	
LL1CB4-SB-055SN-0002-SO	10/27/2009	11:18	10/28/2009	1	0.024	0.44	ND	
LL1CB4-SB-055SN-0003-SO	10/27/2009	11:18	10/28/2009	1	0.015	0.04	ND	

Table D-2
RDX Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDX Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL1CB4-SB-056SN-0001-SO	10/27/2009	11:11	10/28/2009	1	0.027	0.58	ND	
LL1CB4-SB-056SN-0002-SO	10/27/2009	11:11	10/28/2009	1	0.015	0.04	ND	
LL1CB4-SB-056SN-0003-SO	10/27/2009	11:11	10/28/2009	1	0.016	0.09	ND	
LL1CB4-SB-057SN-0001-SO	10/27/2009	12:00	10/28/2009	1	0.047	1.47	1.5	
LL1CB4-SB-057SN-0002-SO	10/27/2009	12:00	10/28/2009	1	0.023	0.40	ND	
LL1CB4-SB-058SN-0001-SO	10/27/2009	11:53	10/28/2009	1	0.013	-0.04	ND	
LL1CB4-SB-058SN-0002-SO	10/27/2009	11:53	10/28/2009	1	0.036	0.98	1.0	
LL1CB4-SB-058SN-0003-SO	10/27/2009	11:53	10/28/2009	1	0.027	0.58	ND	
LL1CB4-SB-059SN-0001-SO	10/27/2009	12:32	10/28/2009	1	0.023	0.40	ND	
LL1CB4-SB-059SN-0001-SO-DUP	10/27/2009	12:32	10/28/2009	1	0.024	0.44	ND	
LL1CB4-SB-059SN-0002-SO	10/27/2009	12:32	10/28/2009	1	0.020	0.27	ND	
LL1CB4-SB-059SN-0003-SO	10/27/2009	12:32	10/28/2009	1	0.045	1.38	1.4	
LL1CB4-SB-059SN-0004-SO	10/27/2009	12:32	10/28/2009	1	0.036	0.98	1.0	
LL1CB4-SB-059SN-0005-SO	10/27/2009	12:32	10/28/2009	1	0.024	0.44	ND	
LL1CB4-SB-059SN-0005-SO-DUP	10/27/2009	12:32	10/28/2009	1	0.021	0.31	ND	
LL1CB4WS-SB-046SN-0001-SO	10/28/2009	11:00	10/29/2009	1	0.027	0.58	ND	
LL1CB4WS-SB-046SN-0002-SO	10/28/2009	11:00	10/29/2009	1	0.016	0.09	ND	
LL1CB4WS-SB-046SN-0003-SO	10/28/2009	11:00	10/29/2009	1	0.023	0.40	ND	
LL1CB4WS-SB-046SN-0003-SO	10/28/2009	11:00	10/29/2009	1	0.026	0.53	ND	
LL1CB4WS-SB-046SN-0005-SO	10/28/2009	11:00	10/29/2009	1	0.029	0.67	ND	
LL1CB4WS-SB-047SN-0001-SO	10/28/2009	10:50	10/29/2009	1	0.022	0.36	ND	
LL1CB4WS-SB-047SN-0002-SO	10/28/2009	10:50	10/29/2009	1	0.021	0.31	ND	
LL1CB4WS-SB-047SN-0003-SO	10/28/2009	10:50	10/29/2009	1	0.084	3.11	3.1	
LL1CB4WS-SB-047SN-0004-SO	10/28/2009	10:50	10/29/2009	1	0.106	4.09	4.1	
LL1CB4WN-SB-060SN-0001-SO	10/28/2009	10:30	10/29/2009	1	0.025	0.49	ND	
LL1CB4WN-SB-060SN-0002-SO	10/28/2009	10:30	10/29/2009	1	0.090	3.38	3.4	
LL1CB4WN-SB-060SN-0003-SO	10/28/2009	10:30	10/29/2009	1	0.120	4.71	4.7	
LL1CB4WN-SB-061SN-0001-SO	10/28/2009	10:06	10/29/2009	1	0.026	0.53	ND	
LL1CB4WN-SB-061SN-0002-SO	10/28/2009	10:06	10/29/2009	1	0.016	0.09	ND	
LL1CB4WN-SB-061SN-0003-SO	10/28/2009	10:06	10/29/2009	1	0.023	0.40	ND	
LL1CB4WN-SB-061SN-0004-SO	10/28/2009	10:06	10/29/2009	1	0.144	5.78	5.8	DARK YELLOW
LL1CB4WN-SB-061SN-0005-SO	10/28/2009	10:06	10/29/2009	1	0.146	5.87	5.9	YELLOW
LL1CB4VP1-SB-062SN-0001-SO	10/28/2009	11:44	10/29/2009	1	0.080	2.93	2.9	YELLOW
LL1CB4VP1-SB-062SN-0002-SO	10/28/2009	11:44	10/29/2009	1	0.030	0.71	ND	
LL1CB4VP1-SB-062SN-0003-SO	10/28/2009	11:44	10/29/2009	1	0.020	0.27	ND	
LL1CB4VP1-SB-062SN-0003-SO-DUP	10/28/2009	11:44	10/29/2009	1	0.028	0.62	ND	
LL1CB4VP1-SB-062SN-0004-SO	10/28/2009	11:44	10/29/2009	1	0.020	0.27	ND	
LL1CB13-SB-078SN-0001-SO	10/28/2009	14:17	10/29/2009	1	0.019	0.22	ND	
LL1CB13-SB-078SN-0002-SO	10/28/2009	14:17	10/29/2009	1	0.024	0.44	ND	
LL1CB13-SB-078SN-0003-SO	10/28/2009	14:17	10/29/2009	1	0.029	0.67	ND	
LL1CB13-SB-078SN-0004-SO	10/28/2009	14:17	10/29/2009	1	0.021	0.31	ND	
LL1CB13-SB-078SN-0005-SO	10/28/2009	14:17	10/29/2009	1	0.037	1.02	1.0	
LL1CB13-SB-079SN-0001-SO	10/28/2009	14:39	10/29/2009	1	0.030	0.71	ND	
LL1CB13-SB-079SN-0002-SO	10/28/2009	14:39	10/29/2009	1	0.029	0.67	ND	
LL1CB13-SB-079SN-0003-SO	10/28/2009	14:39	10/29/2009	1	0.021	0.31	ND	
LL1CB13-SB-079SN-0004-SO	10/28/2009	14:39	10/29/2009	1	0.026	0.53	ND	
LL1CB13-SB-079SN-0005-SO	10/28/2009	14:39	10/29/2009	1	0.027	0.58	ND	
LL1CB13-SB-080SN-0001-SO	10/28/2009	16:05	10/29/2009	1	0.019	0.22	ND	
LL1CB13-SB-080SN-0002-SO	10/28/2009	16:05	10/29/2009	1	0.023	0.40	ND	
LL1CB13-SB-080SN-0003-SO	10/28/2009	16:05	10/29/2009	1	0.015	0.04	ND	
LL1CB13-SB-080SN-0004-SO	10/28/2009	16:05	10/29/2009	1	0.029	0.67	ND	
LL1CB13-SB-080SN-0005-SO	10/28/2009	16:05	10/29/2009	1	0.025	0.49	ND	
LL1CB13-SB-081SN-0001-SO	10/28/2009	14:55	10/29/2009	1	0.028	0.62	ND	
LL1CB13-SB-081SN-0002-SO	10/28/2009	14:55	10/29/2009	1	0.025	0.49	ND	

Table D-2
RDX Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDX Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL1CB13-SB-081SN-0003-SO	10/28/2009	14:55	10/29/2009	1	0.027	0.58	ND	
LL1CB13-SB-081SN-0004-SO	10/28/2009	14:55	10/29/2009	1	0.018	0.18	ND	
LL1CB13-SB-081SN-0004-SO-DUP	10/28/2009	14:55	10/29/2009	1	0.035	0.93	0.9	
LL1CB13-SB-081SN-0005-SO	10/28/2009	14:55	10/29/2009	1	0.032	0.80	0.8	
LL1CB13-SB-082SN-0001-SO	10/28/2009	14:30	10/29/2009	1	0.024	0.44	ND	
LL1CB13-SB-082SN-0002-SO	10/28/2009	14:30	10/29/2009	1	0.035	0.93	0.9	
LL1CB13-SB-082SN-0003-SO	10/28/2009	14:30	10/29/2009	1	0.034	0.87	0.9	
LL1CB13-SB-082SN-0004-SO	10/28/2009	14:30	10/29/2009	1	0.042	1.24	1.2	
LL1CB13-SB-082SN-0005-SO	10/28/2009	14:30	10/29/2009	1	0.022	0.36	ND	
LL1CB13-SB-083SN-0001-SO	10/28/2009	15:02	10/29/2009	1	0.002	-0.53	ND	
LL1CB13-SB-083SN-0002-SO	10/28/2009	15:02	10/29/2009	1	0.014	0.00	ND	
LL1CB13-SB-083SN-0003-SO	10/28/2009	15:02	10/29/2009	1	0.004	-0.44	ND	
LL1CB13-SB-083SN-0004-SO	10/28/2009	15:02	10/29/2009	1	0.031	0.76	ND	
LL1CB13-SB-083SN-0005-SO	10/28/2009	15:02	10/29/2009	1	0.006	-0.36	ND	
LL1CB13-SB-084SN-0001-SO	10/28/2009	15:10	10/29/2009	1	0.013	-0.04	ND	
LL1CB13-SB-084SN-0002-SO	10/28/2009	15:10	10/29/2009	1	0.004	-0.44	ND	
LL1CB13-SB-084SN-0003-SO	10/28/2009	15:10	10/29/2009	1	0.003	-0.49	ND	
LL1CB13-SB-084SN-0004-SO	10/28/2009	15:10	10/29/2009	1	0.018	0.18	ND	
LL1CB13-SB-084SN-0005-SO	10/28/2009	15:10	10/29/2009	1	0.007	-0.31	ND	
LL1CB13A-SB-085SN-0001-SO	10/28/2009	16:45	10/29/2009	1	0.009	-0.22	ND	
LL1CB13A-SB-085SN-0002-SO	10/28/2009	16:45	10/29/2009	1	0.004	-0.44	ND	
LL1CB13A-SB-085SN-0003-SO	10/28/2009	16:45	10/29/2009	1	0.011	-0.13	ND	
LL1CB13A-SB-085SN-0004-SO	10/28/2009	16:45	10/29/2009	1	0.002	-0.53	ND	
LL1CB13A-SB-085SN-0004-SO-DUP	10/28/2009	16:45	10/29/2009	1	0.004	-0.44	ND	
LL1CB13A-SB-085SN-0005-SO	10/28/2009	16:45	10/30/2009	1	0.008	-0.27	ND	
LL1CB13A-SB-086SN-0001-SO	10/28/2009	16:15	10/30/2009	1	0.014	0.00	ND	
LL1CB13A-SB-086SN-0002-SO	10/28/2009	16:15	10/30/2009	1	0.006	-0.36	ND	
LL1CB13A-SB-086SN-0003-SO	10/28/2009	16:15	10/30/2009	1	0.025	0.49	ND	
LL1CB13A-SB-086SN-0004-SO	10/28/2009	16:15	10/30/2009	1	0.021	0.31	ND	
LL1CB13A-SB-086SN-0005-SO	10/28/2009	16:15	10/30/2009	1	0.018	0.18	ND	
LL1CB13A-SB-087SN-0001-SO	10/28/2009	16:02	10/30/2009	1	0.013	-0.04	ND	
LL1CB13A-SB-087SN-0002-SO	10/28/2009	16:02	10/30/2009	1	0.006	-0.36	ND	
LL1CB13A-SB-087SN-0003-SO	10/28/2009	16:02	10/30/2009	1	0.001	-0.58	ND	
LL1CB13A-SB-087SN-0004-SO	10/28/2009	16:02	10/30/2009	1	0.000	-0.62	ND	
LL1CB13A-SB-087SN-0005-SO	10/28/2009	16:02	10/30/2009	1	0.009	-0.22	ND	YELLOW
LL1CB13A-SB-088SN-0001-SO	10/28/2009	16:50	10/30/2009	1	0.007	-0.31	ND	
LL1CB13A-SB-088SN-0002-SO	10/28/2009	16:50	10/30/2009	1	0.007	-0.31	ND	
LL1CB13A-SB-088SN-0003-SO	10/28/2009	16:50	10/30/2009	1	0.003	-0.49	ND	
LL1CB13A-SB-088SN-0004-SO	10/28/2009	16:50	10/30/2009	1	0.013	-0.04	ND	
LL1CB13A-SB-088SN-0005-SO	10/28/2009	16:50	10/30/2009	1	0.004	-0.44	ND	
LL1CB13A-SB-089SN-0001-SO	10/28/2009	16:44	10/30/2009	1	0.006	-0.36	ND	
LL1CB13A-SB-089SN-0002-SO	10/28/2009	16:44	10/30/2009	1	0.002	-0.53	ND	
LL1CB13A-SB-089SN-0003-SO	10/28/2009	16:44	10/30/2009	1	0.010	-0.18	ND	
LL1CB13A-SB-089SN-0004-SO	10/28/2009	16:44	10/30/2009	1	0.005	-0.40	ND	
LL1CB13A-SB-089SN-0004-SO-DUP	10/28/2009	16:44	10/30/2009	1	0.011	-0.13	ND	
LL1CB13A-SB-089SN-0005-SO	10/28/2009	16:44	10/30/2009	1	0.004	-0.44	ND	
LL1CB13A-SB-090SN-0001-SO	10/28/2009	16:31	10/30/2009	1	0.006	-0.36	ND	
LL1CB13A-SB-090SN-0002-SO	10/28/2009	16:31	10/30/2009	1	0.008	-0.27	ND	
LL1CB13A-SB-090SN-0003-SO	10/28/2009	16:31	10/30/2009	1	0.002	-0.53	ND	
LL1CB13A-SB-090SN-0004-SO	10/28/2009	16:31	10/30/2009	1	0.006	-0.36	ND	
LL1CB13A-SB-090SN-0005-SO	10/28/2009	16:31	10/30/2009	1	0.009	-0.22	ND	
LL1CB13B-SB-094SN-0001-SO	10/29/2009	16:16	10/30/2009	1	0.015	0.04	ND	
LL1CB13B-SB-094SN-0002-SO	10/29/2009	16:16	10/30/2009	1	0.011	-0.13	ND	
LL1CB13B-SB-094SN-0003-SO	10/29/2009	16:16	10/30/2009	1	0.010	-0.18	ND	

Table D-2
RDX Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDX Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL1CB13B-SB-094SN-0004-SO	10/29/2009	16:16	10/30/2009	1	0.007	-0.31	ND	
LL1CB13B-SB-094SN-0005-SO	10/29/2009	16:16	10/30/2009	1	0.014	0.00	ND	
LL1CB13B-SB-095SN-0001-SO	10/29/2009	16:31	10/30/2009	1	0.017	0.13	ND	
LL1CB13B-SB-095SN-0002-SO	10/29/2009	16:31	10/30/2009	1	0.006	-0.36	ND	
LL1CB13B-SB-095SN-0003-SO	10/29/2009	16:31	10/30/2009	1	0.010	-0.18	ND	
LL1CB13B-SB-095SN-0004-SO	10/29/2009	16:31	10/30/2009	1	0.005	-0.40	ND	
LL1CB13B-SB-095SN-0005-SO	10/29/2009	16:31	10/30/2009	1	0.010	-0.18	ND	
LL1CB13B-SB-096SN-0001-SO	10/29/2009	15:15	10/30/2009	1	0.017	0.13	ND	
LL1CB13B-SB-096SN-0002-SO	10/29/2009	15:15	10/30/2009	1	0.027	0.58	ND	
LL1CB13B-SB-096SN-0003-SO	10/29/2009	15:15	10/30/2009	1	0.014	0.00	ND	
LL1CB13B-SB-096SN-0004-SO	10/29/2009	15:15	10/30/2009	1	0.012	-0.09	ND	
LL1CB13B-SB-096SN-0004-SO-DUP	10/29/2009	15:15	10/30/2009	1	0.014	0.00	ND	
LL1CB13B-SB-096SN-0005-SO	10/29/2009	15:15	10/30/2009	1	0.018	0.18	ND	
LL1CB13B-SB-097SN-0001-SO	10/29/2009	15:22	10/30/2009	1	0.008	-0.27	ND	
LL1CB13B-SB-097SN-0002-SO	10/29/2009	15:22	10/30/2009	1	0.022	0.36	ND	
LL1CB13B-SB-097SN-0003-SO	10/29/2009	15:22	10/30/2009	1	0.017	0.13	ND	
LL1CB13B-SB-098SN-0001-SO	10/29/2009	14:32	10/30/2009	1	0.007	-0.31	ND	
LL1CB13B-SB-098SN-0002-SO	10/29/2009	14:32	10/30/2009	1	0.009	-0.22	ND	
LL1CB13B-SB-098SN-0003-SO	10/29/2009	14:32	10/30/2009	1	0.017	0.13	ND	
LL1CB13B-SB-098SN-0004-SO	10/29/2009	14:32	10/30/2009	1	0.015	0.04	ND	
LL1CB13B-SB-098SN-0005-SO	10/29/2009	14:32	10/30/2009	1	0.008	-0.27	ND	
LL1CB13B-SB-099SN-0001-SO	10/29/2009	11:10	10/30/2009	1	0.011	-0.13	ND	
LL1CB13B-SB-099SN-0002-SO	10/29/2009	11:10	10/30/2009	1	0.009	-0.22	ND	
LL1CB13B-SB-099SN-0003-SO	10/29/2009	11:10	10/30/2009	1	0.010	-0.18	ND	
LL1CB13B-SB-099SN-0004-SO	10/29/2009	11:10	10/30/2009	1	0.020	0.27	ND	
LL1CB13B-SB-099SN-0005-SO	10/29/2009	11:10	10/30/2009	1	0.012	-0.09	ND	
LL1CB13B-SB-100SN-0001-SO	10/29/2009	14:36	10/30/2009	1	0.007	-0.31	ND	
LL1CB13B-SB-100SN-0002-SO	10/29/2009	14:36	10/30/2009	1	0.005	-0.40	ND	
LL1CB13B-SB-100SN-0003-SO	10/29/2009	14:36	10/30/2009	1	0.011	-0.13	ND	
LL1CB13B-SB-101SN-0001-SO	10/29/2009	11:55	10/30/2009	1	0.003	-0.49	ND	
LL1CB13B-SB-101SN-0002-SO	10/29/2009	11:55	10/30/2009	1	0.006	-0.36	ND	
LL1CB13B-SB-101SN-0003-SO	10/29/2009	11:55	10/30/2009	1	0.009	-0.22	ND	
LL1CB13B-SB-101SN-0003-SO-DUP	10/29/2009	11:55	10/30/2009	1	0.007	-0.31	ND	
LL1CB13B-SB-101SN-0004-SO	10/29/2009	11:55	11/2/2009	1	0.005	-0.40	ND	
LL1CB13B-SB-102SN-0001-SO	10/29/2009	11:50	11/2/2009	1	0.008	-0.27	ND	
LL1CB13B-SB-102SN-0002-SO	10/29/2009	11:50	11/2/2009	1	0.010	-0.18	ND	
LL1CB13B-SB-102SN-0003-SO	10/29/2009	11:50	11/2/2009	1	0.013	-0.04	ND	
LL1CB13B-SB-102SN-0004-SO	10/29/2009	11:50	11/2/2009	1	0.014	0.00	ND	
LL1CB13B-SB-103SN-0001-SO	10/29/2009	16:05	11/2/2009	1	0.008	-0.27	ND	YELLOW
LL1CB13B-SB-103SN-0002-SO	10/29/2009	16:05	11/2/2009	1	0.013	-0.04	ND	
LL1CB13B-SB-103SN-0003-SO	10/29/2009	16:05	11/2/2009	1	0.008	-0.27	ND	
LL1CB13B-SB-103SN-0004-SO	10/29/2009	16:05	11/2/2009	1	0.007	-0.31	ND	
LL1CB13B-SB-103SN-0005-SO	10/29/2009	16:05	11/2/2009	1	0.016	0.09	ND	
LL1CB13B-SB-092SN-0001-SO	10/30/2009	9:30	11/2/2009	1	0.004	-0.44	ND	
LL1CB13B-SB-092SN-0002-SO	10/30/2009	9:30	11/2/2009	1	0.007	-0.31	ND	
LL1CB13B-SB-092SN-0003-SO	10/30/2009	9:30	11/2/2009	1	0.012	-0.09	ND	
LL1CB13B-SB-092SN-0004-SO	10/30/2009	9:30	11/2/2009	1	0.004	-0.44	ND	
LL1CB13B-SB-091SN-0001-SO	10/30/2009	9:11	11/2/2009	1	0.004	-0.44	ND	
LL1CB13B-SB-091SN-0002-SO	10/30/2009	9:11	11/2/2009	1	0.006	-0.36	ND	
LL1CB13B-SB-091SN-0003-SO	10/30/2009	9:11	11/2/2009	1	0.009	-0.22	ND	
LL1CB13B-SB-091SN-0004-SO	10/30/2009	9:11	11/2/2009	1	0.006	-0.36	ND	
LL1CB13B-SB-091SN-0005-SO	10/30/2009	9:11	11/2/2009	1	0.008	-0.27	ND	YELLOW
LL1CB13B-SB-093SN-0001-SO	10/30/2009	9:42	11/2/2009	1	0.008	-0.27	ND	
LL1CB13B-SB-093SN-0001-SO-DUP	10/30/2009	9:42	11/2/2009	1	0.008	-0.27	ND	

Table D-2
RDX Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDX Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL1CB13B-SB-093SN-0002-SO	10/30/2009	9:42	11/2/2009	1	0.003	-0.49	ND	
LL1CB13B-SB-093SN-0003-SO	10/30/2009	9:42	11/2/2009	1	0.006	-0.36	ND	
LL1CA6-SB-114SN-0001-SO	10/30/2009	11:09	11/2/2009	1	0.018	0.18	ND	
LL1CA6-SB-114SN-0002-SO	10/30/2009	11:09	11/2/2009	1	0.005	-0.40	ND	
LL1CA6-SB-114SN-0003-SO	10/30/2009	11:09	11/2/2009	1	0.014	0.00	ND	
LL1CA6-SB-114SN-0004-SO	10/30/2009	11:09	11/2/2009	1	0.010	-0.18	ND	
LL1CA6-SB-114SN-0005-SO	10/30/2009	11:09	11/2/2009	1	0.013	-0.04	ND	
LL1CA6-SB-115SN-0001-SO	10/30/2009	11:11	11/2/2009	1	0.037	1.02	1.0	
LL1CA6-SB-115SN-0002-SO	10/30/2009	11:11	11/2/2009	1	0.019	0.22	ND	
LL1CA6-SB-115SN-0003-SO	10/30/2009	11:11	11/2/2009	1	0.009	-0.22	ND	
LL1CA6-SB-115SN-0004-SO	10/30/2009	11:11	11/2/2009	1	0.001	-0.58	ND	
LL1CA6-SB-115SN-0005-SO	10/30/2009	11:11	11/2/2009	1	0.007	-0.31	ND	
LL1CA6-SB-116SN-0001-SO	10/30/2009	10:20	11/2/2009	1	0.004	-0.44	ND	
LL1CA6-SB-116SN-0002-SO	10/30/2009	10:20	11/2/2009	1	0.003	-0.49	ND	
LL1CA6-SB-116SN-0003-SO	10/30/2009	10:20	11/2/2009	1	0.002	-0.53	ND	
LL1CA6-SB-116SN-0004-SO	10/30/2009	10:20	11/2/2009	1	0.002	-0.53	ND	
LL1CA6-SB-116SN-0005-SO	10/30/2009	10:20	11/2/2009	1	0.003	-0.49	ND	
LL1CA6-SB-117SN-0001-SO	10/30/2009	10:44	11/2/2009	1	0.007	-0.31	ND	
LL1CA6-SB-117SN-0002-SO	10/30/2009	10:44	11/2/2009	1	0.006	-0.36	ND	
LL1CA6-SB-117SN-0003-SO	10/30/2009	10:44	11/2/2009	1	0.002	-0.53	ND	
LL1CA6-SB-117SN-0003-SO-DUP	10/30/2009	10:44	11/2/2009	1	0.004	-0.44	ND	
LL1CA6-SB-117SN-0004-SO	10/30/2009	10:44	11/2/2009	1	0.013	-0.04	ND	
LL1CA6-SB-117SN-0005-SO	10/30/2009	10:44	11/2/2009	1	0.016	0.09	ND	
LL1CA6-SB-118SN-0001-SO	10/30/2009	10:16	11/2/2009	1	0.024	0.44	ND	
LL1CA6-SB-118SN-0002-SO	10/30/2009	10:16	11/2/2009	1	0.009	-0.22	ND	
LL1CA6-SB-118SN-0003-SO	10/30/2009	10:16	11/2/2009	1	0.009	-0.22	ND	
LL1CA6-SB-118SN-0004-SO	10/30/2009	10:16	11/2/2009	1	0.014	0.00	ND	
LL1CA6-SB-118SN-0005-SO	10/30/2009	10:16	11/2/2009	1	0.015	0.04	ND	YELLOW
LL1CA6A-SB-119SN-0001-SO	10/30/2009	13:00	11/2/2009	1	0.009	-0.22	ND	
LL1CA6A-SB-119SN-0002-SO	10/30/2009	13:00	11/2/2009	1	0.016	0.09	ND	
LL1CA6A-SB-119SN-0003-SO	10/30/2009	13:00	11/2/2009	1	0.020	0.27	ND	
LL1CA6A-SB-119SN-0004-SO	10/30/2009	13:00	11/2/2009	1	0.022	0.36	ND	
LL1CA6A-SB-119SN-0005-SO	10/30/2009	13:00	11/2/2009	1	0.006	-0.36	ND	
LL1CA6A-SB-120SN-0001-SO	10/30/2009	12:00	11/2/2009	1	0.004	-0.44	ND	
LL1CA6A-SB-120SN-0002-SO	10/30/2009	12:00	11/2/2009	1	0.005	-0.40	ND	
LL1CA6A-SB-120SN-0003-SO	10/30/2009	12:00	11/2/2009	1	0.023	0.40	ND	
LL1CA6A-SB-120SN-0004-SO	10/30/2009	12:00	11/2/2009	1	0.013	-0.04	ND	
LL1CA6A-SB-120SN-0005-SO	10/30/2009	12:00	11/2/2009	1	0.028	0.62	ND	
LL1CA6A-SB-121SN-0001-SO	10/30/2009	11:40	11/2/2009	1	0.005	-0.40	ND	
LL1CA6A-SB-121SN-0002-SO	10/30/2009	11:40	11/2/2009	1	0.008	-0.27	ND	YELLOW/LIGHT GREEN
LL1CA6A-SB-121SN-0003-SO	10/30/2009	11:40	11/2/2009	1	0.005	-0.40	ND	YELLOW/LIGHT GREEN
LL1CA6A-SB-121SN-0003-SO-DUP	10/30/2009	11:40	11/2/2009	1	0.014	0.00	ND	YELLOW/LIGHT GREEN
LL1CA6A-SB-121SN-0004-SO	10/30/2009	11:40	11/3/2009	1	0.007	-0.31	ND	
LL1CA6A-SB-121SN-0005-SO	10/30/2009	11:40	11/3/2009	1	0.002	-0.53	ND	
LL1CA6A-SB-122SN-0001-SO	10/30/2009	13:13	11/3/2009	1	0.015	0.04	ND	
LL1CA6A-SB-122SN-0002-SO	10/30/2009	13:13	11/3/2009	1	0.009	-0.22	ND	
LL1CA6A-SB-122SN-0003-SO	10/30/2009	13:13	11/3/2009	1	0.006	-0.36	ND	
LL1CA6A-SB-122SN-0004-SO	10/30/2009	13:13	11/3/2009	1	0.009	-0.22	ND	
LL1CA6A-SB-122SN-0005-SO	10/30/2009	13:13	11/3/2009	1	0.007	-0.31	ND	
LL1CA6A-SB-123SN-0001-SO	10/30/2009	12:11	11/3/2009	1	0.020	0.27	ND	
LL1CA6A-SB-123SN-0002-SO	10/30/2009	12:11	11/3/2009	1	0.006	-0.36	ND	
LL1CA6A-SB-123SN-0003-SO	10/30/2009	12:11	11/3/2009	1	0.027	0.58	ND	
LL1CA6A-SB-123SN-0004-SO	10/30/2009	12:11	11/3/2009	1	0.012	-0.09	ND	
LL1CA6A-SB-123SN-0005-SO	10/30/2009	12:11	11/3/2009	1	0.017	0.13	ND	

Table D-2
RDX Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDX Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL1CA14-SB-130SN-0001-SO	11/2/2009	12:40	11/3/2009	1	0.020	0.27	ND	
LL1CA14-SB-130SN-0002-SO	11/2/2009	12:40	11/3/2009	1	0.017	0.13	ND	
LL1CA14-SB-130SN-0003-SO	11/2/2009	12:40	11/3/2009	1	0.004	-0.44	ND	
LL1CA14-SB-130SN-0004-SO	11/2/2009	12:40	11/3/2009	1	0.006	-0.36	ND	
LL1CA14-SB-130SN-0005-SO	11/2/2009	12:40	11/3/2009	1	0.008	-0.27	ND	
LL1CA14-SB-131SN-0001-SO	11/2/2009	12:25	11/3/2009	1	0.013	-0.04	ND	
LL1CA14-SB-131SN-0002-SO	11/2/2009	12:25	11/3/2009	1	0.012	-0.09	ND	
LL1CA14-SB-131SN-0003-SO	11/2/2009	12:25	11/3/2009	1	0.007	-0.31	ND	
LL1CA14-SB-131SN-0003-SO-DUP	11/2/2009	12:25	11/3/2009	1	0.008	-0.27	ND	
LL1CA14-SB-131SN-0004-SO	11/2/2009	12:25	11/3/2009	1	0.023	0.40	ND	
LL1CA14-SB-132SN-0001-SO	11/2/2009	12:05	11/3/2009	1	0.013	-0.04	ND	
LL1CA14-SB-132SN-0002-SO	11/2/2009	12:05	11/3/2009	1	0.018	0.18	ND	
LL1CA14-SB-132SN-0003-SO	11/2/2009	12:05	11/3/2009	1	0.017	0.13	ND	
LL1CA14-SB-132SN-0004-SO	11/2/2009	12:05	11/3/2009	1	0.022	0.36	ND	
LL1CA14-SB-133SN-0001-SO	11/2/2009	11:55	11/3/2009	1	0.038	1.07	1.1	
LL1CA14-SB-133SN-0002-SO	11/2/2009	11:55	11/3/2009	1	0.023	0.40	ND	
LL1CA14-SB-133SN-0003-SO	11/2/2009	11:55	11/3/2009	1	0.030	0.71	ND	DARK YELLOW
LL1CA14-SB-133SN-0004-SO	11/2/2009	11:55	11/3/2009	1	0.017	0.13	ND	
LL1CA14-SB-133SN-0005-SO	11/2/2009	11:55	11/3/2009	1	0.015	0.04	ND	
LL1CA14-SB-134SN-0001-SO	11/2/2009	11:35	11/3/2009	1	0.029	0.67	ND	
LL1CA14-SB-134SN-0002-SO	11/2/2009	11:35	11/3/2009	1	0.011	-0.13	ND	
LL1CA14-SB-134SN-0003-SO	11/2/2009	11:35	11/3/2009	1	0.005	-0.40	ND	
LL1CA14-SB-135SN-0001-SO	11/2/2009	10:35	11/3/2009	1	0.004	-0.44	ND	
LL1CA14-SB-135SN-0002-SO	11/2/2009	10:35	11/3/2009	1	0.013	-0.04	ND	
LL1CA14-SB-135SN-0003-SO	11/2/2009	10:35	11/3/2009	1	0.004	-0.44	ND	
LL1CA14-SB-135SN-0004-SO	11/2/2009	10:35	11/3/2009	1	0.003	-0.49	ND	
LL1CA14-SB-135SN-0005-SO	11/2/2009	10:35	11/3/2009	1	0.009	-0.22	ND	
LL1CA14-SB-136SN-0001-SO	11/2/2009	10:15	11/3/2009	1	0.003	-0.49	ND	
LL1CA14-SB-136SN-0002-SO	11/2/2009	10:15	11/3/2009	1	0.004	-0.44	ND	
LL1CA14-SB-136SN-0002-SO-DUP	11/2/2009	10:15	11/3/2009	1	0.008	-0.27	ND	
LL1CA14-SB-136SN-0003-SO	11/2/2009	10:15	11/3/2009	1	0.021	0.31	ND	
LL1CA14-SB-136SN-0004-SO	11/2/2009	10:15	11/3/2009	1	0.003	-0.49	ND	
LL1CA14-SB-137SN-0001-SO	11/2/2009	10:55	11/3/2009	1	0.046	1.42	1.4	
LL1CA14-SB-137SN-0002-SO	11/2/2009	10:55	11/3/2009	1	0.028	0.62	ND	
LL1CA14-SB-137SN-0003-SO	11/2/2009	10:55	11/3/2009	1	0.008	-0.27	ND	
LL1CA14-SB-138SN-0001-SO	11/2/2009	10:55	11/3/2009	1	0.014	0.00	ND	
LL1CA14-SB-138SN-0002-SO	11/2/2009	10:55	11/3/2009	1	0.008	-0.27	ND	
LL1CA14-SB-138SN-0003-SO	11/2/2009	10:55	11/3/2009	1	0.005	-0.40	ND	
LL1CA14-SB-138SN-0004-SO	11/2/2009	10:55	11/3/2009	1	0.008	-0.27	ND	
LL1CA14-SB-138SN-0005-SO	11/2/2009	10:55	11/3/2009	1	0.010	-0.18	ND	
LL1CA14-SB-139SN-0001-SO	11/2/2009	11:41	11/3/2009	1	0.010	-0.18	ND	
LL1CA14-SB-139SN-0002-SO	11/2/2009	11:41	11/3/2009	1	0.006	-0.36	ND	
LL1CA14-SB-139SN-0003-SO	11/2/2009	11:41	11/3/2009	1	0.004	-0.44	ND	
LL1CA14-SB-139SN-0004-SO	11/2/2009	11:41	11/3/2009	1	0.011	-0.13	ND	
LL1CA14-SB-140SN-0001-SO	11/2/2009	12:26	11/3/2009	1	0.242	10.13	10.1	
LL1CA14-SB-140SN-0002-SO	11/2/2009	12:26	11/3/2009	1	0.018	0.18	ND	
LL1CA14-SB-140SN-0003-SO	11/2/2009	12:26	11/3/2009	1	0.009	-0.22	ND	
LL1CA14-SB-140SN-0004-SO	11/2/2009	12:26	11/3/2009	1	0.012	-0.09	ND	
LL1CA14-SB-140SN-0005-SO	11/2/2009	12:26	11/3/2009	1	0.007	-0.31	ND	
LL1CA14-SB-141SN-0001-SO	11/2/2009	12:02	11/3/2009	1	0.024	0.44	ND	
LL1CA14-SB-141SN-0001-SO-DUP	11/2/2009	12:02	11/3/2009	1	0.026	0.53	ND	
LL1CA14-SB-141SN-0002-SO	11/2/2009	12:02	11/4/2009	1	0.017	0.13	ND	
LL1CA14-SB-141SN-0003-SO	11/2/2009	12:02	11/4/2009	1	0.009	-0.22	ND	
LL1CA14-SB-141SN-0004-SO	11/2/2009	12:02	11/4/2009	1	0.008	-0.27	ND	

Table D-2
RDX Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDX Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL1CA14-SB-142SN-0001-SO	11/2/2009	12:47	11/4/2009	1	0.055	1.82	1.8	
LL1CA14-SB-142SN-0002-SO	11/2/2009	12:47	11/4/2009	1	0.010	-0.18	ND	
LL1CA14-SB-142SN-0003-SO	11/2/2009	12:47	11/4/2009	1	0.006	-0.36	ND	
LL1CA14-SB-142SN-0004-SO	11/2/2009	12:47	11/4/2009	1	0.009	-0.22	ND	
LL1CA14-SB-128SN-0001-SO	11/2/2009	15:00	11/4/2009	1	0.020	0.27	ND	
LL1CA14-SB-128SN-0002-SO	11/2/2009	15:00	11/4/2009	1	0.021	0.31	ND	
LL1CA14-SB-128SN-0003-SO	11/2/2009	15:00	11/4/2009	1	0.017	0.13	ND	
LL1CA14-SB-128SN-0004-SO	11/2/2009	15:00	11/4/2009	1	0.008	-0.27	ND	
LL1CA14-SB-128SN-0005-SO	11/2/2009	15:00	11/4/2009	1	0.041	1.20	1.2	
LL1CA14-SB-129SN-0001-SO	11/2/2009	14:58	11/4/2009	1	0.020	0.27	ND	
LL1CA14-SB-129SN-0002-SO	11/2/2009	14:58	11/4/2009	1	0.007	-0.31	ND	
LL1CA14-SB-129SN-0003-SO	11/2/2009	14:58	11/4/2009	1	0.005	-0.40	ND	
LL1CA14-SB-129SN-0004-SO	11/2/2009	14:58	11/4/2009	1	0.006	-0.36	ND	
LL1CA14-SB-129SN-0005-SO	11/2/2009	14:58	11/4/2009	1	0.015	0.04	ND	
F16-SB-143SN-0001-SO	11/2/2009	16:06	11/4/2009	1	0.007	-0.31	ND	
F16-SB-143SN-0002-SO	11/2/2009	16:06	11/4/2009	1	0.008	-0.27	ND	
F16-SB-143SN-0003-SO	11/2/2009	16:06	11/4/2009	1	0.006	-0.36	ND	
F16-SB-143SN-0003-SO-DUP	11/2/2009	16:06	11/4/2009	1	0.005	-0.40	ND	
F16-SB-143SN-0004-SO	11/2/2009	16:06	11/4/2009	1	0.007	-0.31	ND	
F16-SB-143SN-0005-SO	11/2/2009	16:06	11/4/2009	1	0.006	-0.36	ND	
F16-SB-144SN-0001-S0	11/2/2009	1621	11/4/2009	1	0.009	-0.22	ND	
F16-SB-144SN-0002-S0	11/2/2009	1621	11/4/2009	1	0.009	-0.22	ND	
F16-SB-144SN-0003-S0	11/2/2009	1621	11/4/2009	1	0.006	-0.36	ND	
F16-SB-144SN-0004-S0	11/2/2009	1621	11/4/2009	1	0.009	-0.22	ND	
F16-SB-144SN-0005-S0	11/2/2009	1621	11/4/2009	1	0.009	-0.22	ND	
F16-SB-145SN-0001-S0	11/2/2009	1400	11/4/2009	1	0.017	0.13	ND	
F16-SB-145SN-0002-S0	11/2/2009	1400	11/4/2009	1	0.007	-0.31	ND	
F16-SB-145SN-0003-S0	11/2/2009	1400	11/4/2009	1	0.013	-0.04	ND	
F16-SB-145SN-0004-S0	11/2/2009	1400	11/4/2009	1	0.002	-0.53	ND	
F16-SB-145SN-0005-S0	11/2/2009	1400	11/4/2009	1	0.006	-0.36	ND	
F16-SB-146SN-0001-SO	11/2/2009	1625	11/4/2009	1	0.004	-0.44	ND	
F16-SB-146SN-0002-SO	11/2/2009	1625	11/4/2009	1	0.004	-0.44	ND	
F16-SB-146SN-0003-SO	11/2/2009	1625	11/4/2009	1	0.002	-0.53	ND	
F16-SB-146SN-0004-SO	11/2/2009	1625	11/4/2009	1	0.003	-0.49	ND	
F16-SB-146SN-0005-SO	11/2/2009	1625	11/4/2009	1	0.019	0.22	ND	
F15-SB-147SN-0001-SO	11/2/2009	1705	11/4/2009	1	0.013	-0.04	ND	
F15-SB-147SN-0002-SO	11/2/2009	1705	11/4/2009	1	0.014	0.00	ND	
F15-SB-147SN-0003-SO	11/2/2009	1705	11/4/2009	1	0.000	-0.62	ND	
F15-SB-147SN-0003-SO-DUP	11/2/2009	1705	11/4/2009	1	0.005	-0.40	ND	
F15-SB-147SN-0004-SO	11/2/2009	1705	11/4/2009	1	0.010	-0.18	ND	
F15-SB-147SN-0005-SO	11/2/2009	1705	11/4/2009	1	0.008	-0.27	ND	
F15-SB-148SN-0001-SO	11/2/2009	1725	11/4/2009	1	0.053	1.73	1.7	
F15-SB-148SN-0002-SO	11/2/2009	1725	11/4/2009	1	0.018	0.18	ND	
F15-SB-148SN-0003-SO	11/2/2009	1725	11/4/2009	1	0.009	-0.22	ND	
F15-SB-148SN-0004-SO	11/2/2009	1725	11/4/2009	1	0.011	-0.13	ND	
F15-SB-148SN-0005-SO	11/2/2009	1725	11/4/2009	1	0.019	0.22	ND	
F15-SB-149SN-0001-SO	11/2/2009	1700	11/4/2009	1	0.012	-0.09	ND	
F15-SB-149SN-0002-SO	11/2/2009	1700	11/4/2009	1	0.011	-0.13	ND	
F15-SB-149SN-0003-SO	11/2/2009	1700	11/4/2009	1	0.007	-0.31	ND	
F15-SB-149SN-0004-SO	11/2/2009	1700	11/4/2009	1	0.029	0.67	ND	
F15-SB-149SN-0005-SO	11/2/2009	1700	11/4/2009	1	0.013	-0.04	ND	
F15-SB-150SN-0001-SO	11/2/2009	1725	11/4/2009	1	0.022	0.36	ND	
F15-SB-150SN-0002-SO	11/2/2009	1725	11/4/2009	1	0.013	-0.04	ND	
F15-SB-150SN-0003-SO	11/2/2009	1725	11/4/2009	1	0.008	-0.27	ND	

Table D-2
RDX Field Screening
Laboratory Calculations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDX Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
F15-SB-150SN-0004-SO	11/2/2009	1725	11/4/2009	1	0.009	-0.22	ND	
F15-SB-150SN-0005-SO	11/2/2009	1725	11/4/2009	1	0.006	-0.36	ND	
F15-SB-150SN-0005-SO-DUP	11/2/2009	1725	11/4/2009	1	0.007	-0.31	ND	

APPENDIX E

Analytical Results – All MI Analyses

Table E-1
Volatile Organics in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	CB-3 LL1SS-506D-3007-SO 10/21/2009	CB-4A (#1) LL1SS-523D-3031-SO 10/26/2009	CB-4A (#1) LL1SS-523D-3033-SO Blind Duplicate	CB-4A (#2) LL1SS-524D-3035-SO 10/26/2009	CB-4A (#3) LL1SS-525D-3037-SO 10/26/2009	CB-10 (#1) LL1SS-534D-3047-SO 10/27/2009	Units	Equip. Blank LL1SS-523M-0000-ER 10/29/2009	Equip. Blank LL1SS-534M-0000-ER 10/22/2009	Trip Blank TRIP BLANK 10/22/2009	Trip Blank TRIP BLANK 1 10/21/2009
1,1,1-Trichloroethane	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
1,1,2,2-Tetrachloroethane	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.125 U	0.125 U	0.125 U	0.125 U
1,1,2-Trichloroethane	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
1,1-Dichloroethane	ug/kg	0.84 U	0.885 U	0.979 U	0.921 U	0.905 U	1.15 U	ug/L	0.125 U	0.125 U	0.125 U	0.125 U
1,1-Dichloroethene	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dibromoethane	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichloroethane	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichloroethene (total)	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichloropropane	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.2 U	0.2 U	0.2 U	0.2 U
2-Butanone	ug/kg	2.1 U	2.21 U	2.45 U	2.3 U	2.26 U	2.87 U	ug/L	2.5 U	2.5 U	2.5 U	2.5 U
2-Hexanone	ug/kg	2.1 U	2.21 U	2.45 U	2.3 U	2.26 U	2.87 U	ug/L	2.5 U	2.5 U	2.5 U	2.5 U
4-Methyl-2-pentanone	ug/kg	2.1 U	2.21 U	2.45 U	2.3 U	2.26 U	2.87 U	ug/L	2.5 U	2.5 U	2.5 U	2.5 U
Acetone	ug/kg	4.2 U	4.42 U	12 UJ	4.61 U	4.53 U	5.75 U	ug/L	70.9	52.1	2.5 U	2.5 U
Benzene	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.125 U	0.125 U	0.125 U	0.125 U
Bromochloromethane	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.2 U	0.2 U	0.2 U	0.2 U
Bromodichloromethane	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
Bromoform	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	ug/kg	0.84 U	0.885 U	0.979 U	0.921 U	0.905 U	1.15 U	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Carbon disulfide	ug/kg	0.42 U	0.496 J	0.907 J	0.461 U	0.453 U	1.26 J	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Carbon tetrachloride	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
Chlorobenzene	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.125 U	0.125 U	0.125 U	0.125 U
Chloroethane	ug/kg	0.84 U	0.885 U	0.979 U	0.921 U	0.905 U	1.15 U	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.125 U	0.125 U	0.125 U	0.125 U
Chloromethane	ug/kg	1.68 U	1.77 U	1.96 U	1.84 U	1.81 U	2.3 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
cis-1,3-Dichloropropene	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
Dibromochloromethane	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
Ethyl benzene	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
Methylene chloride	ug/kg	0.84 U	1.83 J	6.09	0.921 U	0.905 U	9.34	ug/L	0.295 J	0.25 U	0.25 U	0.265 J
Styrene	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.125 U	0.125 U	0.125 U	0.125 U
Tetrachloroethene	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
Toluene	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,3-Dichloropropene	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
Vinyl chloride	ug/kg	0.84 U	0.885 U	0.979 U	0.921 U	0.905 U	1.15 U	ug/L	0.25 U	0.25 U	0.25 U	0.25 U
Xylenes, Total	ug/kg	0.42 U	0.442 U	0.489 U	0.461 U	0.453 U	0.575 U	ug/L	0.5 U	0.5 U	0.5 U	0.5 U

U = The analyte was analyzed for, but was not detected. Value shown is the method detection limit.

UJ = The analyte was not detected at or above the method detection limit. However, the detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the method detection limit or quality control criteria were not met.

Table E-1
Volatile Organics in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	Trip Blank TRIP BLANK 1027 10/27/2009	Trip Blank TRIP BLANK-1026 10/26/2009
1,1,1-Trichloroethane	ug/L	0.25 U	0.25 U
1,1,2,2-Tetrachloroethane	ug/L	0.125 U	0.125 U
1,1,2-Trichloroethane	ug/L	0.25 U	0.25 U
1,1-Dichloroethane	ug/L	0.125 U	0.125 U
1,1-Dichloroethene	ug/L	0.5 U	0.5 U
1,2-Dibromoethane	ug/L	0.25 U	0.25 U
1,2-Dichloroethane	ug/L	0.25 U	0.25 U
1,2-Dichloroethene (total)	ug/L	0.25 U	0.25 U
1,2-Dichloropropane	ug/L	0.2 U	0.2 U
2-Butanone	ug/L	2.5 U	2.5 U
2-Hexanone	ug/L	2.5 U	2.5 U
4-Methyl-2-pentanone	ug/L	2.5 U	2.5 U
Acetone	ug/L	4.76 J	3.16 J
Benzene	ug/L	0.125 U	0.125 U
Bromochloromethane	ug/L	0.2 U	0.2 U
Bromodichloromethane	ug/L	0.25 U	0.25 U
Bromoform	ug/L	0.5 U	0.5 UJ
Bromomethane	ug/L	0.5 U	0.5 U
Carbon disulfide	ug/L	0.5 U	0.5 U
Carbon tetrachloride	ug/L	0.25 U	0.25 U
Chlorobenzene	ug/L	0.125 U	0.125 U
Chloroethane	ug/L	0.5 U	0.5 U
Chloroform	ug/L	0.125 U	0.125 U
Chloromethane	ug/L	0.25 U	0.25 U
cis-1,3-Dichloropropene	ug/L	0.25 U	0.25 U
Dibromochloromethane	ug/L	0.25 U	0.25 U
Ethyl benzene	ug/L	0.25 U	0.25 U
Methylene chloride	ug/L	0.416 J	0.25 U
Styrene	ug/L	0.125 U	0.125 U
Tetrachloroethene	ug/L	0.25 U	0.25 U
Toluene	ug/L	0.25 U	0.25 U
trans-1,3-Dichloropropene	ug/L	0.5 U	0.5 U
Trichloroethene	ug/L	0.25 U	0.25 U
Vinyl chloride	ug/L	0.25 U	0.25 U
Xylenes, Total	ug/L	0.5 U	0.5 U

U = The analyte was analyzed for, but was not detected. Value shown is the method detection limit.

UJ = The analyte was not detected at or above the method detection limit. However, the detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the method detection limit or quality control criteria were not met.

Table E-2
Semivolatile Organics in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	CB-2 LL1SS-504M-3004-SO 10/20/2009	CB-3 LL1SS-506M-3006-SO 10/20/2009	CB-4A (#1) LL1SS-523M-3027-SO 10/26/2009	CB-4A (#1) LL1SS-523M-3029-SO MI Duplicate	CB-4A (#1) LL1SS-523M-3030-SO Blind Duplicate	CB-4A (#2) LL1SS-524M-3034-SO 10/26/2009	CB-4A (#3) LL1SS-525M-3036-SO 10/26/2009	CB-10 (#1) LL1SS-534M-3046-SO 10/27/2009	CB-19 LL1SS-503M-3003-SO 10/20/2009
1,2,4-Trichlorobenzene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
1,2-Dichlorobenzene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
1,3-Dichlorobenzene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
1,4-Dichlorobenzene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
2,4,5-Trichlorophenol	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
2,4,6-Trichlorophenol	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
2,4-Dichlorophenol	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
2,4-Dimethylphenol	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
2,4-Dinitrophenol	ug/kg	438 UJ	475 UJ	2140 UJ	2160 UJ	2000 UJ	2130 UJ	2400 UJ	433 UJ	441 UJ
2,4-Dinitrotoluene	ug/kg	361 J	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
2,6-Dinitrotoluene	ug/kg	159 J	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
2-Chloronaphthalene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
2-Chlorophenol	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
2-Methylnaphthalene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
2-Methylphenol	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
2-Nitroaniline	ug/kg	438 UJ	475 UJ	2140 UJ	2160 UJ	2000 UJ	2130 UJ	R	433 UJ	441 UJ
2-Nitrophenol	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
3,3'-Dichlorobenzidine	ug/kg	176 UJ	190 UJ	857 UJ	865 UJ	800 UJ	855 UJ	960 UJ	173 UJ	177 UJ
3-,4-Methylphenol	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
3-Nitroaniline	ug/kg	438 UJ	475 UJ	2140 UJ	2160 UJ	2000 UJ	2130 UJ	R	433 UJ	441 UJ
4,6-Dinitro-2-methylphenol	ug/kg	438 UJ	475 UJ	2140 UJ	2160 UJ	2000 UJ	2130 UJ	2400 UJ	433 UJ	441 UJ
4-Bromophenyl-phenylether	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
4-Chloro-3-methylphenol	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
4-Chloroaniline	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
4-Chlorophenyl-phenyl ether	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
4-Nitroaniline	ug/kg	438 UJ	475 UJ	2140 UJ	2160 UJ	2000 UJ	2130 UJ	R	433 UJ	441 UJ
4-Nitrophenol	ug/kg	438 UJ	475 UJ	2140 UJ	2160 UJ	2000 UJ	2130 UJ	R	433 UJ	441 UJ
Acenaphthene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Acenaphthylene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Anthracene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	1080 J	86.7 UJ	88.4 UJ
Benzo(a)anthracene	ug/kg	100 J	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	1870 J	86.7 UJ	99.1 J
Benzo(a)pyrene	ug/kg	98.4 J	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	1400 J	86.7 UJ	88.4 UJ
Benzo(b)fluoranthene	ug/kg	97.4 J	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	1150 J	86.7 UJ	88.4 UJ
Benzo(g,h,i)Perylene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	607 J	86.7 UJ	88.4 UJ
Benzo(k)fluoranthene	ug/kg	109 J	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	1380 J	86.7 UJ	98.2 J
Benzoic acid	ug/kg	351 UJ	381 UJ	1710 UJ	1730 UJ	1600 UJ	1710 UJ	1920 UJ	347 UJ	353 UJ
Benzyl alcohol	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ

Table E-2
Semivolatile Organics in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	CB-2 LL1SS-504M-3004-SO 10/20/2009	CB-3 LL1SS-506M-3006-SO 10/20/2009	CB-4A (#1) LL1SS-523M-3027-SO 10/26/2009	CB-4A (#1) LL1SS-523M-3029-SO MI Duplicate	CB-4A (#1) LL1SS-523M-3030-SO Blind Duplicate	CB-4A (#2) LL1SS-524M-3034-SO 10/26/2009	CB-4A (#3) LL1SS-525M-3036-SO 10/26/2009	CB-10 (#1) LL1SS-534M-3046-SO 10/27/2009	CB-19 LL1SS-503M-3003-SO 10/20/2009
Bis(2-Chloroethoxy)Methane	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Bis(2-Chloroethyl)ether	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
bis(2-Chloroisopropyl)ether	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
bis(2-Ethylhexyl)phthalate	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Butylbenzylphthalate	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Carbazole	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	666 J	86.7 UJ	88.4 UJ
Chrysene	ug/kg	122 J	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	1780 J	86.7 UJ	103 J
Dibenzo(a,h)Anthracene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Dibenzofuran	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Diethylphthalate	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Dimethylphthalate	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Di-n-Butylphthalate	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Di-n-octylphthalate	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Fluoranthene	ug/kg	221 J	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	4870 J	86.7 UJ	221 J
Fluorene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Hexachlorobenzene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Hexachlorobutadiene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Hexachlorocyclopentadiene	ug/kg	R	R	R	R	R	R	R	R	R
Hexachloroethane	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Indeno(1,2,3-cd)pyrene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	684 J	86.7 UJ	88.4 UJ
Isophorone	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Naphthalene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Nitrobenzene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
N-Nitrosodiphenylamine	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
N-Nitrosodipropylamine	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Pentachlorophenol	ug/kg	438 UJ	475 UJ	2140 UJ	2160 UJ	2000 UJ	2130 UJ	2400 UJ	433 UJ	441 UJ
Phenanthrene	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	3850 J	86.7 UJ	106 J
Phenol	ug/kg	87.8 UJ	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	480 UJ	86.7 UJ	88.4 UJ
Pyrene	ug/kg	163 J	95.2 UJ	428 UJ	432 UJ	400 UJ	427 UJ	3610 J	86.7 UJ	165 J

U = The analyte was analyzed for, but was not detected. Value shown is the method detection limit.

UJ = The analyte was not detected at or above the method detection limit. However, the detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the method detection limit or quality control criteria were not met.

R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.

Table E-2
Semivolatile Organics in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	Equip. Blank LL1SS-523M-0000-ER 10/29/2009	Equip. Blank LL1SS-534M-0000-ER 10/22/2009
1,2,4-Trichlorobenzene	ug/L	2.78 U	2.5 UJ
1,2-Dichlorobenzene	ug/L	2.78 U	2.5 UJ
1,3-Dichlorobenzene	ug/L	2.78 U	R
1,4-Dichlorobenzene	ug/L	2.78 U	R
2,4,5-Trichlorophenol	ug/L	2.78 UJ	2.5 UJ
2,4,6-Trichlorophenol	ug/L	2.78 U	2.5 UJ
2,4-Dichlorophenol	ug/L	2.78 U	2.5 UJ
2,4-Dimethylphenol	ug/L	2.78 U	2.5 UJ
2,4-Dinitrophenol	ug/L	13.9 UJ	12.5 UJ
2,4-Dinitrotoluene	ug/L	2.78 U	2.5 UJ
2,6-Dinitrotoluene	ug/L	2.78 U	2.5 UJ
2-Chloronaphthalene	ug/L	2.78 U	2.5 UJ
2-Chlorophenol	ug/L	2.78 U	2.5 UJ
2-Methylnaphthalene	ug/L	2.78 U	2.5 UJ
2-Methylphenol	ug/L	2.78 U	2.5 UJ
2-Nitroaniline	ug/L	13.9 U	12.5 UJ
2-Nitrophenol	ug/L	2.78 UJ	2.5 UJ
3,3'-Dichlorobenzidine	ug/L	2.78 U	2.5 UJ
3-,4-Methylphenol	ug/L	2.78 U	2.5 UJ
3-Nitroaniline	ug/L	13.9 U	12.5 UJ
4,6-Dinitro-2-methylphenol	ug/L	13.9 UJ	12.5 UJ
4-Bromophenyl-phenylether	ug/L	2.78 U	2.5 UJ
4-Chloro-3-methylphenol	ug/L	2.78 U	2.5 UJ
4-Chloroaniline	ug/L	2.78 U	2.5 UJ
4-Chlorophenyl-phenyl ether	ug/L	2.78 U	2.5 UJ
4-Nitroaniline	ug/L	13.9 U	12.5 UJ
4-Nitrophenol	ug/L	13.9 U	12.5 UJ
Acenaphthene	ug/L	2.78 U	2.5 UJ
Acenaphthylene	ug/L	2.78 U	2.5 UJ
Anthracene	ug/L	2.78 U	2.5 UJ
Benzo(a)anthracene	ug/L	2.78 U	2.5 UJ
Benzo(a)pyrene	ug/L	2.78 U	2.5 UJ
Benzo(b)fluoranthene	ug/L	2.78 U	2.5 UJ
Benzo(g,h,i)Perylene	ug/L	2.78 U	2.5 UJ
Benzo(k)fluoranthene	ug/L	2.78 U	2.5 UJ
Benzoic acid	ug/L	R	12.5 UJ
Benzyl alcohol	ug/L	2.78 U	2.5 UJ

Table E-2
Semivolatile Organics in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	Equip. Blank LL1SS-523M-0000-ER 10/29/2009	Equip. Blank LL1SS-534M-0000-ER 10/22/2009
Bis(2-Chloroethoxy)Methane	ug/L	2.78 UJ	2.5 UJ
Bis(2-Chloroethyl)ether	ug/L	2.78 U	2.5 UJ
bis(2-Chloroisopropyl)ether	ug/L	2.78 U	2.5 UJ
bis(2-Ethylhexyl)phthalate	ug/L	3.33 U	3 UJ
Butylbenzylphthalate	ug/L	2.78 U	2.5 UJ
Carbazole	ug/L	2.78 U	2.5 UJ
Chrysene	ug/L	2.78 U	2.5 UJ
Dibenzo(a,h)Anthracene	ug/L	2.78 U	2.5 UJ
Dibenzofuran	ug/L	2.78 U	2.5 UJ
Diethylphthalate	ug/L	2.78 U	2.5 UJ
Dimethylphthalate	ug/L	2.78 U	2.5 UJ
Di-n-Butylphthalate	ug/L	2.78 U	2.5 UJ
Di-n-octylphthalate	ug/L	2.78 U	2.5 UJ
Fluoranthene	ug/L	2.78 U	2.5 UJ
Fluorene	ug/L	2.78 U	2.5 UJ
Hexachlorobenzene	ug/L	2.78 U	2.5 UJ
Hexachlorobutadiene	ug/L	2.78 U	2.5 UJ
Hexachlorocyclopentadiene	ug/L	R	R
Hexachloroethane	ug/L	2.78 U	2.5 R
Indeno(1,2,3-cd)pyrene	ug/L	2.78 U	2.5 UJ
Isophorone	ug/L	2.78 U	2.5 UJ
Naphthalene	ug/L	2.78 U	2.5 UJ
Nitrobenzene	ug/L	2.78 U	2.5 UJ
N-Nitrosodiphenylamine	ug/L	2.78 U	2.5 UJ
N-Nitrosodipropylamine	ug/L	2.78 U	2.5 UJ
Pentachlorophenol	ug/L	13.9 UJ	12.5 UJ
Phenanthrene	ug/L	2.78 U	2.5 UJ
Phenol	ug/L	2.78 U	2.5 UJ
Pyrene	ug/L	2.78 U	2.5 UJ

U = The analyte was analyzed for, but was not detected. Value shown is the method detection limit.

UJ = The analyte was not detected at or above the method detection limit. However, the detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the method detection limit or quality control criteria were not met.

R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.

Table E-3
Pesticides and PCBs in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	CB-3 LL1SS-506M-3006-SO 10/20/2009	CB-4 (#1) LL1SS-520M-3024-SO 11/03/2009	CB-4 (#2) LL1SS-521M-3025-SO 11/03/2009	CB-4 (#3) LL1SS-522M-3026-SO 11/03/2009	CB-4A (#1) LL1SS-523M-3027-SO 10/26/2009	CB-4A (#1) LL1SS-523M-3029-SO MI Duplicate	CB-4A (#1) LL1SS-523M-3030-SO Blind Duplicate	CB-4A (#2) LL1SS-524M-3034-SO 10/26/2009	CB-4A (#3) LL1SS-525M-3036-SO 10/26/2009	CB-10 (#1) LL1SS-534M-3046-SO 10/27/2009
4,4'-DDD	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	R	0.341 U
4,4'-DDE	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 UJ	0.341 U
4,4'-DDT	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	R	0.341 U
Aldrin	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
alpha Chlordane	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
alpha-BHC	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
beta-BHC	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
delta-BHC	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
Dieldrin	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
Endosulfan I	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
Endosulfan II	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
Endosulfan sulfate	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
Endrin	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
Endrin aldehyde	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
Endrin ketone	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
gamma Chlordane	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
gamma-BHC (Lindane)	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
Heptachlor	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
Heptachlor epoxide	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 U	0.341 U
Methoxychlor	ug/kg	0.324 U	--	--	--	0.345 U	0.315 U	0.329 U	0.323 U	1.97 UJ	0.341 U
Toxaphene	ug/kg	16.4 UJ	--	--	--	17.5 U	15.9 U	16.7 U	16.3 U	99.6 U	17.3 U
Aroclor-1016	ug/kg	8.09 U	8.2 U	8.35 U	8.24 U	8.62 U	7.88 U	8.23 U	8.07 U	9.84 U	8.53 U
Aroclor-1221	ug/kg	8.09 U	8.2 U	8.35 U	8.24 U	8.62 U	7.88 U	8.23 U	8.07 U	9.84 U	8.53 U
Aroclor-1232	ug/kg	8.09 U	8.2 U	8.35 U	8.24 U	8.62 U	7.88 U	8.23 U	8.07 U	9.84 U	8.53 U
Aroclor-1242	ug/kg	8.09 U	8.2 U	8.35 U	8.24 U	8.62 U	7.88 U	8.23 U	8.07 U	9.84 U	8.53 U
Aroclor-1248	ug/kg	8.09 U	8.2 U	8.35 U	8.24 U	8.62 U	7.88 U	8.23 U	8.07 U	9.84 U	8.53 U
Aroclor-1254	ug/kg	251	296	116	495	1220	1280	1200	915	788	124
Aroclor-1260	ug/kg	8.09 U	144	54.5	209	8.62 U	7.88 U	8.23 U	8.07 U	9.84 U	8.53 U

U = The analyte was analyzed for, but was not detected. Value shown is the method detection limit.

UJ = The analyte was not detected at or above the method detection limit. However, the detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.

-- = Not analyzed in this sample.

Table E-3
Pesticides and PCBs in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	CB-10 (#2) LL1SS-535M-3048-SO 10/27/2009	Units	Equip. Blank LL1SS-520M-0000-ER 11/04/2009	Equip. Blank LL1SS-523M-0000-ER 10/29/2009	Equip. Blank LL1SS-534M-0000-ER 10/22/2009
4,4'-DDD	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
4,4'-DDE	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
4,4'-DDT	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
Aldrin	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
alpha Chlordane	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
alpha-BHC	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
beta-BHC	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
delta-BHC	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
Dieldrin	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
Endosulfan I	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
Endosulfan II	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
Endosulfan sulfate	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
Endrin	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
Endrin aldehyde	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
Endrin ketone	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
gamma Chlordane	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
gamma-BHC (Lindane)	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
Heptachlor	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
Heptachlor epoxide	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
Methoxychlor	ug/kg	--	ug/L	--	0.0111 U	0.01 UJ
Toxaphene	ug/kg	--	ug/L	--	0.333 U	0.300 UJ
Aroclor-1016	ug/kg	8.83 U	ug/L	0.255 U	0.278 U	0.25 UJ
Aroclor-1221	ug/kg	8.83 U	ug/L	0.255 U	0.278 U	0.25 UJ
Aroclor-1232	ug/kg	8.83 U	ug/L	0.255 U	0.278 U	0.25 UJ
Aroclor-1242	ug/kg	8.83 U	ug/L	0.255 U	0.278 U	0.25 UJ
Aroclor-1248	ug/kg	8.83 U	ug/L	0.255 U	0.278 U	0.25 UJ
Aroclor-1254	ug/kg	333	ug/L	0.255 U	0.278 U	0.25 UJ
Aroclor-1260	ug/kg	8.83 U	ug/L	0.255 U	0.278 U	0.25 UJ

U = The analyte was analyzed for, but was not detected. Value shown is the method detection limit.

UJ = The analyte was not detected at or above the method detection limit. However, the detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.

-- = Not analyzed in this sample.

Table E-4
Explosives and Propellants in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	1-51, 1-51A LL1SS-509M-3010-SO 10/20/2009	CA-5 LL1SS-517M-3018-SO 10/21/2009	CA-5 LL1SS-517M-3020-SO MI Duplicate	CA-5 LL1SS-517M-3021-SO Blind Duplicate	CA-6, CA-28 LL1SS-532M-3044-SO 11/03/2009	CA-6A, CA-28A LL1SS-533M-3045-SO 11/03/2009	CA-7 LL1SS-515M-3016-SO 10/21/2009	CA-14 (#1) LL1SS-539M-3055-SO 11/04/2009	CA-14 (#2) LL1SS-540M-3056-SO 11/04/2009	CA-15 LL1SS-514M-3015-SO 10/21/2009
1,3,5-Trinitrobenzene	mg/kg	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 U	0.1 U	0.1 U	0.0999 U
1,3-Dinitrobenzene	mg/kg	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 U	0.1 U	0.1 U	0.0999 U
2,4,6-Trinitrotoluene	mg/kg	0.098 U	4.71 J	0.327 J	0.0989 U	1.51	0.31	5.04 J	0.1 U	0.1 U	0.0999 U
2,4-Dinitrotoluene	mg/kg	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 U	0.1 U	0.1 U	0.0999 U
2,6-Dinitrotoluene	mg/kg	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 U	0.1 U	0.1 U	0.0999 U
2-Amino-4,6-dinitrotoluene	mg/kg	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.665	0.1 U	0.1 U	0.0999 U
2-Nitrotoluene	mg/kg	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 U	0.1 U	0.1 U	0.0999 U
3-Nitrotoluene	mg/kg	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 U	0.1 U	0.1 U	0.0999 U
4-Amino-2,6-dinitrotoluene	mg/kg	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.903	0.1 U	0.1 U	0.0999 U
4-Nitrotoluene	mg/kg	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 U	0.1 U	0.1 U	0.0999 U
HMX	mg/kg	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 U	0.1 U	0.1 U	0.0999 U
Nitrobenzene	mg/kg	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 U	0.1 U	0.1 U	0.0999 U
Nitroglycerin	mg/kg	0.098 UJ	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 UJ	0.1 U	0.1 U	0.0999 UJ
PETN	mg/kg	0.49 U	0.494 U	0.488 U	0.495 U	0.5 U	0.5 U	0.491 U	0.5 U	0.5 U	0.5 U
RDX	mg/kg	0.098 U	0.0988 U	0.0977 U	0.0989 U	0.0999 U	0.1 U	0.0981 U	0.1 U	0.1 U	0.0999 U
Tetryl	mg/kg	R	R	R	R	R	R	R	R	R	R
Nitroguanidine	mg/kg	--	--	--	--	0.158 U	0.144 U	--	0.141 U	0.157 U	--
Nitrocellulose	mg/kg	--	--	--	--	2.5 U	2.5 U	--	18.6	7.02	--

U = The analyte was analyzed for, but was not detected. Value shown is the method detection limit.

UJ = The analyte was not detected at or above the method detection limit. However, the detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the method detection limit or quality control criteria were not met.

R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.

-- = Not analyzed in this sample.

Table E-4
Explosives and Propellants in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	CA-16 LL1SS-513M-3014-SO 10/21/2009	CA-17 (#1) LL1SS-541M-3057-SO 10/29/2009	CA-17 (#2) LL1SS-542M-3058-SO 10/29/2009	CA-21 LL1SS-516M-3017-SO 10/21/2009	CB-2 LL1SS-504M-3004-SO 10/20/2009	CB-3 LL1SS-506M-3006-SO 10/20/2009	CB-4 (#1) LL1SS-520M-3024-SO 11/03/2009	CB-4 (#2) LL1SS-521M-3025-SO 11/03/2009	CB-4 (#3) LL1SS-522M-3026-SO 11/03/2009	CB-4VP1 LL1SS-526M-3038-SO 11/03/2009
1,3,5-Trinitrobenzene	mg/kg	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U	0.0998 U	0.0998 U	0.465	0.0998 U
1,3-Dinitrobenzene	mg/kg	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U	0.0998 U	0.0998 U	0.1 U	0.0998 U
2,4,6-Trinitrotoluene	mg/kg	0.0987 U	0.0993 U	0.0985 U	0.611	0.097 U	0.0967 U	0.0998 U	0.0998 U	11	0.0998 U
2,4-Dinitrotoluene	mg/kg	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U	0.0998 U	0.0998 U	0.1 U	0.0998 U
2,6-Dinitrotoluene	mg/kg	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U	0.0998 U	0.0998 U	0.1 U	0.0998 U
2-Amino-4,6-dinitrotoluene	mg/kg	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U	0.0998 U	0.0998 U	0.1 U	0.0998 U
2-Nitrotoluene	mg/kg	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U	0.0998 U	0.0998 U	0.1 U	0.0998 U
3-Nitrotoluene	mg/kg	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U	0.0998 U	0.0998 U	0.1 U	0.0998 U
4-Amino-2,6-dinitrotoluene	mg/kg	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U	0.0998 U	0.0998 U	0.344	0.0998 U
4-Nitrotoluene	mg/kg	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U	0.0998 U	0.0998 U	0.1 U	0.0998 U
HMX	mg/kg	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U	0.0998 U	0.0998 U	0.1 U	0.0998 U
Nitrobenzene	mg/kg	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U	0.0998 U	0.0998 U	0.1 U	0.0998 U
Nitroglycerin	mg/kg	0.0987 UJ	0.0993 U	0.0985 U	0.0987 UJ	0.097 UJ	0.0967 UJ	0.0998 U	0.0998 U	0.1 U	0.0998 U
PETN	mg/kg	0.494 U	0.497 U	0.493 U	0.494 U	0.485 U	0.484 U	0.499 U	0.499 U	0.5 U	0.499 U
RDX	mg/kg	0.0987 U	0.0993 U	0.0985 U	0.0987 U	0.097 U	0.0967 U	0.0998 U	0.0998 U	0.1 U	0.0998 U
Tetryl	mg/kg	R	R	R	R	R	R	R	R	R	R
Nitroguanidine	mg/kg	--	0.126 U	0.126 U	--	--	0.125 U	0.152 U	0.15 U	0.147 U	--
Nitrocellulose	mg/kg	--	15.8 J	12.7 J	--	--	2.47 U	2.5 U	2.49 U	4 J	--

U = The analyte was analyzed for, but was not detected. Value shown is the method detection limit.

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J = Estimated concentration because the result was below the method detection limit or quality control criteria were not met.

R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.

-- = Not analyzed in this sample.

Table E-4
Explosives and Propellants in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	CB-4WS LL1SS-529M-3041-SO 11/03/2009	CB-4A (#1) LL1SS-523M-3027-SO 10/26/2009	CB-4A (#1) LL1SS-523M-3029-SO MI Duplicate	CB-4A (#1) LL1SS-523M-3030-SO Blind Duplicate	CB-4A (#2) LL1SS-524M-3034-SO 10/26/2009	CB-4A (#3) LL1SS-525M-3036-SO 10/26/2009	CB-4AVP1 LL1SS-527M-3039-SO 10/27/2009	CB-4AWN LL1SS-530M-3042-SO 10/27/2009	CB-4B LL1SS-518M-3022-SO 10/21/2009	CB-8 LL1SS-508M-3009-SO 10/20/2009
1,3,5-Trinitrobenzene	mg/kg	0.0999 U	0.0988 U	0.0992 U	0.0987 U	2.16	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U
1,3-Dinitrobenzene	mg/kg	0.0999 U	0.0988 U	0.0992 U	0.0987 U	0.0982 U	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U
2,4,6-Trinitrotoluene	mg/kg	25.5	0.0988 U	0.0992 U	0.0987 U	158	0.0993 U	0.938	0.0968 U	0.0996 U	0.0981 U
2,4-Dinitrotoluene	mg/kg	0.0999 U	0.0988 U	0.0992 U	0.0987 U	0.0982 U	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U
2,6-Dinitrotoluene	mg/kg	0.0999 U	0.0988 U	0.0992 U	0.0987 U	0.0982 U	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U
2-Amino-4,6-dinitrotoluene	mg/kg	0.0999 U	0.0988 U	0.0992 U	0.0987 U	0.853	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U
2-Nitrotoluene	mg/kg	0.0999 U	0.0988 U	0.0992 U	0.0987 U	0.0982 U	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U
3-Nitrotoluene	mg/kg	0.0999 U	0.0988 U	0.0992 U	0.0987 U	0.0982 U	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U
4-Amino-2,6-dinitrotoluene	mg/kg	0.0999 U	0.0988 U	0.0992 U	0.0987 U	1.48	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U
4-Nitrotoluene	mg/kg	0.0999 U	0.0988 U	0.0992 U	0.0987 U	0.0982 U	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U
HMX	mg/kg	0.0999 U	0.0988 U	0.0992 U	0.0987 U	6.8	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U
Nitrobenzene	mg/kg	0.0999 U	0.0988 U	0.0992 U	0.0987 U	0.0982 U	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 U
Nitroglycerin	mg/kg	0.0999 U	0.0988 U	0.0992 U	0.0987 U	0.0982 U	0.0993 U	0.0977 U	0.0968 U	0.0996 U	0.0981 UJ
PETN	mg/kg	0.5 U	0.494 U	0.496 U	0.494 U	0.491 U	0.497 U	0.488 U	0.484 U	0.498 U	0.491 U
RDX	mg/kg	0.0999 U	0.0988 U	0.0992 U	0.0987 U	60.3	0.0993 U	0.0977 U	0.305	0.0996 U	0.0981 U
Tetryl	mg/kg	R	R	R	R	R	R	R	R	R	R
Nitroguanidine	mg/kg	0.156 U	0.125 U	0.125 U	0.125 U	0.125 U	0.125 U	--	0.125 U	--	--
Nitrocellulose	mg/kg	8.32	2.48 U	2.48 U	2.49 U	41.3	2.49 U	14.1 *	2.48 U	--	--

U = The analyte was analyzed for, but was not detected. Value shown is the method detection limit.

UJ = The analyte was not detected at or above the method detection limit. However, the detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the method detection limit or quality control criteria were not met.

R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.

-- = Not analyzed in this sample.

* = Propellants were not requested on this sample. The laboratory inadvertently analyzed for nitroguanidine, so the result is included here.

Table E-4
Explosives and Propellants in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	CB-9 LL1SS-511M-3012-SO 10/20/2009	CB-10 (#1) LL1SS-534M-3046-SO 10/27/2009	CB-10 (#2) LL1SS-535M-3048-SO 10/27/2009	CB-10VP1, 2, 3 LL1SS-536M-3049-SO 10/27/2009	CB-11 LL1SS-519M-3023-SO 10/21/2009	CB-13/13A LL1SS-537M-3050-SO 11/04/2009	CB-13/13A LL1SS-537M-3052-SO MI Duplicate	CB-13/13A LL1SS-537M-3053-SO Blind Duplicate	CB-13B LL1SS-538M-3054-SO 11/04/2009	CB-19 LL1SS-503M-3003-SO 10/20/2009
1,3,5-Trinitrobenzene	mg/kg	0.0995 U	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
1,3-Dinitrobenzene	mg/kg	0.0995 U	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
2,4,6-Trinitrotoluene	mg/kg	0.0995 U	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
2,4-Dinitrotoluene	mg/kg	0.0995 U	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
2,6-Dinitrotoluene	mg/kg	0.0995 U	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
2-Amino-4,6-dinitrotoluene	mg/kg	0.0995 U	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
2-Nitrotoluene	mg/kg	0.0995 U	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
3-Nitrotoluene	mg/kg	0.0995 U	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
4-Amino-2,6-dinitrotoluene	mg/kg	0.0995 U	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
4-Nitrotoluene	mg/kg	0.0995 U	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
HMX	mg/kg	0.0995 U	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
Nitrobenzene	mg/kg	0.0995 U	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
Nitroglycerin	mg/kg	0.0995 UJ	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 UJ
PETN	mg/kg	0.498 U	0.496 U	0.491 U	0.492 U	0.489 U	0.5 U	0.5 U	0.5 U	0.499 U	0.482 U
RDX	mg/kg	0.0995 U	0.0991 U	0.0981 U	0.0984 U	0.0978 U	0.1 U	0.1 U	0.1 U	0.0998 U	0.0963 U
Tetryl	mg/kg	R	R	R	R	R	R	R	R	R	R
Nitroguanidine	mg/kg	--	0.125 U	0.126 U	--	--	0.146 U	0.143 U	0.137 U	0.144 U	--
Nitrocellulose	mg/kg	--	2.48 U	2.48 U	--	--	2.49 U	2.5 U	2.5 U	9.66	--

U = The analyte was analyzed for, but was not detected. Value shown is the method detection limit.

UJ = The analyte was not detected at or above the method detection limit. However, the detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the method detection limit or quality control criteria were not met.

R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.

-- = Not analyzed in this sample.

Table E-4
Explosives and Propellants in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	CB-20 LL1SS-505M-3005-SO 10/20/2009	CB-25 LL1SS-507M-3008-SO 10/20/2009	CB-801 (#1) LL1SS-501M-3001-SO 10/20/2009	CB-801 (#2) LL1SS-502M-3002-SO 10/20/2009	CC-1 LL1SS-500M-3000-SO 10/19/2009	EB-803 (#1) LL3SS-290M-2000-SO 10/21/2009	EB-803 (#2) LL3SS-291M-2001-SO 10/21/2009	T-4801 LL1SS-512M-3013-SO 10/21/2009	F-15 F15SS-012M-0500-SO 11/04/2009	F-15 F15SS-012M-0502-SO MI Duplicate
1,3,5-Trinitrobenzene	mg/kg	0.0988 U	0.097 U	0.0991 U	0.1 U	0.0969 U	0.0976 U	0.0986 U	0.1 U	0.0997 U	0.0998 U
1,3-Dinitrobenzene	mg/kg	0.0988 U	0.097 U	0.0991 U	0.1 U	0.0969 U	0.0976 U	0.0986 U	0.1 U	0.0997 U	0.0998 U
2,4,6-Trinitrotoluene	mg/kg	0.0988 U	1.74	0.0991 U	0.1 U	0.0969 U	0.0976 U	0.0986 U	0.1 U	0.0997 U	0.0998 U
2,4-Dinitrotoluene	mg/kg	0.0988 U	0.097 U	0.0991 U	0.1 U	0.0969 U	0.0976 U	0.0986 U	0.1 U	0.0997 U	0.0998 U
2,6-Dinitrotoluene	mg/kg	0.0988 U	0.097 U	0.0991 U	0.1 U	0.0969 U	0.0976 U	0.0986 U	0.1 U	0.0997 U	0.0998 U
2-Amino-4,6-dinitrotoluene	mg/kg	0.0988 U	0.097 U	0.0991 U	0.1 U	0.0969 U	0.0976 U	0.0986 U	0.1 U	0.0997 U	0.0998 U
2-Nitrotoluene	mg/kg	0.0988 U	0.097 U	0.0991 U	0.1 U	0.0969 U	0.0976 U	0.0986 U	0.1 U	0.0997 U	0.0998 U
3-Nitrotoluene	mg/kg	0.0988 U	0.097 U	0.0991 U	0.1 U	0.0969 U	0.0976 U	0.0986 U	0.1 U	0.0997 U	0.0998 U
4-Amino-2,6-dinitrotoluene	mg/kg	0.0988 U	0.264	0.0991 U	0.1 U	0.0969 U	0.0976 U	0.0986 U	0.1 U	0.0997 U	0.0998 U
4-Nitrotoluene	mg/kg	0.0988 U	0.097 U	0.0991 U	0.1 U	0.0969 U	0.0976 U	0.0986 U	0.1 U	0.0997 U	0.0998 U
HMX	mg/kg	0.0988 U	0.298	0.0991 U	0.1 U	0.0969 U	0.0976 U	0.0986 U	0.1 U	0.0997 U	0.0998 U
Nitrobenzene	mg/kg	0.0988 U	0.097 U	0.0991 U	0.1 U	0.0969 U	0.0976 U	0.0986 U	0.1 U	0.0997 U	0.0998 U
Nitroglycerin	mg/kg	0.0988 UJ	0.097 UJ	0.0991 UJ	0.1 UJ	0.0969 UJ	0.0976 U	0.0986 U	0.1 UJ	0.0997 U	0.0998 U
PETN	mg/kg	0.494 U	0.485 U	0.496 U	0.5 U	0.484 U	0.488 U	0.493 U	0.5 U	0.499 U	0.499 U
RDX	mg/kg	0.0988 U	2.62	0.0991 U	0.1 U	0.0969 U	0.0976 U	0.0986 U	0.1 U	0.0997 U	0.0998 U
Tetryl	mg/kg	R	R	R	R	R	R	R	R	R	R
Nitroguanidine	mg/kg	--	--	--	--	--	--	--	--	0.156 U	0.152 U
Nitrocellulose	mg/kg	--	--	--	--	--	--	--	--	2.5 U	2.65 J

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-- = Not analyzed in this sample.

Table E-4
Explosives and Propellants in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	F-15 F15SS-012M-0503-SO Blind Duplicate	F-16 F16SS-008M-0504-SO 11/04/2009	G-1 LL4SS-280M-2000-SO 10/21/2009	G-1 LL4SS-280M-2002-SO MI Duplicate	G-1 LL4SS-280M-2003-SO Blind Duplicate	G-1A LL4SS-281M-2004-SO 10/21/2009	G-3 LL4SS-282M-2005-SO 10/21/2009	Units	Equip. Blank LL1SS-520M-0000-ER 11/04/2009	Equip. Blank LL1SS-523M-0000-ER 10/29/2009	Equip. Blank LL1SS-534M-0000-ER 10/22/2009
1,3,5-Trinitrobenzene	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
1,3-Dinitrobenzene	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
2,4,6-Trinitrotoluene	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
2,4-Dinitrotoluene	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
2,6-Dinitrotoluene	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
2-Amino-4,6-dinitrotoluene	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
2-Nitrotoluene	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
3-Nitrotoluene	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
4-Amino-2,6-dinitrotoluene	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
4-Nitrotoluene	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
HMX	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
Nitrobenzene	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
Nitroglycerin	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
PETN	mg/kg	0.5 U	0.5 U	0.488 U	0.486 U	0.493 U	0.499 U	0.498 U	ug/L	0.255 U	0.25 U	0.263 U
RDX	mg/kg	0.0999 U	0.1 U	0.0976 U	0.0972 U	0.0986 U	0.0997 U	0.0995 U	ug/L	0.255 U	0.25 U	0.263 U
Tetryl	mg/kg	R	R	R	R	R	R	R	ug/L	R	R	R
Nitroguanidine	mg/kg	0.156 U	0.149 U	--	--	--	--	--	ug/L	0.025 UJ	R	R
Nitrocellulose	mg/kg	2.87 J	2.49 U	--	--	--	--	--	ug/L	R	250 UJ	250 UJ

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Table E-5
Metals in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	1-51, 1-51A LL1SS-509M-3010-SO 10/20/2009	CA-5 LL1SS-517M-3018-SO 10/21/2009	CA-5 LL1SS-517M-3020-SO MI Duplicate	CA-5 LL1SS-517M-3021-SO Blind Duplicate	CA-6, CA-28 LL1SS-532M-3044-SO 11/03/2009	CA-6A, CA-28A LL1SS-533M-3045-SO 11/03/2009	CA-7 LL1SS-515M-3016-SO 10/21/2009	CA-14 (#1) LL1SS-539M-3055-SO 11/04/2009	CA-14 (#2) LL1SS-540M-3056-SO 11/04/2009	CA-15 LL1SS-514M-3015-SO 10/21/2009
Aluminum	mg/kg	5270	5220	5830	5370	6280 J	5280 J	7850	8910 J	9200 J	6460
Antimony	mg/kg	0.297	0.363	0.284	0.281	0.405 J	0.283 J	0.375	0.27 J	0.303 J	0.269
Arsenic	mg/kg	9.45	9.51 J	12.9 J	10.5 J	8.76 J	9.88 J	8.96	10.2 J	10.1 J	10.4
Barium	mg/kg	40.9	32	38	35	39 J	30.8 J	59.8	70 J	65 J	44.4
Beryllium	mg/kg	0.393	0.308	0.352	0.381	0.342	0.291	0.509	0.569	0.527	0.461
Cadmium	mg/kg	0.835	0.831	0.904	0.83	0.868	0.871	0.997	1.16	1.16	0.892
Calcium	mg/kg	9840	3980	3830	6230	3980	3760	3650	14400	10800	7700
Chromium, Total	mg/kg	10.1 J	16.9 J	14.2 J	14.5 J	15.9 J	16.7 J	15 J	16.1 J	16.4 J	17.6 J
Chromium, Hexavalent	mg/kg	0.0501 U	0.0504 U	0.05 U	0.0498 U	0.101 U	0.0497 U	0.0502 U	0.0503 U	0.0994 U	0.05 U
Cobalt	mg/kg	3.59 J	4.43 J	4.9 J	4.95 J	4.47	4.14	5.98 J	5.04	5.54	4.35 J
Copper	mg/kg	14.2	16.3	16.4	16	17.7	17.2	13.2	18.2	16.6	14.8
Iron	mg/kg	14700 J	15600 J	16300 J	14700 J	16900 J	16300 J	19800 J	19000 J	21000 J	15300 J
Lead	mg/kg	18.1 J	15.6 J	16.6 J	17.2 J	15.8	14.3	23 J	39.6	31	33.6 J
Magnesium	mg/kg	2150 J	2090 J	2180 J	2300 J	2100 J	2080 J	2060 J	2840 J	2640 J	2160 J
Manganese	mg/kg	395 J	353 J	386 J	392 J	373 J	321 J	472 J	475 J	396 J	404 J
Mercury	mg/kg	0.0116 J	0.0162 J	0.0131 J	0.0203 J	0.0194 J	0.0182 J	0.0186 J	0.0349 J	0.0312 J	0.0167 J
Nickel	mg/kg	15.4	14.7	15.4	13.8	19.9 J	20.1 J	17.5	21.4 J	18.2 J	21.9
Potassium	mg/kg	458	406	453	410	520 J	524 J	563	945 J	870 J	582
Selenium	mg/kg	0.213 J	0.25 J	0.223 J	0.252 J	0.279 J	0.266 J	0.314 J	0.424 J	0.296 J	0.282 J
Silver	mg/kg	0.175 J	0.178 U	0.177 U	0.179 U	R	R	0.189 U	R	R	0.179 U
Sodium	mg/kg	51	23.1	28.5	34.1	31.8	27.8	26.6	117	88.2	43.7
Thallium	mg/kg	0.0858 J	0.164	0.123	0.122	0.104 J	0.114 J	0.109 J	0.105 J	0.102 J	0.122 J
Vanadium	mg/kg	10 J	11.1 J	12 J	10.6 J	12.9 J	11.1 J	16.1 J	16.1 J	17.5 J	12.4 J
Zinc	mg/kg	79.2	68.3	70.6	65.7	59.9 J	66.6 J	54.2	67.3 J	62.5 J	66.8

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Table E-5
Metals in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	CA-16 LL1SS-513M-3014-SO 10/21/2009	CA-17 (#1) LL1SS-541M-3057-SO 10/29/2009	CA-17 (#2) LL1SS-542M-3058-SO 10/29/2009	CA-21 LL1SS-516M-3017-SO 10/21/2009	CB-3 LL1SS-506M-3006-SO 10/20/2009	CB-2 LL1SS-504M-3004-SO 10/20/2009	CB-4 (#1) LL1SS-520M-3024-SO 11/03/2009	CB-4 (#2) LL1SS-521M-3025-SO 11/03/2009	CB-4 (#3) LL1SS-522M-3026-SO 11/03/2009	CB-4VP1 LL1SS-526M-3038-SO 11/03/2009
Aluminum	mg/kg	8840	8790	9940	7110	3340	5920	3060 J	2850 J	4900 J	8280 J
Antimony	mg/kg	0.301	0.272	0.275	0.355	0.284	2.74	0.153 J	0.11 J	0.271 J	0.262 J
Arsenic	mg/kg	10.6	7.77	8.6	9.07	9.02	12.7	5.98 J	4.66 J	6.79 J	9.46 J
Barium	mg/kg	65.1	71.9	66.4	55.7	19.9	48.4	24 J	18 J	34.1 J	55.6 J
Beryllium	mg/kg	0.544	0.532	0.574	0.446	0.205	0.35	0.194	0.178	0.256	0.476
Cadmium	mg/kg	1.19	1.58	1.11	0.943	0.741	1.17	0.612	0.556	0.782	1.45
Calcium	mg/kg	3870	7290	8110	3200	2560	5200	2930	2500	4880	9520
Chromium, Total	mg/kg	16.6 J	16.5	16.7	13.6 J	11.9 J	13.6 J	16.1 J	21.5 J	17.3 J	18 J
Chromium, Hexavalent	mg/kg	0.05 U	0.0503 U	0.0489 U	0.0501 U	0.0491 U	0.0501 U	0.1 U	0.0499 U	0.1 U	0.101 U
Cobalt	mg/kg	6.63 J	7.23	7.78	5.57 J	3.11 J	4.18 J	2.85	2.66	3.32	6.19
Copper	mg/kg	18.8	19.8 J	14.3 J	12.6	13.8	18.7	10.7	46.5	12.6	17.2
Iron	mg/kg	22500 J	18100	20900	18000 J	12800 J	16100 J	11100 J	11000 J	13100 J	20100 J
Lead	mg/kg	23.8 J	50.8 J	33.1 J	34.3 J	17 J	49 J	21.9	9.84	32.5	57.8
Magnesium	mg/kg	2540 J	2000 J	2230 J	1830 J	1390 J	2300 J	931 J	825 J	1330 J	3530 J
Manganese	mg/kg	454 J	961	1040	414 J	263 J	385 J	291 J	245 J	278 J	514 J
Mercury	mg/kg	0.0182 J	0.0358 J	0.0262 J	0.0242 J	0.00971 U	0.0181 J	0.0239 J	0.0187 J	0.0314 J	0.117
Nickel	mg/kg	21.2	18.7 J	15.9 J	18.8	14.7	20.7	11.6 J	11.4 J	22 J	20.8 J
Potassium	mg/kg	595	672	740	511	347	571	340 J	317 J	505 J	809 J
Selenium	mg/kg	0.352 J	0.32 J	0.306 J	0.344 J	0.212 J	0.281 J	0.215 J	0.164 J	0.43 J	0.397 J
Silver	mg/kg	0.177 U	R	R	0.185 U	0.185 U	0.174 U	R	R	0.184 J	R
Sodium	mg/kg	27.1	93.8	67.1	32.7	17.8 J	40	23.3	17.6 J	32.2	45.7
Thallium	mg/kg	0.13 J	0.146 J	0.147 J	0.131 J	0.101 J	0.126 J	0.0533 J	0.0398 J	0.0819 J	0.127 J
Vanadium	mg/kg	17.6 J	18 J	20.7 J	14.9 J	7.59 J	11.7 J	7.74 J	7.49 J	10.3 J	17 J
Zinc	mg/kg	63.6	83.4 J	59.5 J	46.4	55.1	78.6	52 J	42.3 J	49.9 J	77 J

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Table E-5
Metals in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	CB-4WS LL1SS-529M-3041-SO 11/03/2009	CB-4A (#1) LL1SS-523M-3027-SO 10/26/2009	CB-4A (#1) LL1SS-523M-3029-SO MI Duplicate	CB-4A (#1) LL1SS-523M-3030-SO Blind Duplicate	CB-4A (#2) LL1SS-524M-3034-SO 10/26/2009	CB-4A (#3) LL1SS-525M-3036-SO 10/26/2009	CB-4AVP1 LL1SS-527M-3039-SO 10/27/2009	CB-4AWN LL1SS-530M-3042-SO 10/27/2009	CB-4B LL1SS-518M-3022-SO 10/21/2009	CB-8 LL1SS-508M-3009-SO 10/20/2009
Aluminum	mg/kg	3550 J	2940	3010	2770	3530	2780	12700	3770	4670	3830
Antimony	mg/kg	0.203 J	0.136	0.151	0.164	0.211	0.24	0.445	0.192	0.45	0.26
Arsenic	mg/kg	5.45 J	5.4 J	6.64 J	6.04 J	6.96 J	5.9 J	9.89	12.1	6.56 J	9.38
Barium	mg/kg	29 J	22.7	23.9	21.7	27.2	24.4	105	25.3	46.3	37.3
Beryllium	mg/kg	0.212	0.198	0.198	0.183	0.262	0.211	0.783	0.232	0.404	0.264
Cadmium	mg/kg	0.85	0.729	0.691	0.611	0.952	0.749	1.5	0.779	1.18	0.791
Calcium	mg/kg	3290	4390	4950	4610	5140	3830	4350	4440	5810	7820
Chromium, Total	mg/kg	18.6 J	17.9	14.1	13	14	16.3	33.9	12.9	24.5 J	10.5 J
Chromium, Hexavalent	mg/kg	0.05 U	0.0493 U	0.0497 U	0.0498 U	0.0491 U	0.0487 U	0.0557 U	0.049 U	0.0506 U	0.0502 U
Cobalt	mg/kg	3.05	2.58	2.57	2.49	2.58	2.92	8.74	2.98	3.24 J	2.87 J
Copper	mg/kg	20.7	11.1 J	9.71 J	9.3 J	11.8 J	10.9 J	17 J	12.1 J	22	9.37
Iron	mg/kg	12000 J	12900	12800	11300	15700	13600	21100	14100	12900 J	11200 J
Lead	mg/kg	28.5	19.7 J	22.6 J	20.4 J	28.5 J	16.1 J	20.2	14.2	140 J	36.8 J
Magnesium	mg/kg	1070 J	1090 J	1230 J	1060 J	1250 J	1130 J	2020 J	1400 J	1690 J	1440 J
Manganese	mg/kg	291 J	431	431	401	519	450	1040	388	450 J	327 J
Mercury	mg/kg	0.0302 J	0.025 J	0.0179 J	0.0202 J	0.0163 J	0.00978 U	0.0551 J	0.0531 J	0.0378 J	0.0126 J
Nickel	mg/kg	12.7 J	10.2 J	11.8 J	13.8 J	12.5 J	12.2 J	11.3	15.3	21.3	15.3
Potassium	mg/kg	386 J	424	420	418	473	361	807	467	381	404
Selenium	mg/kg	0.155 J	0.0986 U	0.0926 U	0.0968 U	0.104 J	0.0983 UJ	0.108 J	0.176 J	0.256 J	0.274 J
Silver	mg/kg	R	R	R	R	R	R	R	R	0.173 U	0.192 U
Sodium	mg/kg	21	25.7	26.9	27.1	32.7	19.4	48.7	23.4	36	38.3
Thallium	mg/kg	0.0516 J	0.106 J	0.0704 J	0.0585 J	0.0685 J	0.0604 J	0.0739 J	0.112 J	0.0864	0.078 J
Vanadium	mg/kg	8.57 J	8.25 J	8.04 J	7.5 J	9.67 J	8.36 J	25.7 J	9.26 J	9.62 J	7.94 J
Zinc	mg/kg	66.4 J	51.7	57.2	54.8	76.7	51.6	87.6	57.9	71	61.7

U = The analyte was analyzed for, but was not detected. Value shown is the method detection limit.

UJ = The analyte was not detected at or above the method detection limit. However, the detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the method detection limit or quality control criteria were not met.

R = The sample result was rejected due to serious deficiencies in the ability to meet holding time criteria and/or quality control criteria. The presence or absence of the analyte could not be verified. The result is not usable.

Table E-5
Metals in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	CB-9 LL1SS-511M-3012-SO 10/20/2009	CB-10 (#1) LL1SS-534M-3046-SO 10/27/2009	CB-10 (#2) LL1SS-535M-3048-SO 10/27/2009	CB-10VP1, 2, 3 LL1SS-536M-3049-SO 10/27/2009	CB-11 LL1SS-519M-3023-SO 10/21/2009	CB-13/13A LL1SS-537M-3050-SO 11/04/2009	CB-13/13A LL1SS-537M-3052-SO MI Duplicate	CB-13/13A LL1SS-537M-3053-SO Blind Duplicate	CB-13B LL1SS-538M-3054-SO 11/04/2009	CB-19 LL1SS-503M-3003-SO 10/20/2009
Aluminum	mg/kg	4730	7390	6360	8250	4140	5070 J	5450 J	5160 J	4350 J	5260
Antimony	mg/kg	0.27	0.273	0.3	0.371	0.24	0.455 J	0.232 J	0.249 J	0.293 J	0.313
Arsenic	mg/kg	9.31	8.82	8.98	5.87	8.08 J	10.4 J	10.8 J	8.78 J	12 J	10.8
Barium	mg/kg	27.7	37.2	44.2	56.4	21.3 J	31 J	30.8 J	30.9 J	27.7 J	32.7
Beryllium	mg/kg	0.269	0.348	0.378	0.458	0.216	0.293	0.3	0.295	0.266	0.302
Cadmium	mg/kg	0.813	0.927	0.899	1.11	0.716 J	0.917	0.947	0.883	0.79	0.914
Calcium	mg/kg	3790	4070	4000	3710	1390 J	3100	3100	3680	7600	4690
Chromium, Total	mg/kg	13.4 J	16.4	15.4	23.5	14.9	14.5 J	15.8 J	15.2 J	13.5 J	15.4 J
Chromium, Hexavalent	mg/kg	0.0501 U	0.0498 U	0.05 U	0.049 U	0.05 U	0.0989 U	0.05 U	0.101 U	0.05 U	0.0501 U
Cobalt	mg/kg	3.96 J	4.16	6.48	5.13	3.33	4.26	4.05	3.96	3.27	4.21 J
Copper	mg/kg	14	17.5 J	16.3 J	20.8 J	14.3	18	17.8	17.2	15.5	19.3
Iron	mg/kg	14600 J	18300	17100	18200	13300 J	16300 J	17000 J	15800 J	15100 J	16900 J
Lead	mg/kg	14.1 J	14.1	24.1	31.8	9.88 J	13.6	13.7	12.2	12.4	17.7 J
Magnesium	mg/kg	1920 J	2350 J	1860 J	2010 J	1430 J	1880 J	1830 J	1900 J	2420 J	2190 J
Manganese	mg/kg	339 J	330	558	467	251	356 J	332 J	338 J	351 J	362 J
Mercury	mg/kg	0.00963 U	0.0158 J	0.02 J	0.0295 J	0.00945 U	0.0166 J	0.0148 J	0.0175 J	0.0165 J	0.0165 J
Nickel	mg/kg	18.8	17.5	15.5	12.5	15.9	15.2 J	20.6 J	16.5 J	13.5 J	20
Potassium	mg/kg	434	755	486	690	409 J	415 J	523 J	477 J	385 J	512
Selenium	mg/kg	0.143 J	0.208	0.275	0.101 U	0.142 J	0.267 J	0.255 J	0.299 J	0.275 J	0.24 J
Silver	mg/kg	0.169 U	R	R	R	R	R	R	R	R	0.175 U
Sodium	mg/kg	23.7	36.1	28.2	31.5	18.9	20.2	26.2	28.6	32.1	28.7
Thallium	mg/kg	0.1 J	0.115 J	0.119 J	0.0795 J	0.0982	0.0954 J	0.0923 J	0.081 J	0.0822 J	0.11 J
Vanadium	mg/kg	10.3 J	14.9 J	14.1 J	16.4 J	9.03	11 J	11.6 J	10.7 J	9.56 J	11.3 J
Zinc	mg/kg	51.1	63.2	54.8	87	49.4	59.7 J	60.4 J	60.9 J	56.4 J	71.9

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Table E-5
Metals in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	CB-20 LL1SS-505M-3005-SO 10/20/2009	CB-25 LL1SS-507M-3008-SO 10/20/2009	CB-801 (#1) LL1SS-501M-3001-SO 10/20/2009	CB-801 (#2) LL1SS-502M-3002-SO 10/20/2009	CC-1 LL1SS-500M-3000-SO 10/19/2009	EB-803 (#1) LL3SS-290M-2000-SO 10/21/2009	EB-803 (#2) LL3SS-291M-2001-SO 10/21/2009	F-15 F15SS-012M-0500-SO 11/04/2009	F-15 F15SS-012M-0502-SO MI Duplicate	F-15 F15SS-012M-0503-SO Blind Duplicate
Aluminum	mg/kg	4360	4120	10900	10100	5690	7980	9450	12200 J	11600 J	11600 J
Antimony	mg/kg	0.308	0.234	0.449	0.229	0.669	0.818	0.673	0.444 J	0.278 J	0.441 J
Arsenic	mg/kg	11.5	7.78	8.67	7.48	8.72	10.9 J	8.12 J	10 J	9.18 J	10 J
Barium	mg/kg	27.7	23.4	102	85.7	57	55.7 J	61.9 J	76.1 J	76.7 J	80 J
Beryllium	mg/kg	0.249	0.251	1.01	0.63	0.474	0.454	0.464	0.588	0.578	0.592
Cadmium	mg/kg	0.833	0.945	0.944	0.87	1.48	0.817 J	0.773 J	1.03	1.06	1.09
Calcium	mg/kg	4570	6550	28800	4370	17600	18000 J	9270 J	5690	5760	6150
Chromium, Total	mg/kg	12.7 J	13.1 J	20.4 J	16.6 J	23.2 J	15.8	15.2	21.9 J	19.8 J	18.5 J
Chromium, Hexavalent	mg/kg	0.0499 U	0.0496 U	0.0504 U	0.0505 U	0.0497 U	0.0499 U	0.0502 U	0.051 U	0.0509 U	0.101 U
Cobalt	mg/kg	4.33 J	3.87 J	5.32	7.13 J	3.39 J	4.46	4.74	6.83	6.33	6.58
Copper	mg/kg	18	13.2	15.5	10.3	22.9	17.7	14	16.9	16.3	17.2
Iron	mg/kg	14900 J	15700 J	19400 J	18100 J	20400	16200 J	16800 J	22800 J	22600 J	23200 J
Lead	mg/kg	12.2 J	34.6 J	45.2 J	16.7 J	116 J	15.7 J	14.3 J	16.9	18	19.8
Magnesium	mg/kg	2130 J	2830 J	4460 J	2110 J	3240 J	2950 J	2450 J	3300 J	3190 J	3410 J
Manganese	mg/kg	339 J	309 J	621 J	475 J	546	520	474	330 J	340 J	366 J
Mercury	mg/kg	0.0157 J	0.00991 U	0.0182 J	0.0246 J	0.118	0.0111 J	0.0185 J	0.03 J	0.0361 J	0.0366 J
Nickel	mg/kg	19.6	16	23.8	51.7	36.2	23.8	13.1	30.6 J	35.5 J	35.3 J
Potassium	mg/kg	435	579	890	621	630	975 J	930 J	981 J	859 J	848 J
Selenium	mg/kg	0.197 J	0.137 J	0.389 J	0.343 J	0.317 J	0.204 J	0.322 J	0.367 J	0.307 J	0.36 J
Silver	mg/kg	0.184 U	0.188 U	0.193 U	0.18 U	0.177 U	0.281 J	R	R	R	R
Sodium	mg/kg	23.6	30.9	151	71	72.6	102	103	102	85.9	91.8
Thallium	mg/kg	0.104 J	0.0891 J	0.115 J	0.129 J	0.114 J	0.117	0.108	0.143 J	0.143 J	0.155 J
Vanadium	mg/kg	9.58 J	9.53 J	14.7 J	19 J	12.1 J	14.4	17.5	22 J	21.8 J	21.6 J
Zinc	mg/kg	61.4	77.8	52.8	50.6	140	68.6	54.1	56 J	56.5 J	58.9 J

U = The analyte was analyzed for, but was not detected. Value shown is the method detection limit.

UJ = The analyte was not detected at or above the method detection limit. However, the detection limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

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Table E-5
Metals in Multi-Increment Soil Samples
Load Line 1 and Other Building Locations
Ravenna Army Ammunition Plant
Ravenna, Ohio

Parameter	Units	F-16 F16SS-008M-0504-SO 11/04/2009	G-1 LL4SS-280M-2000-SO 10/21/2009	G-1 LL4SS-280M-2002-SO MI Duplicate	G-1 LL4SS-280M-2003-SO Blind Duplicate	G-1A LL4SS-281M-2004-SO 10/21/2009	G-3 LL4SS-282M-2005-SO 10/21/2009	T-4801 LL1SS-512M-3013-SO 10/21/2009	Units	Equip. Blank LL1SS-520M-0000-ER 11/04/2009	Equip. Blank LL1SS-523M-0000-ER 10/29/2009	Equip. Blank LL1SS-534M-0000-ER 10/22/2009
Aluminum	mg/kg	9410 J	10200	10400	9150	8950	9410	11300	mg/L	0.05 U	0.05 U	0.0532 UJ
Antimony	mg/kg	0.423 J	0.321	0.323	0.307	0.374	0.472	0.523	mg/L	0.00025 UJ	R	0.00025 U
Arsenic	mg/kg	11.8	14.4 J	12.9 J	11.5 J	15.5 J	13.9 J	9.68	mg/L	0.00025 U	0.00025 U	0.00025 U
Barium	mg/kg	58.4 J	46.4 J	49.6 J	44.8 J	45.6 J	45.4 J	76.7	mg/L	0.0025 U	0.0025 UJ	0.0025 U
Beryllium	mg/kg	0.495	0.448	0.471	0.436	0.444	0.423	0.765	mg/L	0.0005 U	0.0005 U	0.0005 U
Cadmium	mg/kg	0.987	1.09 J	1.06 J	1.07 J	1.1 J	1.07 J	1.19	mg/L	0.00025 U	0.00025 U	0.00025 U
Calcium	mg/kg	6870	4130 J	5700 J	4300 J	6860 J	8100 J	9100	mg/L	0.1 U	0.1 U	0.1 U
Chromium, Total	mg/kg	15.8 J	20.5	20.9	22.1	18.8	17.3	18.1 J	mg/L	0.00313 J	0.0025 UJ	0.0025 U
Chromium, Hexavalent	mg/kg	0.0507 U	0.0504 U	0.05 U	0.0624 U	0.0499 U	0.05 U	0.0502 U	mg/L	0.005 UJ	0.005 U	0.005 U
Cobalt	mg/kg	6.13	5.41	5.27	5.67	5.06	4.52	5.95 J	mg/L	0.0025 U	0.0025 U	0.0025 U
Copper	mg/kg	15.9	22.3	21	22.9	23.5	22.2	18.9	mg/L	0.0025 U	0.0025 U	0.0025 U
Iron	mg/kg	20700 J	21600 J	21600 J	21300 J	21200 J	20600 J	23100 J	mg/L	0.464	0.193	0.224 U
Lead	mg/kg	15.2	23.4 J	19.5 J	19.7 J	27 J	22.7 J	23.2 J	mg/L	0.00025 U	0.00025 U	0.00025 U
Magnesium	mg/kg	3420 J	3250 J	3220 J	3100 J	3200 J	3620 J	3730 J	mg/L	0.25 U	0.25 U	0.25 U
Manganese	mg/kg	340 J	363	387	420	416	389	470 J	mg/L	0.005 U	R	0.005 U
Mercury	mg/kg	0.0224 J	0.0234 J	0.0378 J	0.0222 J	0.0183 J	0.024 J	0.0667 J	mg/L	0.0001 U	0.0001 U	0.0001 U
Nickel	mg/kg	29.6 J	21.5	24.2	18.1	20.7	26.6	19	mg/L	0.0136	0.0252	0.00934
Potassium	mg/kg	826 J	1280 J	1250 J	1090 J	1170 J	1110 J	631	mg/L	0.25 U	0.25 U	0.25 U
Selenium	mg/kg	0.408	0.295 J	0.288 J	0.21 J	0.289 J	0.305 J	0.358 J	mg/L	0.0005 U	0.0005 U	0.0005 U
Silver	mg/kg	R	R	R	R	R	R	0.185 U	mg/L	0.002 U	R	0.002 U
Sodium	mg/kg	54.8	64.8	74	60	58.1	54	79.8	mg/L	0.25 U	0.25 U	0.25 U
Thallium	mg/kg	0.137 J	0.146	0.154	0.128	0.15	0.155	0.125 J	mg/L	0.00005 U	0.00005 U	0.00005 U
Vanadium	mg/kg	16.8 J	18.9	18.7	17.2	16.9	18.1	19.7 J	mg/L	0.005 U	R	0.005 U
Zinc	mg/kg	53.8 J	79.9	76	82.3	84.9	84.2	139	mg/L	0.005 U	0.005 U	0.005 U

U = The analyte was analyzed for, but was not detected. Value shown is the method detection limit.

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APPENDIX F

Data Validation Report

Chemical Quality Assurance Report

(CD)

U.S. Army Corps of Engineers
Louisville District

Ravenna Army Ammunition Plant
Load Line 1 and Other Building Locations
Ravenna, Ohio

DRAFT Chemical Quality Assurance Report
Sample Delivery Groups:
76078 & 76265

July 2010

Prepared for:
U.S. Army Corps of Engineers
Louisville District
Contract No. W912QR-08-D-0001
Delivery Order 0014

Prepared by:
MEC^X, LP
12269 East Vassar Drive
Aurora, Colorado 80014

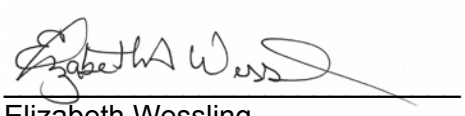
CONTRACTOR STATEMENT OF INDEPENDANT TECHNICAL REVIEW

MEC^X, LP (MEC^X) has completed the Chemical Quality Assurance Report for Sample Delivery Groups 76078 and 76265 from the Ravenna Army Ammunition Plant Load Line 1 and Other Buildings Soil Sampling in Ravenna, Ohio. Notice is hereby given that an independent technical review has been conducted to determine the usability and bias of the analytical data.

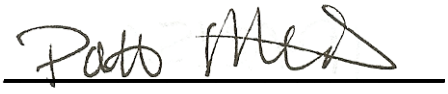
Significant concerns and the resolution are as follows:

The analysis for pesticides by Method SW-846 8081 performed at Microbac Laboratories is likely to have missed some target compounds due to the method the laboratory used to establish retention time windows. The data user should rely on the QA laboratory data for this analysis.

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 of the project described in this document was to determine if contaminants are present in the soils below the floor slabs of Load Line 1 and other building locations.

The following analyses were performed for all primary samples by Microbac Laboratories, Inc. (Microbac) in Marietta, Ohio and all quality assurance (QA) samples by CT Laboratories (CT) in Baraboo, Wisconsin:

- United States Environmental Protection Agency (USEPA) SW-846 Methods 6010B and 6020 for metals (7060, 7740 and 7841 for individual metals at CT)
- USEPA SW-846 Method 7471A for mercury
- USEPA SW-846 Method 8260B for volatile organic compounds (VOCs)
- USEPA SW-846 Method 8270C for semivolatile compounds (SVOCs)
- USEPA SW-846 Method 8081 for pesticides
- USEPA SW-846 Method 8082 for polychlorinated biphenyls (PCBs)
- USEPA SW-846 Method 8330 and 8330B for explosive compounds
- USEPA SW-846 Method 7196A for hexavalent chromium
- United States Army Cold Regions Research and Engineering Laboratory (USACRREL) Method for nitrocellulose

Some data were rejected due to calibration, laboratory control sample, or matrix spike/matrix spike duplicate criteria outliers. All remaining data were usable for its intended purpose with the qualification applied by MEC^X.

Specific concerns regarding the QA data are noted below:

- The reporting limits for the following compounds exceeded the criteria listed in Table 3-3 of the FWQAPP and Appendix A of the QAPP Addendum:
    - Cadmium
    - Hexavalent chromium
    - Beta-BHC, chlordane, endosulfan sulfate, endrin ketone
    - Dibromochloroethane and chloroethane
    - Due to a dilution to report other Aroclors within the linear range of the calibration, Aroclors 1221, 1232, and 1242
    - Twenty-one SVOC target analytes

  With the exception of cadmium, hexavalent chromium, and chlordane, all MDLs met the reporting limit criteria.

Specific concerns regarding the primary data are noted below:

- False negatives were identified in the pesticide data. When a compound retention time (RT) shift exceeded half of the defined RT window, the laboratory flagged the compound with an "F," only on the quantitation report, and did not report the compound as detected. In these instances, MEC^X qualified the results as false negatives.

  It is likely that false negatives exist in the unvalidated data.

  Please see section 7.0 for further details and recommendations.

- The Microbac mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data.

- The laboratory reported total xylenes and total 1,2-dichloroethene instead of the specific isomers, m,p-xylene, o-xylene, cis-1,2-dichloroethene, and trans-1,2-dichloroethene.

- Although the semivolatile samples had no target compound detects or apparent non-target matrix interference, the validated samples were analyzed at 5× dilutions, attributed to extract appearance and viscosity. All semivolatile reporting limits in the validated samples exceeded the reporting limit criteria.

ACRONYMS AND ABBREVIATIONS

ADR	Automated Data Review
BTEX	Benzene, toluene, ethylbenzene, xylenes
CCB	Continuing Calibration Blank
CCC	Calibration Check Compounds
CCV	Continuing Calibration Verification
DoD	Department of Defense
ICSA	Interference Check Sample A
ICSAB	Interference Check Sample AB
ICV	Initial Calibration Verification
ICP	Inductively Coupled Plasma
LCG	Louisville Chemistry Guidance
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection
LODV	Limit of Detection Verification
LUST	Leaking Underground Storage Tank
MRL	Method Reporting Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MDL	Method Detection Limit
PAH	Polynuclear Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
PE	Performance Evaluation
PDS	Post Digestion Spike
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
QSM	Quality Systems Manual
RDX	Hexahydro-1,3,5-trinitro-1,3,5-triazine
RL	Reporting Limit
RPD	Relative Percent Difference
RSD	Relative Standard Deviation
RVAAP	Ravenna Army Ammunition Plant
SAIC	Science Applications International Corporation
SDG	Sample Delivery Group
SPCC	System Performance Check Compound
SVOC	Semivolatile Organic Compounds
TIC	Tentatively Identified Compounds
TNT	Trinitrotoluene
TS	Total Solids
USACE	United State Army Corps of Engineers
USACERREL	United States Army Cold Regions Research and Engineering Laboratory
USEPA	United State Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound

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APPENDICES

1. INTRODUCTION

1.1 PROJECT OVERVIEW

The overall objective of the project described in this document was to determine if contaminants are present in the soils below the floor slabs of Load Line 1 and other building locations.

Sampling was conducted by URS Corporation (URS) in October and November 2009. Sixty-seven primary, three field duplicate, three blind field duplicates and one blind VOC duplicate soil samples were collected and analyzed by the primary laboratory, Microbac. Six soil QA samples were collected and analyzed by the QA laboratory, CT Laboratories (CT) in Baraboo, Wisconsin. The following analyses were performed:

	CT		Microbac	
Parameter	**Method**	**Preparation Method**	**Method**	**Preparation Method**
Explosives	8330	8330	8330B	8330B
Hexavalent Chromium	7196A	3060A	SM3500Cr-D 7196A	SM3500Cr-D 7196A
Mercury	7471A	General Prep	7471A	7471A
Metals	6010B, 7060, 7740, 7841	3050B	6010B, 6020	3051
Nitrocellulose	9060	General Prep	USACRREL	USACRREL
PCBs	8082	3545	8082	3550B
Pesticides	8081A	3545	8081A	3550B
Semivolatiles	8270C	3545	8270C	3545
Volatiles	8260B	5035	8260B	5030B/5035

Preparation methods differed slightly between the laboratories for pesticides, PCBs and metals. CT generally reported metals from 6010B but used graphite furnace methods to analyze for arsenic, selenium, and thallium. Microbac reported antimony, arsenic, lead, nickel, selenium, and thallium by 6020 and all remaining metals by 6010B. The data did not appear to be adversely affected by these differences.

This report describes findings of data validation performed by MEC^X, LP (MEC^X) on the site samples reported in two sample delivery groups (SDGs) from CT.

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 (RVAAP), Ravenna, Ohio (FWQAPP) prepared by Science Applications International Corporation (SAIC).

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 as the Ravenna Arsenal, and the government assumed control of all operations. 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.

In 1989, the USEPA contracted Jacobs Engineering to perform a Resource Conservation and Recovery Act (RCRA) Facility Assessment. Thirty-one solid areas of concern were identified during the assessment, 13 of which were recommended for no further action. In 1996 the United States Army Corps of Engineers (USACE) performed a facility-wide preliminary assessment and conducted Phase I remedial investigations at 11 areas of concern. Salvage and demolition operations were performed in 1998. Monitoring wells were installed and a Phase II remedial investigation was performed at Load Line 1 by the USACE in 1999 and 2000, respectively.

Operations at Load Line 1 consisted of melting and loading energetic compounds into large caliber shells. Water to wash down the lines and the building was collected in concrete sumps and discharged to a drainage ditch or settling pond. Soil and dry sediments outside the footprints of the buildings were removed by Shaw Engineering in 2003 and demolition of the buildings began in 2001. Soil samples collected by Shaw in 2003 found that the soils below the building slabs and foundations of Load Line 1 were more contaminated than Load Lines 2-4. At the time, the slabs and foundations were left intact in order to prevent water infiltration to the contaminated soils below.

Floor slabs were removed as part of the project described in this report and the soil samples described in this report were collected from beneath the floor slabs at Load Line 1, Buildings F-15 and F-16, Building EB-803 (Load Line 3), and Buildings G-1, G-1A, and G-3 (Load Line 4).

2. DESCRIPTION OF WORK PERFORMED

This section describes the data validation procedures used during the evaluation of the site samples and the assessments performed on the resulting data.

2.1 CHEMICAL QUALITY ASSURANCE REPORT TASKS

QA samples were compared to the primary samples using the criteria in the FWQAPP. This data is presented in Section 4.0. The final electronic data deliverables (EDD) were then reviewed to determine the analytical completeness for the project. This data is presented in Section 5.0.

2.2 DATA VALIDATION PROCESS

Six QA samples, presented in the table below, were validated at Level III.

Table 1. Validated QA sample identification table

Client Sample ID	Laboratory ID	Matrix	Collection Date	Validation Level	Validated Methods
LL1SS-517M-3019-QA	738899	Soil	10/21/2009	III	6010B, 7060, 7196A, 7471A, 7740, 7841, 8330
LL1SS-280M-2001-QA	738900	Soil	10/21/2009	III	6010B, 7060, 7196A, 7471A, 7740, 7841, 8330
LL1SS-523M-3028-QA	739913	Soil	10/26/2009	III	6010B, 7060, 7196A, 7471A, 7740, 7841, 8081A, 8082, 8270C, 8330, USACRREL
LL1SS-523D-3032-QA	739917	Soil	10/26/2009	III	8260B
LL1SS-537M-3051-QA	743750	Soil	6/17/2008	III	6010B, 7060, 7196A, 7471A, 7740, 7841, 8330, USACRREL
F15SS-012M-0501-QA	743751	Soil	6/24/2008	III	6010B, 7060, 7196A, 7471A, 7740, 7841, 8330, USACRREL

Data validators assessed results based on the FWQAPP, Quality Assurance Project Plan Addendum for the Sampling of Soils Below Floor Slabs at LLs-2, 3, 4, and Excavation and Transportation of Contaminated Soils to Load Line 4 (QAPP Addendum), Louisville Chemistry Guideline Version 5 (LCG), Shell for Analytical Chemistry Requirements (Shell), Department of Defense Quality systems Manual for Environmental Laboratories Version 3 (DoD QSM), the specific EPA methods, the National Functional Guidelines for Organic Data Review (1994), and the National Functional Guidelines for Inorganic Data Review (1994). The specific items reviewed during Level III data validation are documented in Section 2.1 of the Ravenna Army Ammunition Plant Load Lines 2, 3, and 4 Soil Sampling Data Validation Report.

2.3 DATA VALIDATION QUALIFIERS

Data qualifiers, as defined below, were applied following the documents noted in Section 2.2:

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 reporting limit.

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.

2.4 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 Section 5.2.2. All qualifications and associated qualification codes have been entered into the electronic data deliverables (EDD) received from the laboratories and may be reviewed in the EDD appended to this report.

Table 2. 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 Blank Spike/Blank Spike 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.

Qualifier	Organics	Inorganics
-	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).

3. DATA ACQUISITION ACTIVITIES

3.1 SAMPLE COLLECTION

Six soil samples were collected in October and November 2009. The samples were submitted under chain of custody to the QA laboratory, CT. All results were report in two SDGs.

The chains of custody 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. The laboratory incorrectly reported LL4SS-280M-2001-QA as LL1SS-280M-2001-QA. All documentation regarding sample handling as presented in the case narratives, chains of custody, correspondence, and sample condition upon receipt forms, was evaluated.

3.2 SAMPLE ANALYSIS

CT analyzed a total of six samples by USEPA SW-846 Methods 6010B, 6020, 7060, 7740, and 7841 for various metals, USEPA SW-846 Method 741A for mercury, USEPA SW-846 Method 8270C for SVOCs, USEPA SW-846 Method 8081 for pesticides, USEPA SW-846 Method 8082 for PCBs, USEPA SW-846 Method 8330 for explosives, USEPA SW-846 Method 8260B for VOCs, USACERREL Method for nitrocellulose, and USEPA Method 7196A for hexavalent chromium.

3.3 DATA COMPLETENESS

No reporting limit or method detection limit was reported on the hardcopy data for nitrocellulose; however, both were present in the EDD. Data completeness for the project described in this report was found to be generally acceptable as no other deliverables were missing.

3.4 DETECTION LIMIT REQUIREMENTS

The reporting limits for the following compounds exceeded the criteria listed in Table 3-3 of the FWQAPP and Appendix A of the QAPP Addendum:

- Cadmium
- Hexavalent chromium
- Beta-BHC, chlordane, endosulfan sulfate, endrin ketone
- Dibromochloroethane and chloroethane
- Due to a dilution to report other Aroclors within the linear range of the calibration, Aroclors 1221, 1232, and 1242
- Twenty-one SV target analytes

Except for cadmium, hexavalent chromium, and chlordane, all MDLs met the reporting limit criteria.

4. DATA QUALITY EVALUATION

This section summarizes the data quality for each analytical method evaluated.

4.1 EXPLOSIVES

Five samples were analyzed by CT Laboratories for Explosives by USEPA SW-846 Method 8330 and three samples were analyzed by CT Laboratories for nitroguanidine by USEPA SW-846 Method 8330.

- MDL studies were not evaluated as part of this project.
- Calibration: Calibration criteria were met, with one exception listed below.
    - Initial calibration average percent relative standard deviations (%RSDs) were within the control limits listed in the LCG Table 5 of ≤20%, or the linear regression r values were ≥0.990.
    - The second source initial calibration verification standard (ICV) was within the control limits listed in LCG Table 5 of 85-115%.
    - The continuing calibration verification (CCV) standard %Ds were within the control limits listed in LCG Table 5 of ≤15%.
    - No MRL standards were analyzed in associated with the samples in these SDGs. As the reporting limits were not verified, all samples results less than 10× the reporting limits were qualified as estimated, "J," for detects and, "UJ," for nondetects. It was the reviewer's professional opinion that any result ≥10× the reporting limit was verified by the CCV and was, therefore, not qualified.
    - MDL checks were not analyzed in associated with the samples in these SDGs.
- Blanks: The method blanks associated with the validated samples had no target compound detects above the control limits listed in LCG Table 5, of one-half the reporting limit for target compounds, and no common laboratory contaminant detects above the reporting limit.
- Blank Spikes and Laboratory Control Samples: Recoveries were within the control limits listed in LCG Appendix C for all listed target compounds. PETN and nitroguanidine were not included in Appendix C; however, the control limits were within the laboratory-established control limits of 80-120% and 50-150%, respectively. RPDs were within the control limit listed in FWQAPP Table 3-1 of ≤35%.
- Surrogate Recovery: Recoveries were within the control limits listed in LCG Table 5 of 50-150%.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed for samples LL1SS-523M-3028-QA and LL1SS-537M-3051-QA. Recoveries were within the control limits listed in FWQAPP Tables 3-1 of 40-140%. RPDs were within the control limit listed in FWQAPP Table 3-1 of ≤35%.

- Compound Quantification and Reported Detection Limits: Compound quantification was not verified at a Level III validation. The reporting limits were supported by the low point of the initial calibration. Any result reported between the MDL and the reporting limit was qualified as estimated, "J."

- Target compound confirmation was performed by the laboratory for detects in the validated samples. RPDs were within the control limit listed in LCG Table 5 of ≤40%.

- System Performance: Review is not applicable at Level III validation.

- Manual integrations: Review is not applicable at Level III validation.

- Compound Identification: Compound identification was not verified at a Level III validation.

- 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: Three equipment rinsate samples were collected and analyzed for explosives but only LL1SS-523M-0000-ER was associated with a validated QA sample: LL1SS-523M-3028-QA. There were no detects in LL1SS-523M-0000-ER.

4.2 POLYCHLORINATED BIPHENYLS (PCBS)

One soil sample was analyzed by CT Laboratories for PCBs by USEPA SW-846 Method 8082.

- MDL studies were not evaluated as part of this project.

- Calibration: Calibration criteria were met, with one exception listed below.

    - Initial calibration average percent relative standard deviations (%RSDs) were within the control limits listed in the LCG Table 3 of ≤20%, or the linear regression r values were ≥0.990. The second source initial calibration verification standard (ICV) was within the control limits listed in LCG Table 3 of 85-115%.

    - The continuing calibration verification (CCV) standard %Ds were within the control limits listed in LCG Table 3 of ≤15%.

  - No MRL standards were analyzed in association with the sample in this SDG. As the reporting limits were not verified, all retained results at concentrations less than 10× the reporting limit were qualified as estimated, "J," for detects and, "UJ," for nondetects. All qualified results were coded with a "C" qualification code. It was the reviewer's professional opinion that any result ≥10× the reporting limit was verified by the CCV and was, therefore, not qualified.

  - No MDL check was performed in association with the sample in this SDG.

- Blanks: The method blanks had no target compound detects above the control limit listed in LCG Table 3, of one-half the reporting limit.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the control limits listed in LCG Appendix C.

- Surrogate Recovery: Recoveries were within the control limits listed in LCG Table 3 of 50-150%.

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed on the sample in this SDG. Method accuracy was evaluated based on LCS results.

- Compound Identification: Compound identification was not verified at a Level III validation. .

- Compound Quantification and Reported Detection Limits: Compound quantification was not verified at a Level III validation. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Aroclor 1254 was analyzed at a 10× dilution in order to report the analyte within the linear range of the calibration. Any result reported between the MDL and the reporting limit was qualified as estimated, "J."

  In accordance with the LCG, the reviewer reported the higher of the two values unless there was an indication of interference with the higher concentration result. In that instance the lower result of the two values was reported.

- Target compound confirmation was performed for positive detects in the validated samples of this SDG. The target compound confirmation RPDs were within the control limits listed in LCG Table 3 of ≤40%.

- System Performance: System performance is not evaluated at this level of validation.

- Manual Integrations: Review is not applicable at a Level III validation.

- 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: Three equipment rinsate samples were collected and analyzed for PCBs but only LL1SS-523M-0000-ER was associated with a validated QA sample: LL1SS-523D-3028-QA. There were no detects above the MDL in LL1SS-523M-0000-ER.

4.3 PESTICIDES

One soil sample was analyzed by CT Laboratories for Pesticides by USEPA SW-846 Method 8081A.

- MDL studies were not evaluated as part of this project.
- Calibration:
  - Initial calibration average percent relative standard deviations (%RSDs) were within the control limits listed in the LCG Table 4 of ≤20%, or the linear regression r values were ≥0.990.
  - Except as noted below, the second source initial calibration verification standard (ICV) was within the control limits listed in LCG Table 4 of 85-115%. The sample result affected by the recovery outlier was qualified as estimated, "J-," and was coded with a "C" qualification code.

Samples qualified for ICV %R outliers		
Analyte	**%R**	**Affected Samples**
Methoxychlor	80%	LL1SS-523M-3028-QA

  - The DDT/Endrin breakdown standards were within the control limits listed in LCG Table 4 of ≤15%.
  - Continuing calibration verification (CCV) standard %Ds were within the control limits listed in LCG Table 4 of ≤15%, with one exception affecting sample data listed in the table below The sample result affected by the %D outlier was qualified as estimated, "J+," and was coded with a "C" qualification code.

Samples qualified for CCV %D outliers		
Analyte	**%D**	**Affected Samples**
Heptachlor	16.2%	LL1SS-523M-3028-QA

  - No MRL standards were analyzed in association with the sample in this SDG. As the reporting limits were not verified, all retained results at concentrations less than 10× the reporting limit were qualified as estimated, "J," for detects and, "UJ," for nondetects. All qualified results were coded with a "C" qualification code. It was the reviewer's professional opinion that any result ≥10× the reporting limit was verified by the CCV and was, therefore, not qualified.
  - No MDL check standards were analyzed in association with the sample in this SDG.

- Blanks: The method blank had no target compound detects above the control limits listed in LCG Table 4, of one-half the reporting limit for target compounds, and no common laboratory contaminant detects above the reporting limit.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the control limits listed in LCG Appendix C.

- Surrogate Recovery: Recoveries were within the control limits listed in LCG Table 4 of 50-150%. For samples analyzed at a 10× dilution or higher, surrogate recoveries were considered diluted out and were not evaluated.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed for LL1SS-523M-3028-QA. Except as noted below, the MS/MSD recoveries were within the control limits listed in FWQAPP Tables 3-1 of 40-140% and RPDs were within the control limit of 35%.

  Qualifications were applied only when both the MS and MSD were recovered outside of the control limits. The sample result affected by the recovery outlier was qualified as estimated, "J-," and was coded with a "Q," qualification code.

Samples qualified for MS/MSD recovery outliers		
Analyte	**MS/MSD Recoveries**	**Qualified Sample**
Alpha chlordane	Not recovered	LL1SS-523M-3028-QA

- Compound Identification: Compound identification was not verified at a Level III.

- Compound Quantification and Reported Detection Limits: Compound quantification was not verified at a Level III. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. A portion of the analytes in LL1SS-523M-3028-QA were analyzed at a 20× dilution to report target compounds within linear range of the calibration. Any result reported between the MDL and the reporting limit was qualified as estimated, "J."

  In accordance with the LCG, the reviewer reported the higher of the two values unless there was an indication of interference with the higher concentration result. In that instance the lower result of the two values was reported. The sample result form was edited by the reviewer to report the higher concentration of the two values when applicable and the revised result was coded with a "$" qualification code.

  Target compound confirmation was performed by the laboratory for detects in the samples of this SDG. Unless otherwise noted in the table below, RPDs were within the control limits listed in LCG Table 4 of ≤ 40%. For RPDs >40%, the results were qualified as estimated, "J," and coded with "*III" qualification code.

Analytes qualified for intercolumn %D outliers	
Analyte(s)	**Sample**
4,4'-DDE 4,4'-DDT Alpha-chlordane Endosulfan I Methoxychlor Endrin aldehyde Alpha-BHC	LL1SS-523M-3028-QA

- System Performance: System performance was not evaluated at a Level III validation.
- Manual Integrations: Review is not applicable at a Level III validation.
- 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: Three equipment rinsate samples were collected and analyzed for pesticides but only LL1SS-523M-0000-ER was associated with a validated QA sample: LL1SS-523D-3028-QA. There were no detects above the MDL in LL1SS-523M-0000-ER.

4.4 SEMIVOLATILE ORGANIC COMPOUNDS (SVOCS)

One soil sample was analyzed by CT for semivolatile organic compounds by USEPA SW-846 Method 8270C.

- 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 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 system performance check compounds (SPCCs). All initial calibration %RSDs were within the method control limits listed in the LCG Table 2, of ≤30% for calibration check compounds (CCCs) and ≤15% for remaining compounds, or linear regression r values ≥0.995.
    - All second source initial calibration verification standard recoveries were within the control limits listed in the LCG Table 2 of 70-130%.

- Except as noted in the table below, continuing calibration %Ds were within the method control limits of ≤20% listed in the LCG Table 2. When no other qualifications with conflicting bias were assigned to a result, affected sample results for %D outliers with a negative bias were rejected, "R," for nondetects, and coded with a "C" qualification code.

Samples qualified for calibration %D outliers		
Analyte	**%D**	**Affected Samples**
Benzidine	-53.1%	LL1SS-523M-3028-QA

Bold analytes indicate rejected results in the affected sample.

- No MRL standards were analyzed in association with the sample in this SDG. As the reporting limits were not verified, all retained results at concentrations less than 10× the reporting limit were qualified as estimated, "J," for detects and, "UJ," for nondetects. All qualified results were coded with a "C" qualification code. It was the reviewer's professional opinion that any result ≥10× the reporting limit was verified by the CCV and was, therefore, not qualified.

- Blanks: With the exceptions noted below, the method blanks had no target compound detects above the control limits listed in the LCG Table 2, of one-half the reporting limit for target compounds, and no other common laboratory contaminant detects above the reporting limit. The affected sample results were qualified as a nondetect, "U," at the reporting limit and coded with a "B" qualification code

Samples qualified for method blank detects			
Analyte	**Blank Result (µg/Kg)**	**Sample RL (µg/Kg)**	**Affected Samples**
Dimethylphthalate	58.4	100	LL1SS-523D-3028-QA
Di-n-butylphthalate	62.9	140	LL1SS-523D-3028-QA

- Blank Spikes and Laboratory Control Samples: Except as noted below, the LCS recoveries were within the control limits listed in the LCG Appendix C for soils. Analytes recovered below 30% and not detected in the associated sample were rejected, "R." The qualified result was coded with an "L" qualification code.

Samples qualified for LCS recovery outliers		
Analyte	**Recovery (Limits)**	**Affected Samples**
Benzoic acid	**19%** (30-160%)	LL1SS-523D-3028-QA

Bold analytes and recoveries indicate rejected results in the affected samples.

- Surrogate Recoveries: Except as noted below, the surrogate recoveries were within the control limits of 50-150% listed in the LCG Table 2. All retained results were qualified as estimated, "J-," for detects and, "UJ," for nondetects and coded with an "S" qualification code.

Samples qualified for LCS recovery outliers		
Surrogate	**Recovery**	**Affected Samples**
2,4,5-Tribromophenol	29%	LL1SS-523D-3028-QA

- Matrix Spike/Matrix Spike Duplicate: No MS/MSD analyses were performed in association with the sample in this SDG. Method accuracy was evaluated based on LCS results.

- Internal Standards Performance: The internal standard area counts and retention times were within the LCG Table 2 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas.

- Compound Identification: Verification of compound identification is not applicable at a Level III validation.

- Compound Quantification and Reported Detection Limits: Verification of compound quantification is not applicable at a Level III validation. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any result reported between the MDL and the reporting limit was qualified as estimated, "J," by the laboratory.

- System Performance: Review is not applicable at a Level III validation.

- Manual Integrations: Review is not applicable at a Level III validation.

- 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: Three equipment rinsate samples were collected and analyzed for semivolatiles but only LL1SS-523M-0000-ER was associated with a validated QA sample: LL1SS-523D-3028-QA. There were no detects above the MDL in LL1SS-523M-0000-ER.

4.5 VOLATILE ORGANIC COMPOUNDS (VOCS)

One soil sample was analyzed by CT for volatile organic compounds by USEPA SW-846 Method 8260B.

- 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 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 system performance check compounds (SPCCs). All initial calibration %RSDs were within the method control limits listed in the LCG Table 1,

of ≤30% for calibration check compounds (CCCs) and ≤15% for remaining compounds, or linear regression r values ≥0.990.

- Except as noted below, all second source initial calibration verification standard recoveries affecting sample data were within the control limits listed in the LCG Table 1 of 80-120%. The result associated with the ICV recovery outlier was qualified as estimated, "J," and coded with a "C" qualification code. As the ICV, CCV and MRL results had varying bias, no bias was assigned to the methylene chloride result.

Samples qualified for ICV outliers		
Analyte	**%R**	**Affected Samples**
Methylene chloride	140%	LL1SS-523D-3032-QA

- Except as noted in the table below, continuing calibration %Ds were within the method control limits of ≤20% listed in the LCG Table 1. The result associated with the CCV %D outlier was qualified as estimated, "J," and coded with a "C" qualification code. As the ICV, CCV and MRL results had varying bias, no bias was assigned to the methylene chloride result.

Samples qualified for continuing calibration outliers		
Analyte	**%D**	**Affected Samples**
Methylene chloride	50.1%	LL1SS-523D-3032-QA

- Except as noted in the table below, MRL standard recoveries were within the control limits of 70-130% listed in the LCG Table 1. The result associated with the MRL recovery outlier was qualified as estimated, "J," and coded with a "C" qualification code. As the ICV, CCV and MRL results had varying bias, no bias was assigned to the methylene chloride result.

Samples qualified for MRL recovery outliers		
Analyte	**Outlier Recovery % Begin / End**	**Affected Samples**
Methylene chloride	10% / 0%	LL1SS-523D-3032-QA

- Blanks: Except as noted in the table below, the method blank had no target compound detects affecting sample data above the control limits listed in the LCG Table 1, of one-half the reporting limit for target compounds, and no common laboratory contaminant detects above the reporting limit. The affected sample results were qualified as nondetects, "U," at the RL, and coded with a "B" qualification code.

Samples qualified for method blank detects			
Analyte	**Blank Result (µg/Kg)**	**Sample RL (µg/Kg)**	**Affected Samples**
2-Hexanone	14.5	20	LL1SS-523D-3032-QA
4-Methyl-2-pentanone	6.10	20	LL1SS-523D-3032-QA

- Blank Spikes and Laboratory Control Samples: LCS recoveries were within the control limits listed in the LCG Appendix C for soils.

- Surrogate Recoveries: QA laboratory surrogate recoveries were within the control limits of 50-150% listed in the LCG Table 1.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on the validated sample for this SDG. Evaluation of method precision was based on LCS results.

- Internal Standards Performance: The internal standard area counts and retention times were within the LCG Table 1 control limits established by the midpoint initial calibration standard: ±30 seconds for retention times and -50% / +100% for internal standard areas.

- Compound Identification: Verification of compound identification is not applicable at a Level III validation.

- Compound Quantification and Reported Detection Limits: Verification of compound quantification is not applicable at a Level III validation. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any result reported between the MDL and the reporting limit was qualified as estimated, "J," by the laboratory.

- System Performance: Review is not applicable at a Level III validation.

- Manual Integrations: Review is not applicable at a Level III validation.

- 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:

    - o Trip Blanks: No trip blank was associated with the sample in this SDG.

    - o Field Blanks and Equipment Rinsates: Three equipment rinsate samples were collected and analyzed for volatiles but only LL1SS-523M-0000-ER was associated with a validated QA sample: LL1SS-523D-3032-QA. There were no detects above the MDL in LL1SS-523M-0000-ER.

4.6 METALS

A total of five samples were analyzed by CT for various metals by USEPA Methods 6010B, 7060A, 7471A, 7740, and 7841.

- MDL studies were not evaluated.

- Calibration: Except as noted below, calibration criteria were met.

    - o Initial calibration: Linear regression r values were within the control limit listed in the LCG Tables 7 and 9 of ≥0.995.

- The inductively coupled plasma (ICP) ICV and CCV recoveries were within the control limits listed in LCG Table 7 of 90-110% and Table 9 of 80-120% for mercury.

- The graphite furnace atomic absorption (GFAA) and ICV and CCV recoveries were within the control limits listed in LCG Table 8 of 80-120%. However, for both sets of selenium analyses, no ending CCV was analyzed and the opening CCVs were analyzed either one or two days before the reported analyses. Although the National Functional Guidelines only specify that a CCV must be analyzed every 20 injections, it was the reviewer's professional opinion that the instrument calibration was not verified; therefore, all nondetected selenium results were rejected, "R," and selenium detected in the sample was qualified as estimated, "J.". All qualified results were coded with a "C" qualification code.

- No MRL check standard was analyzed in association with the ICP analytes in SDG 76078; therefore, all retained results for LL1SS-280M-2001-QA, LL1SS-517M-3019-QA, and LL1SS-523M-3028-QA less than 10× the reporting limit were qualified as estimated.

  MRL recoveries in SDG 76265 were within the control limits listed in the LCG Tables 8, and 9 of 70-130%.

- The laboratory did not provide MDL verification information.

- Method blanks had no applicable detects above the control limit listed in the LCG Tables 7, 8, and 9 of one-half the MRL.

- ICP interference check sample A (ICSA) and AB (ICSAB) recoveries were within the control limits listed in QAPP Table 7 of 80-120%.

- Laboratory Control Samples: Recoveries were within the control limits listed in LCG Appendix C of 80-120%.

- Except as noted below, laboratory duplicate RPDs were within the control limits listed in the FWQAPP Table 3-1 of ≤20%. The duplicate criterion was only applied when the original sample result was nominally ≥5× the reporting limit. In cases where the original sample result was <5× the reporting limit, the reasonable control limit of ± the reporting limit was applied. In instances where more than one laboratory duplicate was analyzed in an SDG, parent samples were qualified only for the RPD outliers in the sample's laboratory duplicate.

  Results listed in the table below were qualified as estimated, "J," for detects and, "UJ," for nondetects. All qualified results were coded with an "E" qualification code.

Samples qualified for laboratory duplicate RPD outliers			
Parent Sample	**Analyte**	**RPD**	**Qualified Samples**
LL1SS-280M-2001-QA	Cadmium	24%	All samples in 76078

- Matrix Spike/Matrix Spike Duplicate: Except as noted below, recoveries were within the control limits listed in FWQAPP Table 3-1 of 75-125%. Matrix spike control limits were not applied when the native sample concentration exceeded the spiked amount by a factor of four or more. In instances where more than one matrix spike was analyzed in an SDG, parent samples were qualified only for the recovery outliers in the sample's matrix spike.

  Nondetected results associated with recoveries less than 30% were rejected, "R," and are noted in **bold** in the table below. All remaining results noted in the table below were qualified as estimated, "J," for detects and "UJ," for nondetects in the associated samples; however, nondetected results were not qualified for recoveries above the control limit. All qualified results were 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 MS/MSD recovery outliers			
Parent Sample	**Analyte**	**Recovery**	**Qualified Samples**
LL1SS-280M-2001-QA	Aluminum	15%	Aluminum in all samples in 76078)
	Antimony	11%	Antimony in all samples in 76078
	Beryllium	25%	Beryllium in all samples in 76078
	Chromium	0%	Chromium in all samples in 76078
	Copper	69%	Copper in all samples in 76078
	Zinc	72%	Zinc in all samples in 76078
	Arsenic	0%	Arsenic in all samples in 76078
	Selenium	14%	Selenium in all samples in 76078
	Thallium	69%	Thallium in all samples in 76078
LL1SS-537M-3051-QA	**Antimony**	15%	Antimony in all samples in 76265
	Cadmium	72%	Cadmium in all samples in 76265
	Cobalt	73%	Cobalt in all samples in 76265
	Lead	55%	Lead in all samples in 76265
	Thallium	74%	Thallium in all samples in 76265
	Selenium	30%	Selenium in all samples in 76265

Nondetected analytes noted in **bold** were rejected in the associated samples.

- Serial Dilution: Except as noted below, serial dilution %Ds were within the control limit listed in LCG Table 7 of ≤10%. The serial dilution control limit is only applicable when the original sample concentration is minimally ≥50× the MDL for ICP analytes and ≥25× the MDL for mercury.

All detect results for the analytes noted in the table below were qualified as estimated, "J," and were coded with an "A" qualification code. When no other qualifications with conflicting bias were assigned to a result, detected results noted in the table below were assigned a negative bias, "J-."

Samples qualified for serial dilution %D outliers			
Parent Sample	**Analyte**	**%D**	**Qualified Samples**
LL1SS-280M-2001-QA	Cadmium	74%	Cadmium in all samples in 76078
	Calcium	11%	Calcium in all samples in 76078
	Chromium	15%	Chromium in all samples in 76078
	Cobalt	18%	Cobalt in all samples in 76078
	Copper	31%	Copper in all samples in 76078
	Iron	16%	Iron in all samples in 76078
	Lead	17%	Lead in all samples in 76078
	Magnesium	11%	Magnesium in all samples in 76078
	Nickel	14%	Nickel in all samples in 76078
	Zinc	20%	Zinc in all samples in 76078
	Thallium	67%	Thallium in all samples in 76078
LL1SS-537M-3051-QA	Aluminum	19%	Aluminum in all samples in 76265
	Barium	25%	Barium in all samples in 76265
	Beryllium	45%	Beryllium in all samples in 76265
	Calcium	30%	Calcium in all samples in 76265
	Chromium	41%	Chromium in all samples in 76265
	Cobalt	50%	Cobalt in all samples in 76265
	Copper	40%	Copper in all samples in 76265
	Iron	24%	Iron in all samples in 76265
	Magnesium	29%	Magnesium in all samples in 76265
	Manganese	12%	Manganese in all samples in 76265
	Nickel	48%	Nickel in all samples in 76265
	Zinc	53%	Zinc in all samples in 76265

- Sample Result Verification: Sample results are not verified at a Level III validation. Any result reported between the MDL and the reporting limit was qualified as estimated, "J."

- Manual Integrations: Manual integrations are not reviewed at a Level III validation.

- 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:

    - Three equipment rinsate samples were collected and analyzed for metals but only LL1SS-523M-0000-ER was associated with a validated QA sample: LL1SS-523M-3028-QA. There were detects in LL1SS-523M-0000-ER, but none were sufficient to qualify the validated samples.

4.6 GENERAL CHEMISTRY - HEXAVALENT CHROMIUM AND NITROCELLULOSE

Five samples were analyzed for hexavalent chromium by USEPA SW-846 Method 7196A and three samples were analyzed by CT for nitrocellulose as nitrate/nitrite by USEPA Method Cold Regions Research and Engineering Laboratory's method for nitrocellulose.

- MDL studies were not reviewed.
- Calibration: Except as noted below, calibration criteria were met.
    - Initial calibration: The initial calibration is not reviewed at a Level III validation.
    - The ICV and CCV recoveries were within the control limits listed in DoD QSM Tables B-8 and B-10 of 90-110%.
    - No MRL check standards were analyzed. As the hexavalent chromium ICV and CCVs were spiked at levels significantly higher than the reporting limit; the nondetected hexavalent chromium results were qualified as estimated, "UJ." The qualified results were coded with a "C" qualification code. The nitrocellulose CCVs were near the reporting limits; therefore, the reviewer did not qualify the nitrocellulose results.
    - MDL Verification: The laboratory did not provide MDL verification information for hexavalent chromium. Nitrate/nitrite was detected in the nitrocellulose MDL verification.
- Blanks: Method blanks had no applicable detects above the control limit listed in the DoD QSM Tables B-8 and B-10 of one-half the MRL.
- Blank Spikes and Laboratory Control Samples: Hexavalent chromium recoveries were within the laboratory-established control limits of 90-110% and the nitrate/nitrite recoveries were within the laboratory-established control limits of 70-130%.
- Laboratory Duplicates: Laboratory duplicate analyses for hexavalent chromium were performed on LL1SS-280M-2001-QA and LL1SS-537M-3051-QA. The hexavalent chromium laboratory duplicate RPDs were within the control limits listed in the DoD QSM Table B-8 of ≤30%. Nitrate/nitrite laboratory duplicate analysis was performed on F15SS-012M-0501-QA. The nitrate/nitrite laboratory duplicate RPD was not within the laboratory-established control limit of ≤20%; however, the duplicate criterion is only applied when the original sample result was nominally ≥5× the reporting limit. In this case, the original sample result was <5× the reporting limit and the reasonable control limit of ± the reporting limit was applied.
- Matrix Spike/Matrix Spike Duplicate: Recoveries for the hexavalent chromium MS/MSD analyses of LL1SS-280M-2001-QA and LL1SS-537M-3051-QA were within the DoD QSM Table B-8 control limits of 85-115%. The nitrate/nitrite recovery from the matrix

spike analysis of F15SS-012M-0501-QA was within the laboratory-established control limits of 50-150%.

- Sample Result Verification: Sample results are not reviewed at a Level III validation. Any result reported between the MDL and the reporting limit was qualified as estimated, "J."

- Manual Integrations: Manual integrations are not reviewed at a Level III validation.

- 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: Three equipment rinsate samples were collected and analyzed for wet chemistry analyses but only LL1SS-523M-0000-ER was associated with a validated QA sample: LL1SS-523M-3028-QA. There were no detects in LL1SS-523M-0000-ER.

4.7 PRIMARY DATA QUALITY EVALUATION SUMMARY

The following table summarizes the qualifications applied to the primary sample data:

Table 3. Primary data qualification summary

Analysis	Number of Samples Analyzed	Number of Analytes per Sample	Percent Rejected	Percent Estimated
Explosives	15	16	6.3%	0%
Pesticides	3	21	0%	3.2%
PCBs	3	7	0%	0%
SVOCs	3	66	3.0%	97.0%
VOCs	2	35	0%	1.4%
Metals	15	23	4.3%	41.0%
Hexavalent Chromium	15	1	0%	0%
Nitroguanidine	9	1	0%	0%
Nitrocellulose	9	1	0%	100%
		Totals	**3.7%**	**35.7%**

A complete summary of qualifications applied to the primary samples can be found in Appendix A of the Ravenna Army Ammunition Plant Load Line 1 and Other Buildings Soil Sampling Data Validation Report. With the exception of rejected data, the primary data was found to be usable for its intended purpose with the qualifications applied by MEC^X.

5. DATA USABILITY SUMMARY

5.1 OVERALL COMPLETENESS REVIEW

As the data validated in this report are not inclusive of the entire field effort, no field completeness value was calculated.

The analytical completeness goal for the project that was established in the FWQAPP was 90% for each method. Data with reporting limits that exceeded the established criteria and data estimated for quality control outliers or for detects between the MDL and the RL were included in Table 3 for informational purposes only. The QA laboratory reported the following analytes not reported by the primary laboratory: 2,6-dichlorophenol, acetophenone, benzidine, n-nitrosopyrrolidine, technical chlordane and Aroclors 1262 and 1268. The primary laboratory reported total xylenes, and total 1,2-dichloroethene; while the QA laboratory reported m,p-xylene, o-xylene, cis-1,2-dichloroethene, and trans-1,2-dichloroethene. Additionally, the QA laboratory reported only 4-methylphenol while primary laboratory correctly reported the semivolatile compound as the indistinguishable isomer 3,4-methylphenol. Therefore, for the pesticide, PCBs, semivolatile, and volatile analyses, the number of samples and analytes per sample in the table below parenthetically lists the QA laboratory counts. The following table summarizes the calculated completeness for the project.

Table 4. Overall analytical completeness

			Number of Results					
Analysis	**Samples Analyzed**	**Analytes per Sample**	**Total**	**Rejected**	**MDLs Exceeding Criteria**	**Estimated for QC Outliers**	**Estimated for Detects <RL**	**Percent Complete**
Explosives	20	16	320	0	0	80	1	100%
Pesticides	4	21 (22)	85	0	1	23	2	100%
PCBs	4	7 (9)	30	0	0	8	0	100%
SVOCs	4	66 (70)	334	6	198	262	6	98.2%
VOCs	3	35 (37)	142	2	0	4	6	98.6%
Metals	20	23	460	19	5	235	17	95.9%
Hexavalent Chromium	20	1	20	0	5	5	0	100%
Nitroguanidine	12	1	11	0	0	2	0	100%
Nitrocellulose	12	1	11	0	0	9	0	100%
Totals			**1413**	**27**	**209**	**628**	**32**	**98.1%**

5.2 DATA DEFICIENCIES

5.2.1 Sources

Some data were rejected for QC considerations. For the organic methods, the rejections were due to calibration criteria outliers and for the inorganic analyses, the rejections were primarily due calibration outliers and a few low matrix spike 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 rejected data points do not affect data quality or usability.

5.2.2 Impact on Data Quality

A total of 1.9% of data was rejected and these data are not usable. Although some data were rejected, the overall analytical completeness goal listed in the FWQAPP of 90% was met, with the actual completeness equal to 97.8%. Although 44% of the data was qualified, the data quality was not adversely impacted by these qualifications.

5.3 GENERAL DATA USABILITY

Except for rejected data noted in Appendix B of this document and Appendix B of the Ravenna Army Ammunition Plant Load Line 1 and Other Buildings Soil Sampling Data Validation Report, all data are usable with the assigned qualifications.

Specific concerns regarding the QA data are noted below:

- The reporting limits for the following compounds exceeded the criteria listed in Table 3-3 of the FWQAPP and Appendix A of the QAPP Addendum:
    - Cadmium
    - Hexavalent chromium
    - Beta-BHC, chlordane, endosulfan sulfate, endrin ketone
    - Dibromochloroethane and chloroethane
    - Due to a dilution to report other Aroclors within the linear range of the calibration, Aroclors 1221, 1232, and 1242
    - Twenty-one SV target analytes

  With the exception of cadmium, hexavalent chromium, and chlordane, all MDLs met the reporting limit criteria.

Specific concerns regarding the primary data are noted below:

- False negatives were identified in the pesticide data. When a compound retention time (RT) shift exceeded half of the defined RT window, the laboratory flagged the compound with an "F," only on the quantitation report, and did not report the compound as detected. In these instances, MEC^X qualified the results as false negatives.

It is likely that false negatives exist in the unvalidated data.

Please see section 7.0 for further details and recommendations.

- The Microbac mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data.

- The laboratory reported total xylenes and total 1,2-dichloroethene instead of the specific isomers, m,p-xylene, o-xylene, cis-1,2-dichloroethene, and trans-1,2-dichloroethene.

- Although the semivolatile samples had no target compound detects or apparent non-target matrix interference, the validated samples were analyzed at 5× dilutions, attributed to extract appearance and viscosity. All semivolatile reporting limits in the validated samples exceeded the reporting limit criteria.

In order to avoid repetition of the issues noted above, the following actions should be taken:

- P. Schuler of URS contacted Microbac concerning the process used to confirm analyte identification in gas chromatographic methods. Microbac explained their identification method as follows:

  "*Our actual statistical RT windows are 0 or 0.017 minutes, but we use a default of .03 minutes to ensure an adequate width for detection of compounds. The peaks should be right in the middle of the window. Generally speaking, if a peak is even halfway out of the window, we do not call it a hit, especially if the surrogate peaks are perfectly aligned within their windows.*"

  P. Schuler then contacted Methods Information Communication Exchange (MICE) Service, operated for the EPA by Science Applications International Corporation (SAIC), to inquire about Microbac's retention time window practice. The response from MICE was as follows

  "*We may have to agree to disagree on your initial inquiry, but a retention time window of 0.03 minutes is in fact +/- 3 times the default standard deviation of 0.01. Which further translates to 0.015 minutes on each side of the peak. If you use the logic of a window of +/- 0.03 or 0.03 minutes on each side of the peak, this actually equates to a window of 0.06 or six times the default standard deviation. Also, from a historical perspective this Method 8000 guidance originated using packed column technology which invariably generated much more variability while performing the 72 hour retention time window study and therefore created wider windows. However, with the newer capillary column technology there is much less variability and thereby the default standard deviation is one possible option should one choose to use the Method 8000 guidance. In reality, the retention time windows should be both method and instrument specific using retention times obtained from the initial calibrations. In other words the generic retention time*

window guidance in Method 8000 will not always be appropriate for many GC methods and most certainly the HPLC methods."

While MICE may agree with Microbac on a total retention time window of 0.03 minutes, MEC^X's evaluation of the data indicates the presence of potential target compounds partially within the Microbac's retention time windows. These target compounds are confirmed by split laboratory analysis. The restrictive nature of Microbac's use of the retention time window continues to result in false negatives.

If pesticides are a contaminant of concern at this site, MEC^X recommends either:

1. **Have the analysis performed at a laboratory with a less restrictive gas chromatography retention time window policy;**
2. **Confirm potential pesticide detects by a mass spectrometer method when the detects are above the detection limit of the mass spectrometer; or**
3. **Perform comprehensive data validation on all pesticide data.**

- A list of the primary compounds of concern should be provided to the laboratory project manager. This list can be used by the laboratory analysts in order to determine if undiluted analyses should be performed to confirm specific compounds of concern or to meet project reporting limit requirements.
- A comprehensive list of items in a Level IV data packages should be listed in the QAPP and provided to the laboratory project manager. This list should note that the raw data for all spectroscopic methods must include the raw absorbance data.

6. QA SAMPLE COMPARISONS

The following table presents the QA samples and associated primary samples. Results of these samples are compared in the following sections. A full comparison of all sample detects can be found in Appendix C.

Table 5. QA sample and primary sample associations

QA Sample	QA SDG	Primary Sample	Primary SDG	Collection Date	Analyses
LL4SS-280M-2001-QA	76078	LL1SS-280M-2001	L09100553	10/21/2009	Explosives, Hexavalent Chromium, Metals
LL1SS-517M-3019-QA	76078	LL1SS-517M-3019	L09100553	10/21/2009	Explosives, Hexavalent Chromium, Metals
LL1SS-523M-3028-QA	76078	LL1SS-523M-3028	L09100645	10/26/2009	Explosives, Propellants, Hexavalent Chromium, Metals, PCBs, Pesticides, Semivolatiles
LL1SS-537M-3051-QA	76265	LL1SS-537M-3051	L09110136	11/4/2009	Explosives, Propellants, Hexavalent Chromium, Metals
F15SS-012M-0501-QA	76265	F15SS-012M-0501-QA	L09110136	11/4/2009	Explosives, Propellants, Hexavalent Chromium, Metals
LL1SS-523D-3032-QA	76078	LL1SS-523D-3032	L09100645	10/26/2009	Volatiles

A total of 34% of the QA pair results evaluated had RPDs above the control limit listed in FWQAPP Table 3-1 of 50%. Excluding results that were not detected in either the QA sample or the primary sample, only 9.3% of the QA pair results had RPDs above the control limit.

More than half of the discrepancies occurred in the semivolatile analyses of QA sample LL1SS-523-3028-QA and associated primary sample LL1SS-523M-3027-SO. Most of these discrepancies were for analytes that were not detected in either sample but, due to dilution, were reported at a significantly higher reporting limit by the primary laboratory. Additionally, all hexavalent chromium results were nondetected and were in disagreement as the primary laboratory reporting limits were 60× lower than the QA laboratory reporting limits.

The majority of the discrepancies between detected analytes occurred in the metals analyses of QA sample LL1SS-523M-3028-QA and associated primary sample LL1SS-523M-3027-SO and QA sample LL1SS-517M-3019-QA and primary sample LL1SS-517M-3019-SO. For these samples and the remaining metals, most discrepancies were due to detects reported by the QA laboratory at concentrations 2× to 4× times larger than those reported by the primary laboratory. The most affected analytes were cadmium (5 pairs; larger detects at primary laboratory) and chromium (4 pair, larger detects at the QA laboratory).

The following table summarizes the discrepancies by method. Please note that rejected results were not assessed and are not counted in the "Total Analytes" column. The pesticide results were not assessed due to false negatives found in the Microbac data (see Data Validation Report). Due to the large number of nondetected analyte pairs with RPDs greater than 50%, an additional column was included in the table below removing from the count RPD outliers due to reporting limit differences that were nondetected in both the primary and QA samples.

Table 6. Primary/QA sample comparison summary

Method	Analytes	Primary/QA Sample Pairs	Total Analytes	RPD <50%	RPD >50%	RPD >50% Detects only
Explosives	16	5	80	74	6	0
Pesticides	21	1	Not performed due to Microbac false positives			
PCBs	7	1	7	4	3	1
SVOCs	66	1	65	3	62	5
VOCs	35	1	33	27	6	0
Metals	23	5	115	96	19	19
Hexavalent Chromium	1	5	5	0	5	0
Nitroguanidine	1	3	3	0	3	1
Nitrocellulose	1	3	3	1	2	1
		Total	**311**	**205**	**106**	**29**

Excluding discrepancies due to dilution in one sample and higher reporting limits at one laboratory, the majority of the discrepancies were in the metals analyses. As 16 of the 19 analytes that were in discrepancy were analyzed by ICP, it is possible that interelement correction factors may not be correctly applied at one or both laboratories.

7. CONCLUSIONS AND RECOMMENDATIONS

Counting all discrepancies, 34.8% of the QA and primary data had RPDs above the control limit of 50%. Approximately 70% of the discrepancies in the data stemmed from common nondetects in the QA/primary sample pairs. In 60% of these discrepancies, the primary laboratory had the highest reporting limit. If common nondetected results were not counted, only 9.3% of the data would be in discrepancy.

As 65% of the discrepancies for common detects occurred in the metals analyses, MEC^X strongly recommends sending blind soil performance evaluation samples to both laboratories to ensure that the ICP interelement correction factors are correctly set and monitored.

8. 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 Blank Spike/Blank Spike 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: 76078

Analysis Method 6010C

Sample Name LL1SS-280M-2001-QA **AnalysisType:** RES

Lab Sample Name: 738900 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	12100	0.22	0.071	mg/kg		J-	Q
Antimony	7440-36-0	0.18	0.18	0.051	mg/kg	U	R	Q
Barium	7440-39-3	56.2	0.056	0.017	mg/kg			
Beryllium	7440-41-7	0.48	0.017	0.0051	mg/kg		J-	Q
Cadmium	7440-43-9	0.38	0.014	0.0041	mg/kg	Y	J	E, A
Calcium	7440-70-2	5420	1.1	0.3	mg/kg		J-	A
Chromium	7440-47-3	130	0.044	0.013	mg/kg	M	J-	Q
Cobalt	7440-48-4	8.5	0.03	0.0091	mg/kg		J-	A
Copper	7440-50-8	21.7	0.19	0.061	mg/kg	M	J-	Q, A
Iron	7439-89-6	29100	1.2	0.41	mg/kg	M	J-	A
Lead	7439-92-1	28.4	0.11	0.03	mg/kg		J-	A
Magnesium	7439-95-4	3670	0.34	0.1	mg/kg		J-	A
Manganese	7439-96-5	461	0.11	0.03	mg/kg			
Nickel	7440-02-0	26.1	0.046	0.014	mg/kg		J-	A
Silver	7440-22-4	0.074	0.075	0.022	mg/kg	U	UJ	C
Vanadium	7440-62-2	17.8	0.058	0.018	mg/kg			
Zinc	7440-66-6	76.7	0.11	0.03	mg/kg	M	J-	Q, A

Analysis Method 6010C

Sample Name LL1SS-517M-3019-QA **AnalysisType:** RES

Lab Sample Name: 738899 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	9720	0.22	0.071	mg/kg		J-	Q
Antimony	7440-36-0	0.18	0.18	0.051	mg/kg	U	R	Q
Barium	7440-39-3	48.2	0.056	0.017	mg/kg			
Beryllium	7440-41-7	0.42	0.017	0.0051	mg/kg		J-	Q
Cadmium	7440-43-9	0.24	0.014	0.004	mg/kg		J	E, A
Calcium	7440-70-2	5200	1.1	0.3	mg/kg		J-	A
Chromium	7440-47-3	72.5	0.043	0.013	mg/kg		J-	Q
Cobalt	7440-48-4	6.8	0.03	0.0091	mg/kg		J-	A
Copper	7440-50-8	18	0.19	0.061	mg/kg		J-	Q, A
Iron	7439-89-6	23100	1.2	0.4	mg/kg		J-	A
Lead	7439-92-1	21.3	0.11	0.03	mg/kg		J-	A
Magnesium	7439-95-4	2800	0.34	0.1	mg/kg		J-	A
Manganese	7439-96-5	434	0.11	0.03	mg/kg			
Nickel	7440-02-0	17.4	0.045	0.014	mg/kg		J-	A
Silver	7440-22-4	0.074	0.075	0.022	mg/kg	U	UJ	C
Vanadium	7440-62-2	14.4	0.058	0.018	mg/kg			
Zinc	7440-66-6	73.7	0.11	0.03	mg/kg		J-	Q, A

Analysis Method 6010C

Sample Name LL1SS-523M-3028-QA **AnalysisType:** RES

Lab Sample Name: 739913 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	5280	0.22	0.07	mg/kg		J-	Q
Antimony	7440-36-0	0.18	0.18	0.05	mg/kg	U	R	Q
Barium	7440-39-3	31.4	0.055	0.017	mg/kg			
Beryllium	7440-41-7	0.24	0.017	0.005	mg/kg		J-	Q
Cadmium	7440-43-9	0.22	0.014	0.004	mg/kg		J	E, A
Calcium	7440-70-2	6760	1.1	0.3	mg/kg		J-	A
Chromium	7440-47-3	159	0.043	0.013	mg/kg		J-	Q
Cobalt	7440-48-4	4.3	0.03	0.009	mg/kg		J-	A
Copper	7440-50-8	13.4	0.19	0.06	mg/kg		J-	Q, A
Iron	7439-89-6	18100	1.2	0.4	mg/kg		J-	A
Lead	7439-92-1	32.9	0.11	0.03	mg/kg		J-	A
Magnesium	7439-95-4	1440	0.34	0.1	mg/kg		J-	A
Manganese	7439-96-5	475	0.11	0.03	mg/kg			
Nickel	7440-02-0	15	0.045	0.014	mg/kg		J-	A
Silver	7440-22-4	0.074	0.074	0.022	mg/kg	U	UJ	C
Vanadium	7440-62-2	8.9	0.057	0.018	mg/kg		J	C
Zinc	7440-66-6	59	0.11	0.03	mg/kg		J	C, Q, A

Analysis Method 6010C-NaK

Sample Name LL1SS-280M-2001-QA **AnalysisType:** RES

Lab Sample Name: 738900 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Potassium	7440-09-7	1340	13	4.1	mg/kg			
Sodium	7440-23-5	74	7.3	2.2	mg/kg			

Sample Name LL1SS-517M-3019-QA **AnalysisType:** RES

Lab Sample Name: 738899 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Potassium	7440-09-7	866	13	4	mg/kg			
Sodium	7440-23-5	43.2	7.3	2.2	mg/kg		J	C

Sample Name LL1SS-523M-3028-QA **AnalysisType:** RES

Lab Sample Name: 739913 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Potassium	7440-09-7	837	13	4	mg/kg			
Sodium	7440-23-5	43.5	7.2	2.2	mg/kg		J	C

Analysis Method 7060A

Sample Name LL1SS-280M-2001-QA **AnalysisType:** RES

Lab Sample Name: 738900 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Arsenic	7440-38-2	15.2	6.1	2	mg/kg		J-	Q

Sample Name LL1SS-517M-3019-QA **AnalysisType:** RES

Lab Sample Name: 738899 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Arsenic	7440-38-2	10.5	2.4	0.81	mg/kg		J-	Q

Sample Name LL1SS-523M-3028-QA **AnalysisType:** RES

Lab Sample Name: 739913 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Arsenic	7440-38-2	6.6	2.4	0.8	mg/kg		J-	Q

Analysis Method 7196A

Sample Name LL1SS-280M-2001-QA **AnalysisType:** RES

Lab Sample Name: 738900 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Hexavalent Chromium	18540-29-9	6.4	6.4	1.9	mg/kg	U	UJ	C

Sample Name LL1SS-517M-3019-QA **AnalysisType:** RES

Lab Sample Name: 738899 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Hexavalent Chromium	18540-29-9	6.4	6.4	1.9	mg/kg	U	UJ	C

Sample Name LL1SS-523M-3028-QA **AnalysisType:** RES

Lab Sample Name: 739913 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Hexavalent Chromium	18540-29-9	6.4	6.4	1.9	mg/kg	U	UJ	C

Analysis Method 7471A

Sample Name LL1SS-280M-2001-QA **AnalysisType:** RES

Lab Sample Name: 738900 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.024	0.0039	0.0012	mg/kg			

Sample Name LL1SS-517M-3019-QA **AnalysisType:** RES

Lab Sample Name: 738899 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.02	0.0038	0.0012	mg/kg			

Sample Name LL1SS-523M-3028-QA **AnalysisType:** RES

Lab Sample Name: 739913 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.097	0.0038	0.0012	mg/kg			

Analysis Method 7740

Sample Name	LL1SS-280M-2001-QA	**AnalysisType:** RES						
Lab Sample Name:	738900	**Validation Level:** III						
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Selenium	7782-49-2	0.12	0.12	0.041	mg/kg	M	J	C

Sample Name	LL1SS-517M-3019-QA	**AnalysisType:** RES						
Lab Sample Name:	738899	**Validation Level:** III						
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Selenium	7782-49-2	0.16	0.12	0.04	mg/kg	M	J	C

Sample Name	LL1SS-523M-3028-QA	**AnalysisType:** RES						
Lab Sample Name:	739913	**Validation Level:** III						
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Selenium	7782-49-2	0.083	0.12	0.04	mg/kg	J	J	C

Analysis Method 7841

Sample Name LL1SS-280M-2001-QA **AnalysisType:** RES

Lab Sample Name: 738900 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Thallium	7440-28-0	0.12	0.016	0.0046	mg/kg		J-	Q

Sample Name LL1SS-517M-3019-QA **AnalysisType:** RES

Lab Sample Name: 738899 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Thallium	7440-28-0	0.11	0.016	0.0045	mg/kg		J-	Q

Sample Name LL1SS-523M-3028-QA **AnalysisType:** RES

Lab Sample Name: 739913 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Thallium	7440-28-0	0.07	0.016	0.0045	mg/kg		J-	Q

Analysis Method 8000C

Sample Name LL1SS-280M-2001-QA **AnalysisType:** RES

Lab Sample Name: 738900 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Total Solids	TSO	98.7	1	1	%			

Sample Name LL1SS-517M-3019-QA **AnalysisType:** RES

Lab Sample Name: 738899 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Total Solids	TSO	99	1	1	%			

Sample Name LL1SS-523D-3032-QA **AnalysisType:** RES

Lab Sample Name: 739917 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Total Solids	TSO	93.6	1	1	%			

Sample Name LL1SS-523M-3028-QA **AnalysisType:** RES

Lab Sample Name: 739913 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Total Solids	TSO	99.5	1	1	%			

Analysis Method 8081B

Sample Name LL1SS-523M-3028-QA **AnalysisType:** RES

Lab Sample Name: 739913 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
4,4'-DDD	72-54-8	1.2	1.2	0.3	ug/kg	UM	UJ	C
4,4'-DDE	72-55-9	170	22	6	ug/kg	P	J	C, *III
4,4'-DDT	50-29-3	800	30	10	ug/kg	P,M	J	*III
Aldrin	309-00-2	1.7	1.7	0.5	ug/kg	U	UJ	C
alpha-BHC	319-84-6	3.4	1.9	0.6	ug/kg	P	J	C, *III
alpha-Chlordane	5103-71-9	130	22	6	ug/kg	P,M	J-	Q, C, *III
beta-BHC	319-85-7	2	2	0.6	ug/kg	U	UJ	C
Chlordane (Technical)	57-74-9	30	30	4	ug/kg	U	UJ	C
Decachlorobiphenyl	2051-24-3	127	130	55	ug/kg			
delta-BHC	319-86-8	3	1.1	0.3	ug/kg		J	C
Dieldrin	60-57-1	250	24	6	ug/kg			$
Endosulfan I	959-98-8	130	44	14	ug/kg	P	J	C, *III
Endosulfan II	33213-65-9	1.2	1.2	0.3	ug/kg	UM	UJ	C
Endosulfan sulfate	1031-07-8	3.1	3.1	0.9	ug/kg	U	UJ	C
Endrin	72-20-8	1.4	1.4	0.4	ug/kg	UM	UJ	C
Endrin aldehyde	7421-93-4	150	72	22	ug/kg	P,M	J	C, *III
Endrin ketone	53494-70-5	2.8	2.8	0.8	ug/kg	UM	UJ	C
GAMMA-BHC	58-89-9	1.6	1.6	0.5	ug/kg	U	UJ	C
gamma-Chlordane	5103-74-2	1.1	1.1	0.3	ug/kg	UM	UJ	C
Heptachlor	76-44-8	9.7	1.2	0.4	ug/kg		J+	C, $
Heptachlor epoxide	1024-57-3	1.7	1.7	0.5	ug/kg	UM	UJ	C
Methoxychlor	72-43-5	160	46	14	ug/kg	P,M	J-	C, *III
Tetrachloro-m-xylene	877-09-8	107	125	70	ug/kg			
Toxaphene	8001-35-2	30	30	5	ug/kg	U	UJ	C

Analysis Method 8082A

Sample Name LL1SS-523M-3028-QA **AnalysisType:** RES

Lab Sample Name: 739913 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aroclor 1016	12674-11-2	31	31	9.1	ug/kg	U	UJ	C
Aroclor 1221	11104-28-2	41	41	12	ug/kg	U	UJ	C
Aroclor 1232	11141-16-5	47	47	14	ug/kg	U	UJ	C
Aroclor 1242	53469-21-9	34	34	10	ug/kg	U	UJ	C
Aroclor 1248	12672-29-6	30	30	9.1	ug/kg	U	UJ	C
Aroclor 1254	11097-69-1	3200	300	30	ug/kg			
Aroclor 1260	11096-82-5	30	30	6	ug/kg	U	UJ	C
Aroclor 1262	37324-23-5	30	30	6	ug/kg	U	UJ	C
Aroclor 1268	11100-14-4	30	30	5	ug/kg	U	UJ	C
Decachlorobiphenyl	2051-24-3	81	125	60	ug/kg			

Analysis Method 8260B

Sample Name LL1SS-523D-3032-QA **AnalysisType:** RES

Lab Sample Name: 739917 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	5	5	0.5	ug/kg	U	U	
1,1,2,2-Tetrachloroethane	79-34-5	5	5	1.1	ug/kg	U	U	
1,1,2-Trichloroethane	79-00-5	5	5	0.6	ug/kg	U	U	
1,1-Dichloroethane	75-34-3	5	5	0.3	ug/kg	U	U	
1,1-Dichloroethene	75-35-4	5	5	0.5	ug/kg	U	U	
1,2-Dibromoethane	106-93-4	5	5	0.3	ug/kg	U	U	
1,2-Dichloroethane	107-06-2	5	5	0.6	ug/kg	U	U	
1,2-Dichloroethane-d4	17060-07-0	83	150	50	ug/kg			
1,2-Dichloropropane	78-87-5	5	5	0.6	ug/kg	U	U	
2-Butanone	78-93-3	20	21	6	ug/kg	U	U	
2-Hexanone	591-78-6	12	20	5	ug/kg	JB	U	B
4-Bromofluorobenzene (SURR)	460-00-4	106	150	50	ug/kg			
4-Methyl-2-pentanone	108-10-1	4.2	20	2.9	ug/kg	JB	U	B
Acetone	67-64-1	20	20	6	ug/kg	U	U	
Benzene	71-43-2	5	5	0.3	ug/kg	U	U	
Bromochloromethane	74-97-5	5	5	0.6	ug/kg	U	U	
Bromodichloromethane	75-27-4	5	5	0.4	ug/kg	U	U	
Bromoform	75-25-2	5	5	0.7	ug/kg	U	U	
Bromomethane	74-83-9	5	5	1.2	ug/kg	U	U	
Carbon disulfide	75-15-0	5	5	1	ug/kg	U	U	
Carbon tetrachloride	56-23-5	5	5	0.7	ug/kg	U	U	
Chlorobenzene	108-90-7	5	5	0.8	ug/kg	U	U	
Chloroethane	75-00-3	10	10	0.4	ug/kg	U	U	
Chloroform	67-66-3	5	5	0.4	ug/kg	U	U	
Chloromethane	74-87-3	5	5	0.5	ug/kg	U	U	
cis-1,2-Dichloroethene	156-59-2	5	5	0.5	ug/kg	U	U	
cis-1,3-Dichloropropene	10061-01-5	5	5	0.6	ug/kg	U	U	
Dibromochloromethane	124-48-1	10	10	0.7	ug/kg	U	U	

Analysis Method 8260B

Dibromofluoromethane	1868-53-7	83	150	50	ug/kg			
Ethylbenzene	100-41-4	5	5	0.7	ug/kg	U	U	
m,p-Xylenes	1330-20-7	10	10	1.7	ug/kg	U	U	
Methylene chloride	75-09-2	2.7	10	1.9	ug/kg	JA	J	C
o-Xylene	95-47-6	5	5	1	ug/kg	U	U	
Styrene	100-42-5	5	5	0.5	ug/kg	U	U	
Tetrachloroethene	127-18-4	5	5	0.91	ug/kg	U	U	
Toluene	108-88-3	5	5	0.6	ug/kg	U	U	
Toluene-d8	2037-26-5	94	150	50	ug/kg			
trans-1,2-Dichloroethene	156-60-5	5	5	0.6	ug/kg	U	U	
trans-1,3-Dichloropropene	10061-02-6	5	5	0.8	ug/kg	U	U	
Trichloroethene	79-01-6	5	5	0.5	ug/kg	U	U	
Vinyl chloride	75-01-4	5	5	0.7	ug/kg	U	U	

Analysis Method 8270C

Sample Name LL1SS-523M-3028-QA **AnalysisType:** RES

Lab Sample Name: 739913 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	100	100	16	ug/kg	U	UJ	C, S
1,2-Dichlorobenzene	95-50-1	100	100	10	ug/kg	U	UJ	C, S
1,3-Dichlorobenzene	541-73-1	100	100	11	ug/kg	U	UJ	C, S
1,4-Dichlorobenzene	106-46-7	100	100	13	ug/kg	U	UJ	C, S
2,4,5-Trichlorophenol	95-95-4	350	350	110	ug/kg	U	UJ	C, S
2,4,6-Tribromophenol	118-79-6	29	125	35	ug/kg			
2,4,6-Trichlorophenol	88-06-2	260	260	76	ug/kg	U	UJ	C, S
2,4-Dichlorophenol	120-83-2	320	320	93	ug/kg	U	UJ	C, S
2,4-Dimethylphenol	105-67-9	260	260	77	ug/kg	U	UJ	C, S
2,4-Dinitrophenol	51-28-5	710	710	210	ug/kg	U	UJ	C, S
2,4-Dinitrotoluene	121-14-2	100	100	23	ug/kg	U	UJ	C, S
2,6-Dichlorophenol	87-65-0	100	110	31	ug/kg	U	UJ	C, S
2,6-Dinitrotoluene	606-20-2	100	100	20	ug/kg	U	UJ	C, S
2-Chloronaphthalene	91-58-7	100	100	13	ug/kg	U	UJ	C, S
2-Chlorophenol	95-57-8	350	350	110	ug/kg	U	UJ	C, S
2-Fluoro-1,1'-biphenyl	321-60-8	74	105	45	ug/kg			
2-Fluorophenol	367-12-4	65	105	35	ug/kg			
2-Methyl-4,6-dinitrophenol	534-52-1	500	500	71	ug/kg	U	UJ	C, S
2-Methylnaphthalene	91-57-6	100	100	19	ug/kg	U	UJ	C, S
2-Methylphenol	95-48-7	340	340	100	ug/kg	U	UJ	C, S
2-Nitroaniline	88-74-4	100	100	26	ug/kg	U	UJ	C, S
2-Nitrophenol	88-75-5	400	400	120	ug/kg	U	UJ	C, S
3,3'-Dichlorobenzidine	91-94-1	940	940	280	ug/kg	U	UJ	C, S
3-Nitroaniline	99-09-2	110	110	32	ug/kg	U	UJ	C, S
4-Bromophenyl phenyl ether	101-55-3	100	100	10	ug/kg	U	UJ	C, S
4-Chloro-3-methylphenol	59-50-7	310	310	91	ug/kg	U	UJ	C, S
4-Chloroaniline	106-47-8	220	220	65	ug/kg	U	UJ	C, S
4-Chlorophenyl phenyl ether	7005-72-3	110	110	31	ug/kg	U	UJ	C, S

Analysis Method 8270C

4-Methylphenol	1319-77-3	350	350	100	ug/kg	U	UJ	C, S
4-Nitroaniline	100-01-6	110	110	31	ug/kg	U	UJ	C, S
4-Nitrophenol	100-02-7	1100	1100	320	ug/kg	U	UJ	C, S
Acenaphthene	83-32-9	100	100	15	ug/kg	U	UJ	C, S
Acenaphthylene	208-96-8	100	100	20	ug/kg	U	UJ	C, S
Acetophenone	98-86-2	110	110	32	ug/kg	U	UJ	C, S
Anthracene	120-12-7	100	100	10	ug/kg	U	UJ	C, S
Benzidine	92-87-5	3900	3900	1200	ug/kg	UZ	R	C
Benzo(a)anthracene	56-55-3	14	100	9	ug/kg	J	J-	C, S
Benzo(a)pyrene	50-32-8	100	100	19	ug/kg	U	UJ	C, S
Benzo(b)fluoranthene	205-99-2	20	100	11	ug/kg	J	J-	C, S
Benzo(g,h,i)perylene	191-24-2	100	100	25	ug/kg	U	UJ	C, S
Benzo(k)fluoranthene	207-08-9	100	100	21	ug/kg	U	UJ	C, S
Benzoic acid	65-85-0	990	990	290	ug/kg	U	R	L
Benzyl alcohol	100-51-6	270	270	78	ug/kg	U	UJ	C, S
Bis(2-chloroethoxy)methane	111-91-1	100	100	20	ug/kg	U	UJ	C, S
Bis(2-chloroethyl) ether	111-44-4	100	100	14	ug/kg	U	UJ	C, S
Bis(2-chloroisopropyl) ether	108-60-1	100	100	11	ug/kg	U	UJ	C, S
Bis(2-ethylhexyl) phthalate	117-81-7	100	100	28	ug/kg	U	UJ	C, S
Butylbenzyl phthalate	85-68-7	100	100	24	ug/kg	U	UJ	C, S
Carbazole	86-74-8	100	100	11	ug/kg	U	UJ	C, S
Chrysene	218-01-9	100	100	12	ug/kg	U	UJ	C, S
Dibenzo(a,h)anthracene	53-70-3	100	100	11	ug/kg	U	UJ	C, S
Dibenzofuran	132-64-9	130	130	37	ug/kg	U	UJ	C, S
Diethyl phthalate	84-66-2	130	130	38	ug/kg	U	UJ	C, S
Dimethyl phthalate	131-11-3	28	100	26	ug/kg	JB	UJ	B, C, S
Di-n-butyl phthalate	84-74-2	94	140	40	ug/kg	JB	UJ	B, C, S
Di-n-octyl phthalate	117-84-0	130	130	39	ug/kg	U	UJ	C, S
Fluoranthene	206-44-0	100	100	21	ug/kg	U	UJ	C, S
Fluorene	86-73-7	100	100	11	ug/kg	U	UJ	C, S
Hexachlorobenzene	118-74-1	100	100	15	ug/kg	U	UJ	C, S
Hexachlorobutadiene	87-68-3	100	100	31	ug/kg	U	UJ	C, S

Analysis Method 8270C

Hexachlorocyclopentadiene	77-47-4	100	100	26	ug/kg	U	UJ	C, S
Hexachloroethane	67-72-1	100	100	17	ug/kg	U	UJ	C, S
Indeno(1,2,3-cd)pyrene	193-39-5	100	100	8	ug/kg	U	UJ	C, S
Isophorone	78-59-1	450	100	27	ug/kg		J-	C, S
Naphthalene	91-20-3	100	100	9	ug/kg	U	UJ	C, S
Nitrobenzene	98-95-3	100	140	40	ug/kg	U	UJ	C, S
Nitrobenzene-d5	4165-60-0	76	100	35	ug/kg			
N-Nitroso-di-n-propylamine	621-64-7	110	110	30	ug/kg	U	UJ	C, S
N-Nitrosodiphenylamine	86-30-6	200	200	17	ug/kg	U	UJ	C, S
N-Nitrosopyrrolidine	930-55-2	130	130	37	ug/kg	U	UJ	C, S
Pentachlorophenol	87-86-5	500	500	70	ug/kg	U	UJ	C, S
Phenanthrene	85-01-8	12	100	11	ug/kg	J	J-	C, S
Phenol	108-95-2	410	410	120	ug/kg	U	UJ	C, S
Phenol-d5	4165-62-2	66	100	40	ug/kg			
Pyrene	129-00-0	13	100	11	ug/kg	J	J-	C, S
Terphenyl-d14	1718-51-0	83	125	30	ug/kg			

Analysis Method 8330B

Sample Name LL1SS-280M-2001-QA **AnalysisType:** RES

Lab Sample Name: 738900 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	108	150	50	ug/kg			
1,3,5-Trinitrobenzene	99-35-4	0.25	0.25	0.08	mg/kg	U	UJ	C
1,3-Dinitrobenzene	99-65-0	0.24	0.24	0.06	mg/kg	U	UJ	C
2,4,6-Trinitrotoluene	118-96-7	0.24	0.24	0.07	mg/kg	U	UJ	C
2,4-Dinitrotoluene	121-14-2	0.27	0.27	0.08	mg/kg	U	UJ	C
2,6-Dinitrotoluene	606-20-2	0.27	0.27	0.08	mg/kg	U	UJ	C
2-Amino-4,6-dinitrotoluene	35572-78-2	0.24	0.24	0.07	mg/kg	U	UJ	C
2-Nitrotoluene	88-72-2	0.29	0.29	0.09	mg/kg	U	UJ	C
3-Nitrotoluene	99-08-1	0.27	0.27	0.08	mg/kg	U	UJ	C
4-Amino-2,6-dinitrotoluene	19406-51-0	0.26	0.26	0.08	mg/kg	U	UJ	C
4-Nitrotoluene	99-99-0	0.33	0.33	0.1	mg/kg	U	UJ	C
HMX	2691-41-0	0.26	0.26	0.08	mg/kg	U	UJ	C
Nitrobenzene	98-95-3	0.24	0.24	0.07	mg/kg	U	UJ	C
Nitroglycerin	55-63-0	1.4	1.4	0.4	mg/kg	U	UJ	C
PETN	78-11-5	1.4	1.4	0.4	mg/kg	U	UJ	C
RDX	121-82-4	0.29	0.29	0.09	mg/kg	U	UJ	C
Tetryl	479-45-8	0.29	0.29	0.09	mg/kg	U	UJ	C

Analysis Method 8330B

Sample Name LL1SS-517M-3019-QA **AnalysisType:** RES

Lab Sample Name: 738899 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	111	150	50	ug/kg			
1,3,5-Trinitrobenzene	99-35-4	0.24	0.24	0.078	mg/kg	U	UJ	C
1,3-Dinitrobenzene	99-65-0	0.23	0.23	0.059	mg/kg	U	UJ	C
2,4,6-Trinitrotoluene	118-96-7	0.18	0.23	0.068	mg/kg	J	J	C
2,4-Dinitrotoluene	121-14-2	0.26	0.26	0.078	mg/kg	U	UJ	C
2,6-Dinitrotoluene	606-20-2	0.26	0.26	0.078	mg/kg	U	UJ	C
2-Amino-4,6-dinitrotoluene	35572-78-2	0.23	0.23	0.068	mg/kg	U	UJ	C
2-Nitrotoluene	88-72-2	0.28	0.28	0.088	mg/kg	U	UJ	C
3-Nitrotoluene	99-08-1	0.26	0.26	0.078	mg/kg	U	UJ	C
4-Amino-2,6-dinitrotoluene	19406-51-0	0.25	0.25	0.078	mg/kg	U	UJ	C
4-Nitrotoluene	99-99-0	0.32	0.32	0.098	mg/kg	U	UJ	C
HMX	2691-41-0	0.25	0.25	0.078	mg/kg	U	UJ	C
Nitrobenzene	98-95-3	0.23	0.23	0.068	mg/kg	U	UJ	C
Nitroglycerin	55-63-0	1.4	1.4	0.39	mg/kg	U	UJ	C
PETN	78-11-5	1.4	1.4	0.39	mg/kg	U	UJ	C
RDX	121-82-4	0.28	0.28	0.088	mg/kg	U	UJ	C
Tetryl	479-45-8	0.28	0.28	0.088	mg/kg	U	UJ	C

Analysis Method 8330B

Sample Name LL1SS-523M-3028-QA **AnalysisType:** RES

Lab Sample Name: 739913 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	114	150	50	ug/kg			
1,3,5-Trinitrobenzene	99-35-4	0.24	0.24	0.078	mg/kg	U	UJ	C
1,3-Dinitrobenzene	99-65-0	0.23	0.23	0.058	mg/kg	U	UJ	C
2,4,6-Trinitrotoluene	118-96-7	0.23	0.23	0.068	mg/kg	U	UJ	C
2,4-Dinitrotoluene	121-14-2	0.26	0.26	0.078	mg/kg	U	UJ	C
2,6-Dinitrotoluene	606-20-2	0.26	0.26	0.078	mg/kg	U	UJ	C
2-Amino-4,6-dinitrotoluene	35572-78-2	0.23	0.23	0.068	mg/kg	U	UJ	C
2-Nitrotoluene	88-72-2	0.28	0.28	0.088	mg/kg	U	UJ	C
3-Nitrotoluene	99-08-1	0.26	0.26	0.078	mg/kg	U	UJ	C
4-Amino-2,6-dinitrotoluene	19406-51-0	0.25	0.25	0.078	mg/kg	U	UJ	C
4-Nitrotoluene	99-99-0	0.32	0.32	0.097	mg/kg	U	UJ	C
HMX	2691-41-0	0.25	0.25	0.078	mg/kg	U	UJ	C
Nitrobenzene	98-95-3	0.23	0.23	0.068	mg/kg	U	UJ	C
Nitroglycerin	55-63-0	1.4	1.4	0.39	mg/kg	U	UJ	C
PETN	78-11-5	1.4	1.4	0.39	mg/kg	U	UJ	C
RDX	121-82-4	0.28	0.28	0.088	mg/kg	U	UJ	C
Tetryl	479-45-8	0.28	0.28	0.088	mg/kg	U	UJ	C

Analysis Method 8330B-NG

Sample Name LL1SS-523M-3028-QA **AnalysisType:** RES

Lab Sample Name: 739913 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	78	150	50	mg/kg			
Nitroguanidine	556-88-7	0.14	0.14	0.05	mg/kg	U	UJ	C

Analysis Method 9056M

Sample Name LL1SS-523M-3028-QA **AnalysisType:** RES

Lab Sample Name: 739913 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	5	16	5	mg/kg	U	U	

Validated Sample Result Forms: 76265

Analysis Method 6010C

Sample Name 750040 **AnalysisType:** RES

Lab Sample Name: 750040 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	0.07	0.22	0.07	mg/kg	U		
Antimony	7440-36-0	0.05	0.18	0.05	mg/kg	U		
Barium	7440-39-3	0.025	0.055	0.017	mg/kg			
Beryllium	7440-41-7	0.005	0.017	0.005	mg/kg	U		
Cadmium	7440-43-9	0.004	0.014	0.004	mg/kg	U		
Calcium	7440-70-2	0.3	1.1	0.3	mg/kg	U		
Chromium	7440-47-3	0.013	0.043	0.013	mg/kg	U		
Cobalt	7440-48-4	0.009	0.03	0.009	mg/kg	U		
Copper	7440-50-8	0.06	0.19	0.06	mg/kg	U		
Iron	7439-89-6	0.4	1.2	0.4	mg/kg	U		
Lead	7439-92-1	0.03	0.11	0.03	mg/kg	U		
Magnesium	7439-95-4	0.1	0.34	0.1	mg/kg	U		
Manganese	7439-96-5	0.078	0.11	0.03	mg/kg			
Nickel	7440-02-0	0.014	0.045	0.014	mg/kg	U		
Silver	7440-22-4	0.022	0.074	0.022	mg/kg	U		
Vanadium	7440-62-2	0.018	0.057	0.018	mg/kg	U		
Zinc	7440-66-6	0.036	0.11	0.03	mg/kg			

Analysis Method 6010C

Sample Name 750041 **AnalysisType:** RES

Lab Sample Name: 750041 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	79.8	0.47	0.15	mg/kg			
Antimony	7440-36-0	21.6	0.55	0.17	mg/kg			
Barium	7440-39-3	89.8	0.048	0.015	mg/kg			
Beryllium	7440-41-7	2.2	0.014	0.004	mg/kg			
Cadmium	7440-43-9	2	0.048	0.014	mg/kg			
Calcium	7440-70-2	5180	1	0.3	mg/kg			
Chromium	7440-47-3	8.3	0.36	0.11	mg/kg			
Cobalt	7440-48-4	20.5	0.094	0.028	mg/kg			
Copper	7440-50-8	11	0.11	0.03	mg/kg			
Iron	7439-89-6	42.8	0.63	0.19	mg/kg			
Lead	7439-92-1	22.6	0.37	0.11	mg/kg			
Magnesium	7439-95-4	2210	3.8	1.1	mg/kg			
Manganese	7439-96-5	21.1	0.092	0.028	mg/kg			
Nickel	7440-02-0	20.3	0.069	0.021	mg/kg			
Silver	7440-22-4	2.1	0.11	0.03	mg/kg			
Vanadium	7440-62-2	21	0.27	0.08	mg/kg			
Zinc	7440-66-6	20.9	0.74	0.22	mg/kg			

Analysis Method 6010C

Sample Name F15SS-012M-0501-QA **AnalysisType:** RES

Lab Sample Name: 743751 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	13500	0.22	0.071	mg/kg		J-	A
Antimony	7440-36-0	0.68	0.18	0.051	mg/kg		J-	Q
Barium	7440-39-3	80.4	0.056	0.017	mg/kg		J-	A
Beryllium	7440-41-7	0.58	0.017	0.0051	mg/kg		J-	A
Cadmium	7440-43-9	0.014	0.014	0.0041	mg/kg	U	UJ	Q
Calcium	7440-70-2	6950	1.1	0.31	mg/kg		J-	A
Chromium	7440-47-3	14.1	0.044	0.013	mg/kg		J-	A
Cobalt	7440-48-4	8.4	0.031	0.0092	mg/kg		J-	Q, A
Copper	7440-50-8	12.9	0.19	0.061	mg/kg		J-	A
Iron	7439-89-6	27500	1.2	0.41	mg/kg		J-	A
Lead	7439-92-1	10.5	0.11	0.031	mg/kg		J-	Q
Magnesium	7439-95-4	3410	0.35	0.1	mg/kg		J-	A
Manganese	7439-96-5	466	0.11	0.031	mg/kg		J-	A
Nickel	7440-02-0	27.7	0.046	0.014	mg/kg		J-	A
Silver	7440-22-4	0.074	0.075	0.022	mg/kg	U	U	
Vanadium	7440-62-2	19.3	0.058	0.018	mg/kg			
Zinc	7440-66-6	45.3	0.11	0.031	mg/kg		J-	A

Analysis Method 6010C

Sample Name LL1SS-537M-3051-QA **AnalysisType:** RES

Lab Sample Name: 743750 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	6930	0.22	0.071	mg/kg		J-	A
Antimony	7440-36-0	0.55	0.18	0.05	mg/kg		J-	Q
Barium	7440-39-3	37.3	0.055	0.017	mg/kg		J-	A
Beryllium	7440-41-7	0.33	0.017	0.005	mg/kg		J-	A
Cadmium	7440-43-9	0.014	0.014	0.004	mg/kg	UM	UJ	Q
Calcium	7440-70-2	3500	1.1	0.3	mg/kg		J-	A
Chromium	7440-47-3	8.3	0.043	0.013	mg/kg		J-	A
Cobalt	7440-48-4	5.7	0.03	0.0091	mg/kg	M	J-	Q, A
Copper	7440-50-8	15.9	0.19	0.06	mg/kg		J-	A
Iron	7439-89-6	21300	1.2	0.4	mg/kg		J-	A
Lead	7439-92-1	15.9	0.11	0.03	mg/kg		J-	Q
Magnesium	7439-95-4	2140	0.34	0.1	mg/kg		J-	A
Manganese	7439-96-5	428	0.11	0.03	mg/kg	M	J-	A
Nickel	7440-02-0	18.5	0.045	0.014	mg/kg		J-	A
Silver	7440-22-4	0.074	0.075	0.022	mg/kg	U	U	
Vanadium	7440-62-2	10.3	0.057	0.018	mg/kg			
Zinc	7440-66-6	53.4	0.11	0.03	mg/kg		J-	A

Analysis Method 6010C-NaK

Sample Name 750040 **AnalysisType:** RES

Lab Sample Name: 750040 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Potassium	7440-09-7	4	13	4	mg/kg	U		
Sodium	7440-23-5	2.2	7.2	2.2	mg/kg	U		

Sample Name 750041 **AnalysisType:** RES

Lab Sample Name: 750041 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Potassium	7440-09-7	2210	60	18	mg/kg			
Sodium	7440-23-5	2130	32	10	mg/kg			

Sample Name F15SS-012M-0501-QA **AnalysisType:** RES

Lab Sample Name: 743751 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Potassium	7440-09-7	881	13	4.1	mg/kg			
Sodium	7440-23-5	90.1	7.3	2.2	mg/kg			

Sample Name LL1SS-537M-3051-QA **AnalysisType:** RES

Lab Sample Name: 743750 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Potassium	7440-09-7	630	13	4	mg/kg			
Sodium	7440-23-5	27.2	7.3	2.2	mg/kg			

Analysis Method 7060A

Sample Name 750050 **AnalysisType:** RES

Lab Sample Name: 750050 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Arsenic	7440-38-2	0.04	0.12	0.04	mg/kg	U		

Sample Name 750051 **AnalysisType:** RES

Lab Sample Name: 750051 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Arsenic	7440-38-2	0.54	0.12	0.04	mg/kg			

Sample Name F15SS-012M-0501-QA **AnalysisType:** RES

Lab Sample Name: 743751 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Arsenic	7440-38-2	8.3	3.7	1.2	mg/kg			

Sample Name LL1SS-537M-3051-QA **AnalysisType:** RES

Lab Sample Name: 743750 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Arsenic	7440-38-2	12.5	5.3	1.8	mg/kg			

Analysis Method 7196A

Sample Name F15SS-012M-0501-QA **AnalysisType:** RES

Lab Sample Name: 743751 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Hexavalent Chromium	18540-29-9	6.5	6.5	2	mg/kg	U	UJ	C

Sample Name LL1SS-537M-3051-QA **AnalysisType:** RES

Lab Sample Name: 743750 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Hexavalent Chromium	18540-29-9	6.4	6.4	1.9	mg/kg	U	UJ	C

Analysis Method 7471A

Sample Name F15SS-012M-0501-QA **AnalysisType:** RES

Lab Sample Name: 743751 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.033	0.0039	0.0012	mg/kg			

Sample Name LL1SS-537M-3051-QA **AnalysisType:** RES

Lab Sample Name: 743750 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.017	0.0038	0.0012	mg/kg			

Analysis Method 7740

Sample Name	750050		**AnalysisType:** RES					
Lab Sample Name:	750050		**Validation Level:**					
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Selenium	7782-49-2	0.04	0.12	0.04	mg/kg	U		

Sample Name	750051		**AnalysisType:** RES					
Lab Sample Name:	750051		**Validation Level:**					
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Selenium	7782-49-2	0.54	0.12	0.04	mg/kg			

Sample Name	F15SS-012M-0501-QA		**AnalysisType:** RES					
Lab Sample Name:	743751		**Validation Level:** III					
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Selenium	7782-49-2	0.2	0.61	0.2	mg/kg	UV	R	C, Q

Sample Name	LL1SS-537M-3051-QA		**AnalysisType:** RES					
Lab Sample Name:	743750		**Validation Level:** III					
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Selenium	7782-49-2	0.11	0.12	0.04	mg/kg	J	J	C

Analysis Method 7841

Sample Name	750050		**AnalysisType:** RES					
Lab Sample Name:	750050		**Validation Level:**					
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Thallium	7440-28-0	0.018	0.062	0.018	mg/kg	U		

Sample Name	750051		**AnalysisType:** RES					
Lab Sample Name:	750051		**Validation Level:**					
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Thallium	7440-28-0	0.5	0.062	0.018	mg/kg			

Sample Name	F15SS-012M-0501-QA		**AnalysisType:** RES					
Lab Sample Name:	743751		**Validation Level:**	III				
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Thallium	7440-28-0	0.11	0.016	0.0046	mg/kg		J-	Q

Sample Name	LL1SS-537M-3051-QA		**AnalysisType:** RES					
Lab Sample Name:	743750		**Validation Level:**	III				
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Thallium	7440-28-0	0.091	0.016	0.0045	mg/kg		J-	Q

Analysis Method 8000C

Sample Name	F15SS-012M-0501-QA	**AnalysisType:** RES						
Lab Sample Name:	743751	**Validation Level:** III						
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Total Solids	TSO	98.2	1	1	%			

Sample Name	LL1SS-537M-3051-QA	**AnalysisType:** RES						
Lab Sample Name:	743750	**Validation Level:** III						
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Total Solids	TSO	99.1	1	1	%			

Analysis Method 8330B

Sample Name F15SS-012M-0501-QA **AnalysisType:** RES

Lab Sample Name: 743751 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	137	150	50	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.25	0.25	0.08	mg/kg	U	UJ	C
1,3-Dinitrobenzene	99-65-0	0.24	0.24	0.06	mg/kg	U	UJ	C
2,4,6-Trinitrotoluene	118-96-7	0.24	0.24	0.07	mg/kg	U	UJ	C
2,4-Dinitrotoluene	121-14-2	0.27	0.27	0.08	mg/kg	U	UJ	C
2,6-Dinitrotoluene	606-20-2	0.27	0.27	0.08	mg/kg	U	UJ	C
2-Amino-4,6-dinitrotoluene	35572-78-2	0.24	0.24	0.07	mg/kg	U	UJ	C
2-Nitrotoluene	88-72-2	0.29	0.29	0.091	mg/kg	U	UJ	C
3-Nitrotoluene	99-08-1	0.27	0.27	0.08	mg/kg	U	UJ	C
4-Amino-2,6-dinitrotoluene	19406-51-0	0.26	0.26	0.08	mg/kg	U	UJ	C
4-Nitrotoluene	99-99-0	0.33	0.33	0.1	mg/kg	U	UJ	C
HMX	2691-41-0	0.26	0.26	0.08	mg/kg	U	UJ	C
Nitrobenzene	98-95-3	0.24	0.24	0.07	mg/kg	U	UJ	C
Nitroglycerin	55-63-0	1.4	1.4	0.4	mg/kg	U	UJ	C
PETN	78-11-5	1.4	1.4	0.4	mg/kg	U	UJ	C
RDX	121-82-4	0.29	0.29	0.091	mg/kg	U	UJ	C
Tetryl	479-45-8	0.29	0.29	0.091	mg/kg	U	UJ	C

Analysis Method 8330B

Sample Name LL1SS-537M-3051-QA **AnalysisType:** RES

Lab Sample Name: 743750 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	107	150	50	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.25	0.25	0.08	mg/kg	U	UJ	C
1,3-Dinitrobenzene	99-65-0	0.24	0.24	0.06	mg/kg	U	UJ	C
2,4,6-Trinitrotoluene	118-96-7	0.24	0.24	0.07	mg/kg	U	UJ	C
2,4-Dinitrotoluene	121-14-2	0.27	0.27	0.08	mg/kg	U	UJ	C
2,6-Dinitrotoluene	606-20-2	0.27	0.27	0.08	mg/kg	U	UJ	C
2-Amino-4,6-dinitrotoluene	35572-78-2	0.24	0.24	0.07	mg/kg	U	UJ	C
2-Nitrotoluene	88-72-2	0.29	0.29	0.09	mg/kg	U	UJ	C
3-Nitrotoluene	99-08-1	0.27	0.27	0.08	mg/kg	U	UJ	C
4-Amino-2,6-dinitrotoluene	19406-51-0	0.26	0.26	0.08	mg/kg	U	UJ	C
4-Nitrotoluene	99-99-0	0.33	0.33	0.1	mg/kg	U	UJ	C
HMX	2691-41-0	0.26	0.26	0.08	mg/kg	U	UJ	C
Nitrobenzene	98-95-3	0.24	0.24	0.07	mg/kg	U	UJ	C
Nitroglycerin	55-63-0	1.4	1.4	0.4	mg/kg	U	UJ	C
PETN	78-11-5	1.4	1.4	0.4	mg/kg	U	UJ	C
RDX	121-82-4	0.29	0.29	0.09	mg/kg	U	UJ	C
Tetryl	479-45-8	0.29	0.29	0.09	mg/kg	U	UJ	C

Analysis Method 8330B-NG

Sample Name F15SS-012M-0501-QA **AnalysisType:** RES

Lab Sample Name: 743751 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	64	150	50	mg/kg			
Nitroguanidine	556-88-7	0.14	0.14	0.049	mg/kg	U	UJ	C

Sample Name LL1SS-537M-3051-QA **AnalysisType:** RES

Lab Sample Name: 743750 **Validation Level:**

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	67	150	50	mg/kg			
Nitroguanidine	556-88-7	0.3	0.14	0.049	mg/kg		J	C

Analysis Method 9056M

Sample Name F15SS-012M-0501-QA **AnalysisType:** RES

Lab Sample Name: 743751 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	27.88	16	5	mg/kg	Y		

Sample Name LL1SS-537M-3051-QA **AnalysisType:** RES

Lab Sample Name: 743750 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	16	16	5	mg/kg	U	U	

APPENDIX B

Sample Qualification Summary

Sample	Analyte	Result	RL	MDL	Units	Qualifier	Code	SDG
F15SS-012M-0501-QA	Selenium	0.2	0.61	0.2	mg/kg	R	C, Q	76265
F15SS-012M-0501-QA	Thallium	0.11	0.016	0.005	mg/kg	J-	Q	76265
F15SS-012M-0501-QA	Aluminum	13500	0.22	0.071	mg/kg	J-	A	76265
F15SS-012M-0501-QA	Antimony	0.68	0.18	0.051	mg/kg	J-	Q	76265
F15SS-012M-0501-QA	Barium	80.4	0.056	0.017	mg/kg	J-	A	76265
F15SS-012M-0501-QA	Beryllium	0.58	0.017	0.005	mg/kg	J-	A	76265
F15SS-012M-0501-QA	Cadmium	0.014	0.014	0.004	mg/kg	UJ	Q	76265
F15SS-012M-0501-QA	Calcium	6950	1.1	0.31	mg/kg	J-	A	76265
F15SS-012M-0501-QA	Chromium	14.1	0.044	0.013	mg/kg	J-	A	76265
F15SS-012M-0501-QA	Cobalt	8.4	0.031	0.009	mg/kg	J-	Q, A	76265
F15SS-012M-0501-QA	Copper	12.9	0.19	0.061	mg/kg	J-	A	76265
F15SS-012M-0501-QA	Iron	27500	1.2	0.41	mg/kg	J-	A	76265
F15SS-012M-0501-QA	Lead	10.5	0.11	0.031	mg/kg	J-	Q	76265
F15SS-012M-0501-QA	Magnesium	3410	0.35	0.1	mg/kg	J-	A	76265
F15SS-012M-0501-QA	Manganese	466	0.11	0.031	mg/kg	J-	A	76265
F15SS-012M-0501-QA	Nickel	27.7	0.046	0.014	mg/kg	J-	A	76265
F15SS-012M-0501-QA	Silver	0.074	0.075	0.022	mg/kg	U		76265
F15SS-012M-0501-QA	Vanadium	19.3	0.058	0.018	mg/kg			76265
F15SS-012M-0501-QA	Zinc	45.3	0.11	0.031	mg/kg	J-	A	76265
F15SS-012M-0501-QA	Potassium	881	13	4.1	mg/kg			76265
F15SS-012M-0501-QA	Sodium	90.1	7.3	2.2	mg/kg			76265
F15SS-012M-0501-QA	Arsenic	8.3	3.7	1.2	mg/kg			76265
F15SS-012M-0501-QA	Hexavalent Chromium	6.5	6.5	2	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	Mercury	0.033	0.004	0.001	mg/kg			76265
F15SS-012M-0501-QA	Total Solids	98.2	1	1	%			76265
F15SS-012M-0501-QA	1,3,5-Trinitrobenzene	0.25	0.25	0.08	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	1,3-Dinitrobenzene	0.24	0.24	0.06	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	2,4,6-Trinitrotoluene	0.24	0.24	0.07	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	2,4-Dinitrotoluene	0.27	0.27	0.08	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	2,6-Dinitrotoluene	0.27	0.27	0.08	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	2-Amino-4,6-	0.24	0.24	0.07	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	2-Nitrotoluene	0.29	0.29	0.091	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	3-Nitrotoluene	0.27	0.27	0.08	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	4-Amino-2,6-	0.26	0.26	0.08	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	4-Nitrotoluene	0.33	0.33	0.1	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	HMX	0.26	0.26	0.08	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	Nitrobenzene	0.24	0.24	0.07	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	Nitroglycerin	1.4	1.4	0.4	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	PETN	1.4	1.4	0.4	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	RDX	0.29	0.29	0.091	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	Tetryl	0.29	0.29	0.091	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	Nitroguanidine	0.14	0.14	0.049	mg/kg	UJ	C	76265
F15SS-012M-0501-QA	Nitrocellulose	27.88	16	5	mg/kg			76265
LL1SS-280M-2001-QA	Selenium	0.12	0.12	0.041	mg/kg	J	C	76078
LL1SS-280M-2001-QA	Thallium	0.12	0.016	0.005	mg/kg	J-	Q	76078
LL1SS-280M-2001-QA	Aluminum	12100	0.22	0.071	mg/kg	J-	Q	76078
LL1SS-280M-2001-QA	Antimony	0.18	0.18	0.051	mg/kg	R	Q	76078
LL1SS-280M-2001-QA	Barium	56.2	0.056	0.017	mg/kg			76078

Sample	Analyte	Result	RL	MDL	Units	Qualifier	Code	SDG
LL1SS-280M-2001-QA	Beryllium	0.48	0.017	0.005	mg/kg	J-	Q	76078
LL1SS-280M-2001-QA	Cadmium	0.38	0.014	0.004	mg/kg	J	E, A	76078
LL1SS-280M-2001-QA	Calcium	5420	1.1	0.3	mg/kg	J-	A	76078
LL1SS-280M-2001-QA	Chromium	130	0.044	0.013	mg/kg	J-	Q	76078
LL1SS-280M-2001-QA	Cobalt	8.5	0.03	0.009	mg/kg	J-	A	76078
LL1SS-280M-2001-QA	Copper	21.7	0.19	0.061	mg/kg	J-	Q, A	76078
LL1SS-280M-2001-QA	Iron	29100	1.2	0.41	mg/kg	J-	A	76078
LL1SS-280M-2001-QA	Lead	28.4	0.11	0.03	mg/kg	J-	A	76078
LL1SS-280M-2001-QA	Magnesium	3670	0.34	0.1	mg/kg	J-	A	76078
LL1SS-280M-2001-QA	Manganese	461	0.11	0.03	mg/kg			76078
LL1SS-280M-2001-QA	Nickel	26.1	0.046	0.014	mg/kg	J-	A	76078
LL1SS-280M-2001-QA	Silver	0.074	0.075	0.022	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	Vanadium	17.8	0.058	0.018	mg/kg			76078
LL1SS-280M-2001-QA	Zinc	76.7	0.11	0.03	mg/kg	J-	Q, A	76078
LL1SS-280M-2001-QA	Potassium	1340	13	4.1	mg/kg			76078
LL1SS-280M-2001-QA	Sodium	74	7.3	2.2	mg/kg			76078
LL1SS-280M-2001-QA	Arsenic	15.2	6.1	2	mg/kg	J-	Q	76078
LL1SS-280M-2001-QA	Hexavalent Chromium	6.4	6.4	1.9	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	Mercury	0.024	0.004	0.001	mg/kg			76078
LL1SS-280M-2001-QA	Total Solids	98.7	1	1	%			76078
LL1SS-280M-2001-QA	1,3,5-Trinitrobenzene	0.25	0.25	0.08	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	1,3-Dinitrobenzene	0.24	0.24	0.06	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	2,4,6-Trinitrotoluene	0.24	0.24	0.07	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	2,4-Dinitrotoluene	0.27	0.27	0.08	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	2,6-Dinitrotoluene	0.27	0.27	0.08	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	2-Amino-4,6-	0.24	0.24	0.07	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	2-Nitrotoluene	0.29	0.29	0.09	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	3-Nitrotoluene	0.27	0.27	0.08	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	4-Amino-2,6-	0.26	0.26	0.08	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	4-Nitrotoluene	0.33	0.33	0.1	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	HMX	0.26	0.26	0.08	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	Nitrobenzene	0.24	0.24	0.07	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	Nitroglycerin	1.4	1.4	0.4	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	PETN	1.4	1.4	0.4	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	RDX	0.29	0.29	0.09	mg/kg	UJ	C	76078
LL1SS-280M-2001-QA	Tetryl	0.29	0.29	0.09	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	Selenium	0.16	0.12	0.04	mg/kg	J	C	76078
LL1SS-517M-3019-QA	Thallium	0.11	0.016	0.005	mg/kg	J-	Q	76078
LL1SS-517M-3019-QA	Aluminum	9720	0.22	0.071	mg/kg	J-	Q	76078
LL1SS-517M-3019-QA	Antimony	0.18	0.18	0.051	mg/kg	R	Q	76078
LL1SS-517M-3019-QA	Barium	48.2	0.056	0.017	mg/kg			76078
LL1SS-517M-3019-QA	Beryllium	0.42	0.017	0.005	mg/kg	J-	Q	76078
LL1SS-517M-3019-QA	Cadmium	0.24	0.014	0.004	mg/kg	J	E, A	76078
LL1SS-517M-3019-QA	Calcium	5200	1.1	0.3	mg/kg	J-	A	76078
LL1SS-517M-3019-QA	Chromium	72.5	0.043	0.013	mg/kg	J-	Q	76078
LL1SS-517M-3019-QA	Cobalt	6.8	0.03	0.009	mg/kg	J-	A	76078
LL1SS-517M-3019-QA	Copper	18	0.19	0.061	mg/kg	J-	Q, A	76078
LL1SS-517M-3019-QA	Iron	23100	1.2	0.4	mg/kg	J-	A	76078

Sample	Analyte	Result	RL	MDL	Units	Qualifier	Code	SDG
LL1SS-517M-3019-QA	Lead	21.3	0.11	0.03	mg/kg	J-	A	76078
LL1SS-517M-3019-QA	Magnesium	2800	0.34	0.1	mg/kg	J-	A	76078
LL1SS-517M-3019-QA	Manganese	434	0.11	0.03	mg/kg			76078
LL1SS-517M-3019-QA	Nickel	17.4	0.045	0.014	mg/kg	J-	A	76078
LL1SS-517M-3019-QA	Silver	0.074	0.075	0.022	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	Vanadium	14.4	0.058	0.018	mg/kg			76078
LL1SS-517M-3019-QA	Zinc	73.7	0.11	0.03	mg/kg	J-	Q, A	76078
LL1SS-517M-3019-QA	Potassium	866	13	4	mg/kg			76078
LL1SS-517M-3019-QA	Sodium	43.2	7.3	2.2	mg/kg	J	C	76078
LL1SS-517M-3019-QA	Arsenic	10.5	2.4	0.81	mg/kg	J-	Q	76078
LL1SS-517M-3019-QA	Hexavalent Chromium	6.4	6.4	1.9	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	Mercury	0.02	0.004	0.001	mg/kg			76078
LL1SS-517M-3019-QA	Total Solids	99	1	1	%			76078
LL1SS-517M-3019-QA	1,3,5-Trinitrobenzene	0.24	0.24	0.078	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	1,3-Dinitrobenzene	0.23	0.23	0.059	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	2,4,6-Trinitrotoluene	0.18	0.23	0.068	mg/kg	J	C	76078
LL1SS-517M-3019-QA	2,4-Dinitrotoluene	0.26	0.26	0.078	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	2,6-Dinitrotoluene	0.26	0.26	0.078	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	2-Amino-4,6-	0.23	0.23	0.068	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	2-Nitrotoluene	0.28	0.28	0.088	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	3-Nitrotoluene	0.26	0.26	0.078	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	4-Amino-2,6-	0.25	0.25	0.078	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	4-Nitrotoluene	0.32	0.32	0.098	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	HMX	0.25	0.25	0.078	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	Nitrobenzene	0.23	0.23	0.068	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	Nitroglycerin	1.4	1.4	0.39	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	PETN	1.4	1.4	0.39	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	RDX	0.28	0.28	0.088	mg/kg	UJ	C	76078
LL1SS-517M-3019-QA	Tetryl	0.28	0.28	0.088	mg/kg	UJ	C	76078
LL1SS-523D-3032-QA	Total Solids	93.6	1	1	%			76078
LL1SS-523D-3032-QA	1,1,1-Trichloroethane	5	5	0.5	ug/kg	U		76078
LL1SS-523D-3032-QA	1,1,2,2-	5	5	1.1	ug/kg	U		76078
LL1SS-523D-3032-QA	1,1,2-Trichloroethane	5	5	0.6	ug/kg	U		76078
LL1SS-523D-3032-QA	1,1-Dichloroethane	5	5	0.3	ug/kg	U		76078
LL1SS-523D-3032-QA	1,1-Dichloroethene	5	5	0.5	ug/kg	U		76078
LL1SS-523D-3032-QA	1,2-Dibromoethane	5	5	0.3	ug/kg	U		76078
LL1SS-523D-3032-QA	1,2-Dichloroethane	5	5	0.6	ug/kg	U		76078
LL1SS-523D-3032-QA	1,2-Dichloropropane	5	5	0.6	ug/kg	U		76078
LL1SS-523D-3032-QA	2-Butanone	20	21	6	ug/kg	U		76078
LL1SS-523D-3032-QA	2-Hexanone	12	20	5	ug/kg	U	B	76078
LL1SS-523D-3032-QA	4-Methyl-2-pentanone	4.2	20	2.9	ug/kg	U	B	76078
LL1SS-523D-3032-QA	Acetone	20	20	6	ug/kg	U		76078
LL1SS-523D-3032-QA	Benzene	5	5	0.3	ug/kg	U		76078
LL1SS-523D-3032-QA	Bromochloromethane	5	5	0.6	ug/kg	U		76078
LL1SS-523D-3032-QA	Bromodichloromethane	5	5	0.4	ug/kg	U		76078
LL1SS-523D-3032-QA	Bromoform	5	5	0.7	ug/kg	U		76078
LL1SS-523D-3032-QA	Bromomethane	5	5	1.2	ug/kg	U		76078
LL1SS-523D-3032-QA	Carbon disulfide	5	5	1	ug/kg	U		76078

Sample	Analyte	Result	RL	MDL	Units	Qualifier	Code	SDG
LL1SS-523D-3032-QA	Carbon tetrachloride	5	5	0.7	ug/kg	U		76078
LL1SS-523D-3032-QA	Chlorobenzene	5	5	0.8	ug/kg	U		76078
LL1SS-523D-3032-QA	Chloroethane	10	10	0.4	ug/kg	U		76078
LL1SS-523D-3032-QA	Chloroform	5	5	0.4	ug/kg	U		76078
LL1SS-523D-3032-QA	Chloromethane	5	5	0.5	ug/kg	U		76078
LL1SS-523D-3032-QA	cis-1,2-Dichloroethene	5	5	0.5	ug/kg	U		76078
LL1SS-523D-3032-QA	cis-1,3-Dichloropropene	5	5	0.6	ug/kg	U		76078
LL1SS-523D-3032-QA	Dibromochloromethane	10	10	0.7	ug/kg	U		76078
LL1SS-523D-3032-QA	Ethylbenzene	5	5	0.7	ug/kg	U		76078
LL1SS-523D-3032-QA	m,p-Xylenes	10	10	1.7	ug/kg	U		76078
LL1SS-523D-3032-QA	Methylene chloride	2.7	10	1.9	ug/kg	J	C	76078
LL1SS-523D-3032-QA	o-Xylene	5	5	1	ug/kg	U		76078
LL1SS-523D-3032-QA	Styrene	5	5	0.5	ug/kg	U		76078
LL1SS-523D-3032-QA	Tetrachloroethene	5	5	0.91	ug/kg	U		76078
LL1SS-523D-3032-QA	Toluene	5	5	0.6	ug/kg	U		76078
LL1SS-523D-3032-QA	trans-1,2-Dichloroethene	5	5	0.6	ug/kg	U		76078
LL1SS-523D-3032-QA	trans-1,3-	5	5	0.8	ug/kg	U		76078
LL1SS-523D-3032-QA	Trichloroethene	5	5	0.5	ug/kg	U		76078
LL1SS-523D-3032-QA	Vinyl chloride	5	5	0.7	ug/kg	U		76078
LL1SS-523M-3028-QA	Selenium	0.083	0.12	0.04	mg/kg	J	C	76078
LL1SS-523M-3028-QA	Thallium	0.07	0.016	0.005	mg/kg	J-	Q	76078
LL1SS-523M-3028-QA	Aluminum	5280	0.22	0.07	mg/kg	J-	Q	76078
LL1SS-523M-3028-QA	Antimony	0.18	0.18	0.05	mg/kg	R	Q	76078
LL1SS-523M-3028-QA	Barium	31.4	0.055	0.017	mg/kg			76078
LL1SS-523M-3028-QA	Beryllium	0.24	0.017	0.005	mg/kg	J-	Q	76078
LL1SS-523M-3028-QA	Cadmium	0.22	0.014	0.004	mg/kg	J	E, A	76078
LL1SS-523M-3028-QA	Calcium	6760	1.1	0.3	mg/kg	J-	A	76078
LL1SS-523M-3028-QA	Chromium	159	0.043	0.013	mg/kg	J-	Q	76078
LL1SS-523M-3028-QA	Cobalt	4.3	0.03	0.009	mg/kg	J-	A	76078
LL1SS-523M-3028-QA	Copper	13.4	0.19	0.06	mg/kg	J-	Q, A	76078
LL1SS-523M-3028-QA	Iron	18100	1.2	0.4	mg/kg	J-	A	76078
LL1SS-523M-3028-QA	Lead	32.9	0.11	0.03	mg/kg	J-	A	76078
LL1SS-523M-3028-QA	Magnesium	1440	0.34	0.1	mg/kg	J-	A	76078
LL1SS-523M-3028-QA	Manganese	475	0.11	0.03	mg/kg			76078
LL1SS-523M-3028-QA	Nickel	15	0.045	0.014	mg/kg	J-	A	76078
LL1SS-523M-3028-QA	Silver	0.074	0.074	0.022	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	Vanadium	8.9	0.057	0.018	mg/kg	J	C	76078
LL1SS-523M-3028-QA	Zinc	59	0.11	0.03	mg/kg	J	C, Q, A	76078
LL1SS-523M-3028-QA	Potassium	837	13	4	mg/kg			76078
LL1SS-523M-3028-QA	Sodium	43.5	7.2	2.2	mg/kg	J	C	76078
LL1SS-523M-3028-QA	Arsenic	6.6	2.4	0.8	mg/kg	J-	Q	76078
LL1SS-523M-3028-QA	Hexavalent Chromium	6.4	6.4	1.9	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	Mercury	0.097	0.004	0.001	mg/kg			76078
LL1SS-523M-3028-QA	Total Solids	99.5	1	1	%			76078
LL1SS-523M-3028-QA	4,4'-DDD	1.2	1.2	0.3	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	4,4'-DDE	170	22	6	ug/kg	J	C, *III	76078
LL1SS-523M-3028-QA	4,4'-DDT	800	30	10	ug/kg	J	*III	76078
LL1SS-523M-3028-QA	Aldrin	1.7	1.7	0.5	ug/kg	UJ	C	76078

Sample	Analyte	Result	RL	MDL	Units	Qualifier	Code	SDG
LL1SS-523M-3028-QA	alpha-BHC	3.4	1.9	0.6	ug/kg	J	C, *III	76078
LL1SS-523M-3028-QA	alpha-Chlordane	130	22	6	ug/kg	J-	Q, C, *III	76078
LL1SS-523M-3028-QA	beta-BHC	2	2	0.6	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Chlordane (Technical)	30	30	4	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	delta-BHC	3	1.1	0.3	ug/kg	J	C	76078
LL1SS-523M-3028-QA	Dieldrin	310	24	6	ug/kg		$	76078
LL1SS-523M-3028-QA	Endosulfan I	130	44	14	ug/kg	J	C, *III	76078
LL1SS-523M-3028-QA	Endosulfan II	1.2	1.2	0.3	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Endosulfan sulfate	3.1	3.1	0.9	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Endrin	1.4	1.4	0.4	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Endrin aldehyde	150	72	22	ug/kg	J	C, *III	76078
LL1SS-523M-3028-QA	Endrin ketone	2.8	2.8	0.8	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	GAMMA-BHC	1.6	1.6	0.5	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	gamma-Chlordane	1.1	1.1	0.3	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Heptachlor	10	1.2	0.4	ug/kg	J+	C, $	76078
LL1SS-523M-3028-QA	Heptachlor epoxide	1.7	1.7	0.5	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Methoxychlor	160	46	14	ug/kg	J-	C, *III	76078
LL1SS-523M-3028-QA	Toxaphene	30	30	5	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Aroclor 1016	31	31	9.1	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Aroclor 1221	41	41	12	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Aroclor 1232	47	47	14	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Aroclor 1242	34	34	10	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Aroclor 1248	30	30	9.1	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Aroclor 1254	3200	300	30	ug/kg			76078
LL1SS-523M-3028-QA	Aroclor 1260	30	30	6	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Aroclor 1262	30	30	6	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	Aroclor 1268	30	30	5	ug/kg	UJ	C	76078
LL1SS-523M-3028-QA	1,2,4-Trichlorobenzene	100	100	16	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	1,2-Dichlorobenzene	100	100	10	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	1,3-Dichlorobenzene	100	100	11	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	1,4-Dichlorobenzene	100	100	13	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2,4,5-Trichlorophenol	350	350	110	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2,4,6-Trichlorophenol	260	260	76	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2,4-Dichlorophenol	320	320	93	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2,4-Dimethylphenol	260	260	77	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2,4-Dinitrophenol	710	710	210	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2,4-Dinitrotoluene	100	100	23	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2,6-Dichlorophenol	100	110	31	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2,6-Dinitrotoluene	100	100	20	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2-Chloronaphthalene	100	100	13	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2-Chlorophenol	350	350	110	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2-Methyl-4,6-	500	500	71	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2-Methylnaphthalene	100	100	19	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2-Methylphenol	340	340	100	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2-Nitroaniline	100	100	26	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	2-Nitrophenol	400	400	120	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	3,3'-Dichlorobenzidine	940	940	280	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	3-Nitroaniline	110	110	32	ug/kg	UJ	C, S	76078

Sample	Analyte	Result	RL	MDL	Units	Qualifier	Code	SDG
LL1SS-523M-3028-QA	4-Bromophenyl phenyl	100	100	10	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	4-Chloro-3-methylphenol	310	310	91	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	4-Chloroaniline	220	220	65	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	4-Chlorophenyl phenyl	110	110	31	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	4-Methylphenol	350	350	100	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	4-Nitroaniline	110	110	31	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	4-Nitrophenol	1100	1100	320	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Acenaphthene	100	100	15	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Acenaphthylene	100	100	20	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Acetophenone	110	110	32	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Anthracene	100	100	10	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Benzidine	3900	3900	1200	ug/kg	R	C	76078
LL1SS-523M-3028-QA	Benzo(a)anthracene	14	100	9	ug/kg	J-	C, S	76078
LL1SS-523M-3028-QA	Benzo(a)pyrene	100	100	19	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Benzo(b)fluoranthene	20	100	11	ug/kg	J-	C, S	76078
LL1SS-523M-3028-QA	Benzo(g,h,i)perylene	100	100	25	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Benzo(k)fluoranthene	100	100	21	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Benzoic acid	990	990	290	ug/kg	R	L	76078
LL1SS-523M-3028-QA	Benzyl alcohol	270	270	78	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Bis(2-	100	100	20	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Bis(2-chloroethyl) ether	100	100	14	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Bis(2-chloroisopropyl)	100	100	11	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Bis(2-ethylhexyl)	100	100	28	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Butylbenzyl phthalate	100	100	24	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Carbazole	100	100	11	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Chrysene	100	100	12	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Dibenzo(a,h)anthracene	100	100	11	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Dibenzofuran	130	130	37	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Diethyl phthalate	130	130	38	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Dimethyl phthalate	28	100	26	ug/kg	UJ	B, C, S	76078
LL1SS-523M-3028-QA	Di-n-butyl phthalate	94	140	40	ug/kg	UJ	B, C, S	76078
LL1SS-523M-3028-QA	Di-n-octyl phthalate	130	130	39	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Fluoranthene	100	100	21	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Fluorene	100	100	11	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Hexachlorobenzene	100	100	15	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Hexachlorobutadiene	100	100	31	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Hexachlorocyclopentadie	100	100	26	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Hexachloroethane	100	100	17	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Indeno(1,2,3-cd)pyrene	100	100	8	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Isophorone	450	100	27	ug/kg	J-	C, S	76078
LL1SS-523M-3028-QA	Naphthalene	100	100	9	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Nitrobenzene	100	140	40	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	N-Nitroso-di-n-	110	110	30	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	N-Nitrosodiphenylamine	200	200	17	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	N-Nitrosopyrrolidine	130	130	37	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Pentachlorophenol	500	500	70	ug/kg	UJ	C, S	76078
LL1SS-523M-3028-QA	Phenanthrene	12	100	11	ug/kg	J-	C, S	76078
LL1SS-523M-3028-QA	Phenol	410	410	120	ug/kg	UJ	C, S	76078

Sample	Analyte	Result	RL	MDL	Units	Qualifier	Code	SDG
LL1SS-523M-3028-QA	Pyrene	13	100	11	ug/kg	J-	C, S	76078
LL1SS-523M-3028-QA	1,3,5-Trinitrobenzene	0.24	0.24	0.078	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	1,3-Dinitrobenzene	0.23	0.23	0.058	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	2,4,6-Trinitrotoluene	0.23	0.23	0.068	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	2,4-Dinitrotoluene	0.26	0.26	0.078	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	2,6-Dinitrotoluene	0.26	0.26	0.078	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	2-Amino-4,6-	0.23	0.23	0.068	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	2-Nitrotoluene	0.28	0.28	0.088	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	3-Nitrotoluene	0.26	0.26	0.078	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	4-Amino-2,6-	0.25	0.25	0.078	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	4-Nitrotoluene	0.32	0.32	0.097	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	HMX	0.25	0.25	0.078	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	Nitrobenzene	0.23	0.23	0.068	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	Nitroglycerin	1.4	1.4	0.39	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	PETN	1.4	1.4	0.39	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	RDX	0.28	0.28	0.088	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	Tetryl	0.28	0.28	0.088	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	Nitroguanidine	0.14	0.14	0.05	mg/kg	UJ	C	76078
LL1SS-523M-3028-QA	Nitrocellulose	5	16	5	mg/kg	U		76078
LL1SS-537M-3051-QA	Selenium	0.11	0.12	0.04	mg/kg	J	C	76265
LL1SS-537M-3051-QA	Thallium	0.091	0.016	0.005	mg/kg	J-	Q	76265
LL1SS-537M-3051-QA	Aluminum	6930	0.22	0.071	mg/kg	J-	A	76265
LL1SS-537M-3051-QA	Antimony	0.55	0.18	0.05	mg/kg	J-	Q	76265
LL1SS-537M-3051-QA	Barium	37.3	0.055	0.017	mg/kg	J-	A	76265
LL1SS-537M-3051-QA	Beryllium	0.33	0.017	0.005	mg/kg	J-	A	76265
LL1SS-537M-3051-QA	Cadmium	0.014	0.014	0.004	mg/kg	UJ	Q	76265
LL1SS-537M-3051-QA	Calcium	3500	1.1	0.3	mg/kg	J-	A	76265
LL1SS-537M-3051-QA	Chromium	8.3	0.043	0.013	mg/kg	J-	A	76265
LL1SS-537M-3051-QA	Cobalt	5.7	0.03	0.009	mg/kg	J-	Q, A	76265
LL1SS-537M-3051-QA	Copper	15.9	0.19	0.06	mg/kg	J-	A	76265
LL1SS-537M-3051-QA	Iron	21300	1.2	0.4	mg/kg	J-	A	76265
LL1SS-537M-3051-QA	Lead	15.9	0.11	0.03	mg/kg	J-	Q	76265
LL1SS-537M-3051-QA	Magnesium	2140	0.34	0.1	mg/kg	J-	A	76265
LL1SS-537M-3051-QA	Manganese	428	0.11	0.03	mg/kg	J-	A	76265
LL1SS-537M-3051-QA	Nickel	18.5	0.045	0.014	mg/kg	J-	A	76265
LL1SS-537M-3051-QA	Silver	0.074	0.075	0.022	mg/kg	U		76265
LL1SS-537M-3051-QA	Vanadium	10.3	0.057	0.018	mg/kg			76265
LL1SS-537M-3051-QA	Zinc	53.4	0.11	0.03	mg/kg	J-	A	76265
LL1SS-537M-3051-QA	Potassium	630	13	4	mg/kg			76265
LL1SS-537M-3051-QA	Sodium	27.2	7.3	2.2	mg/kg			76265
LL1SS-537M-3051-QA	Arsenic	12.5	5.3	1.8	mg/kg			76265
LL1SS-537M-3051-QA	Hexavalent Chromium	6.4	6.4	1.9	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	Mercury	0.017	0.004	0.001	mg/kg			76265
LL1SS-537M-3051-QA	Total Solids	99.1	1	1	%			76265
LL1SS-537M-3051-QA	1,3,5-Trinitrobenzene	0.25	0.25	0.08	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	1,3-Dinitrobenzene	0.24	0.24	0.06	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	2,4,6-Trinitrotoluene	0.24	0.24	0.07	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	2,4-Dinitrotoluene	0.27	0.27	0.08	mg/kg	UJ	C	76265

Sample	Analyte	Result	RL	MDL	Units	Qualifier	Code	SDG
LL1SS-537M-3051-QA	2,6-Dinitrotoluene	0.27	0.27	0.08	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	2-Amino-4,6-	0.24	0.24	0.07	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	2-Nitrotoluene	0.29	0.29	0.09	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	3-Nitrotoluene	0.27	0.27	0.08	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	4-Amino-2,6-	0.26	0.26	0.08	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	4-Nitrotoluene	0.33	0.33	0.1	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	HMX	0.26	0.26	0.08	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	Nitrobenzene	0.24	0.24	0.07	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	Nitroglycerin	1.4	1.4	0.4	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	PETN	1.4	1.4	0.4	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	RDX	0.29	0.29	0.09	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	Tetryl	0.29	0.29	0.09	mg/kg	UJ	C	76265
LL1SS-537M-3051-QA	Nitroguanidine	0.3	0.14	0.049	mg/kg	J	C	76265
LL1SS-537M-3051-QA	Nitrocellulose	16	16	5	mg/kg	U		76265

APPENDIX C

QA/Primary Sample Comparisons

Sample	Analyte	Result	RL	Units	Qualifier	Sample	Result	RL	Qualifier	RPD	RPD >50%?
F15SS-012M-0501-QA	2,4,6-Trinitrotoluene	0.24	0.24	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	3.7	
F15SS-012M-0501-QA	2,4-Dinitrotoluene	0.27	0.27	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	8.1	
F15SS-012M-0501-QA	RDX	0.29	0.29	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	15.2	
F15SS-012M-0501-QA	4-Amino-2,6-dinitrotoluene	0.26	0.26	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	4.3	
F15SS-012M-0501-QA	HMX	0.26	0.26	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	4.3	
F15SS-012M-0501-QA	2-Amino-4,6-dinitrotoluene	0.24	0.24	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	3.7	
F15SS-012M-0501-QA	Nitroglycerin	1.4	1.4	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	139.6	
F15SS-012M-0501-QA	2,6-Dinitrotoluene	0.27	0.27	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	8.1	
F15SS-012M-0501-QA	PETN	1.4	1.4	mg/kg	UJ	F15SS-012M-0500-	0.499	1.5	U	6.9	
F15SS-012M-0501-QA	2-Nitrotoluene	0.29	0.29	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	15.2	
F15SS-012M-0501-QA	Nitrobenzene	0.24	0.24	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	3.7	
F15SS-012M-0501-QA	3-Nitrotoluene	0.27	0.27	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	8.1	
F15SS-012M-0501-QA	1,3,5-Trinitrobenzene	0.25	0.25	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	0.4	
F15SS-012M-0501-QA	1,3-Dinitrobenzene	0.24	0.24	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	3.7	
F15SS-012M-0501-QA	4-Nitrotoluene	0.33	0.33	mg/kg	UJ	F15SS-012M-0500-	0.0997	0.249	U	28.0	
F15SS-012M-0501-QA	Potassium	881	13	mg/kg		F15SS-012M-0500-	981	35.4	J	10.7	
F15SS-012M-0501-QA	Aluminum	13500	0.22	mg/kg	J-	F15SS-012M-0500-	12200	14.1	J	10.1	
F15SS-012M-0501-QA	Iron	27500	1.2	mg/kg	J-	F15SS-012M-0500-	22800	1.41		18.7	
F15SS-012M-0501-QA	Lead	10.5	0.11	mg/kg	J-	F15SS-012M-0500-	16.9	0.195		46.7	
F15SS-012M-0501-QA	Magnesium	3410	0.35	mg/kg	J-	F15SS-012M-0500-	3300	17.7		3.3	
F15SS-012M-0501-QA	Manganese	466	0.11	mg/kg	J-	F15SS-012M-0500-	330	0.354	J	34.2	
F15SS-012M-0501-QA	Mercury	0.033	0.0039	mg/kg		F15SS-012M-0500-	0.03	0.0985	J	9.5	
F15SS-012M-0501-QA	Sodium	90.1	7.3	mg/kg		F15SS-012M-0500-	102	17.7		12.4	
F15SS-012M-0501-QA	Thallium	0.11	0.016	mg/kg	J-	F15SS-012M-0500-	0.143	0.0195	J	26.1	
F15SS-012M-0501-QA	Antimony	0.68	0.18	mg/kg	J-	F15SS-012M-0500-	0.444	0.0998		42.0	
F15SS-012M-0501-QA	Beryllium	0.58	0.017	mg/kg	J-	F15SS-012M-0500-	0.588	0.0177		1.4	
F15SS-012M-0501-QA	Cadmium	0.014	0.014	mg/kg	UJ	F15SS-012M-0500-	1.03	0.0707		194.6	HIGH
F15SS-012M-0501-QA	Hexavalent Chromium	6.5	6.5	mg/kg	UJ	F15SS-012M-0500-	0.051	0.102	U	193.8	HIGH
F15SS-012M-0501-QA	Cobalt	8.4	0.031	mg/kg	J-	F15SS-012M-0500-	6.83	0.177		20.6	
F15SS-012M-0501-QA	Copper	12.9	0.19	mg/kg	J-	F15SS-012M-0500-	16.9	0.177		26.8	
F15SS-012M-0501-QA	Zinc	45.3	0.11	mg/kg	J-	F15SS-012M-0500-	56	0.707	J	21.1	
F15SS-012M-0501-QA	Calcium	6950	1.1	mg/kg	J-	F15SS-012M-0500-	5690	7.07		19.9	
F15SS-012M-0501-QA	Nitrocellulose	27.88	16	mg/kg		F15SS-012M-0500-	2.5	5	UJ	167.1	HIGH
F15SS-012M-0501-QA	Nitroguanidine	0.14	0.14	mg/kg	UJ	F15SS-012M-0500-	156	312	U	199.8	HIGH
LL1SS-517M-3019-QA	2,4,6-Trinitrotoluene	0.18	0.23	mg/kg	J	LL1SS-517M-3018-SO	4.71	0.247		185.3	HIGH
LL1SS-517M-3019-QA	2,4-Dinitrotoluene	0.26	0.26	mg/kg	UJ	LL1SS-517M-3018-SO	0.0988	0.247	U	5.1	

Sample	Analyte	Result	RL	Units	Qualifier	Sample	Result	RL	Qualifier	RPD	RPD >50%?
LL1SS-517M-3019-QA	RDX	0.28	0.28	mg/kg	UJ	LL1SS-517M-3018-SO	0.0988	0.247	U	12.5	
LL1SS-517M-3019-QA	4-Amino-2,6-dinitrotoluene	0.25	0.25	mg/kg	UJ	LL1SS-517M-3018-SO	0.0988	0.247	U	1.2	
LL1SS-517M-3019-QA	HMX	0.25	0.25	mg/kg	UJ	LL1SS-517M-3018-SO	0.0988	0.247	U	1.2	
LL1SS-517M-3019-QA	2-Amino-4,6-dinitrotoluene	0.23	0.23	mg/kg	UJ	LL1SS-517M-3018-SO	0.0988	0.247	U	7.1	
LL1SS-517M-3019-QA	Nitroglycerin	1.4	1.4	mg/kg	UJ	LL1SS-517M-3018-SO	0.0988	0.247	U	140.0	HIGH
LL1SS-517M-3019-QA	2,6-Dinitrotoluene	0.26	0.26	mg/kg	UJ	LL1SS-517M-3018-SO	0.0988	0.247	U	5.1	
LL1SS-517M-3019-QA	PETN	1.4	1.4	mg/kg	UJ	LL1SS-517M-3018-SO	0.494	1.48	U	5.6	
LL1SS-517M-3019-QA	2-Nitrotoluene	0.28	0.28	mg/kg	UJ	LL1SS-517M-3018-SO	0.0988	0.247	U	12.5	
LL1SS-517M-3019-QA	Nitrobenzene	0.23	0.23	mg/kg	UJ	LL1SS-517M-3018-SO	0.0988	0.247	U	7.1	
LL1SS-517M-3019-QA	3-Nitrotoluene	0.26	0.26	mg/kg	UJ	LL1SS-517M-3018-SO	0.0988	0.247	U	5.1	
LL1SS-517M-3019-QA	1,3,5-Trinitrobenzene	0.24	0.24	mg/kg	UJ	LL1SS-517M-3018-SO	0.0988	0.247	U	2.9	
LL1SS-517M-3019-QA	1,3-Dinitrobenzene	0.23	0.23	mg/kg	UJ	LL1SS-517M-3018-SO	0.0988	0.247	U	7.1	
LL1SS-517M-3019-QA	4-Nitrotoluene	0.32	0.32	mg/kg	UJ	LL1SS-517M-3018-SO	0.0988	0.247	U	25.7	
LL1SS-517M-3019-QA	Aluminum	9720	0.22	mg/kg	J-	LL1SS-517M-3018-SO	5220	14.2		60.2	HIGH
LL1SS-517M-3019-QA	Iron	23100	1.2	mg/kg	J-	LL1SS-517M-3018-SO	15600	1.42	J	38.8	
LL1SS-517M-3019-QA	Lead	21.3	0.11	mg/kg	J-	LL1SS-517M-3018-SO	15.6	0.199	J	30.9	
LL1SS-517M-3019-QA	Magnesium	2800	0.34	mg/kg	J-	LL1SS-517M-3018-SO	2090	17.8		29.0	
LL1SS-517M-3019-QA	Mercury	0.02	0.0038	mg/kg		LL1SS-517M-3018-SO	0.0162	0.0996	J	21.0	
LL1SS-517M-3019-QA	Nickel	17.4	0.045	mg/kg	J-	LL1SS-517M-3018-SO	14.7	0.797		16.8	
LL1SS-517M-3019-QA	Sodium	43.2	7.3	mg/kg	J	LL1SS-517M-3018-SO	23.1	17.8		60.6	HIGH
LL1SS-517M-3019-QA	Thallium	0.11	0.016	mg/kg	J-	LL1SS-517M-3018-SO	0.164	0.0199		39.4	
LL1SS-517M-3019-QA	Beryllium	0.42	0.017	mg/kg	J-	LL1SS-517M-3018-SO	0.308	0.0178		30.8	
LL1SS-517M-3019-QA	Cadmium	0.24	0.014	mg/kg	J	LL1SS-517M-3018-SO	0.831	0.0712		110.4	HIGH
LL1SS-517M-3019-QA	Hexavalent Chromium	6.4	6.4	mg/kg	UJ	LL1SS-517M-3018-SO	0.0504	0.101	U	193.8	HIGH
LL1SS-517M-3019-QA	Copper	18	0.19	mg/kg	J-	LL1SS-517M-3018-SO	16.3	0.178		9.9	
LL1SS-517M-3019-QA	Vanadium	14.4	0.058	mg/kg		LL1SS-517M-3018-SO	11.1	0.356		25.9	
LL1SS-517M-3019-QA	Zinc	73.7	0.11	mg/kg	J-	LL1SS-517M-3018-SO	68.3	0.712		7.6	
LL1SS-517M-3019-QA	Calcium	5200	1.1	mg/kg	J-	LL1SS-517M-3018-SO	3980	7.12	J	26.6	
LL1SS-523D-3032-QA	Ethylbenzene	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	Styrene	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	cis-1,3-Dichloropropene	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	trans-1,3-Dichloropropene	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	1,2-Dibromoethane	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	1,2-Dichloroethane	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	4-Methyl-2-pentanone	4.2	20	ug/kg	U	LL1SS-523D-3031-SO	2.21	4.42	U	5.1	
LL1SS-523D-3032-QA	Toluene	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	

Sample	Analyte	Result	RL	Units	Qualifier	Sample	Result	RL	Qualifier	RPD	RPD >50%?
LL1SS-523D-3032-QA	Chlorobenzene	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	Dibromochloromethane	10	10	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	77.4	HIGH
LL1SS-523D-3032-QA	Tetrachloroethene	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	Carbon tetrachloride	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	2-Hexanone	12	20	ug/kg	U	LL1SS-523D-3031-SO	2.21	4.42	U	92.3	HIGH
LL1SS-523D-3032-QA	Acetone	20	20	ug/kg	U	LL1SS-523D-3031-SO	4.42	8.85	U	77.3	HIGH
LL1SS-523D-3032-QA	Chloroform	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	Benzene	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	1,1,1-Trichloroethane	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	Bromomethane	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.885	4.42	U	12.3	
LL1SS-523D-3032-QA	Chloromethane	5	5	ug/kg	U	LL1SS-523D-3031-SO	1.77	4.42	U	12.3	
LL1SS-523D-3032-QA	Bromochloromethane	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	Chloroethane	10	10	ug/kg	U	LL1SS-523D-3031-SO	0.885	4.42	U	77.4	HIGH
LL1SS-523D-3032-QA	Vinyl chloride	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.885	4.42	U	12.3	
LL1SS-523D-3032-QA	Methylene chloride	2.7	10	ug/kg	J	LL1SS-523D-3031-SO	1.83	4.42	J	38.4	
LL1SS-523D-3032-QA	Carbon disulfide	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.496	4.42	J	163.9	HIGH
LL1SS-523D-3032-QA	Bromoform	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	Bromodichloromethane	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	1,1-Dichloroethane	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.885	4.42	U	12.3	
LL1SS-523D-3032-QA	1,1-Dichloroethene	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	1,2-Dichloropropane	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	2-Butanone	20	21	ug/kg	U	LL1SS-523D-3031-SO	2.21	4.42	U	127.6	HIGH
LL1SS-523D-3032-QA	1,1,2-Trichloroethane	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	Trichloroethene	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523D-3032-QA	1,1,2,2-Tetrachloroethane	5	5	ug/kg	U	LL1SS-523D-3031-SO	0.442	4.42	U	12.3	
LL1SS-523M-3028-QA	2,4,6-Trinitrotoluene	0.23	0.23	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	7.1	
LL1SS-523M-3028-QA	2,4-Dinitrotoluene	0.26	0.26	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	5.1	
LL1SS-523M-3028-QA	RDX	0.28	0.28	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	12.5	
LL1SS-523M-3028-QA	4-Amino-2,6-dinitrotoluene	0.25	0.25	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	1.2	
LL1SS-523M-3028-QA	HMX	0.25	0.25	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	1.2	
LL1SS-523M-3028-QA	2-Amino-4,6-dinitrotoluene	0.23	0.23	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	7.1	
LL1SS-523M-3028-QA	Nitroglycerin	1.4	1.4	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	140.0	HIGH
LL1SS-523M-3028-QA	2,6-Dinitrotoluene	0.26	0.26	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	5.1	
LL1SS-523M-3028-QA	PETN	1.4	1.4	mg/kg	UJ	LL1SS-523M-3027-SO	0.494	1.48	U	5.6	
LL1SS-523M-3028-QA	2-Nitrotoluene	0.28	0.28	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	12.5	
LL1SS-523M-3028-QA	Nitrobenzene	0.23	0.23	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	7.1	

Sample	Analyte	Result	RL	Units	Qualifier	Sample	Result	RL	Qualifier	RPD	RPD >50%?
LL1SS-523M-3028-QA	3-Nitrotoluene	0.26	0.26	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	5.1	
LL1SS-523M-3028-QA	1,3,5-Trinitrobenzene	0.24	0.24	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	2.9	
LL1SS-523M-3028-QA	1,3-Dinitrobenzene	0.23	0.23	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	7.1	
LL1SS-523M-3028-QA	4-Nitrotoluene	0.32	0.32	mg/kg	UJ	LL1SS-523M-3027-SO	0.0988	0.247	U	25.7	
LL1SS-523M-3028-QA	Potassium	837	13	mg/kg		LL1SS-523M-3027-SO	424	36.4		65.5	HIGH
LL1SS-523M-3028-QA	Aluminum	5280	0.22	mg/kg	J-	LL1SS-523M-3027-SO	2940	14.5		56.9	HIGH
LL1SS-523M-3028-QA	Iron	18100	1.2	mg/kg	J-	LL1SS-523M-3027-SO	12900	1.45		33.5	
LL1SS-523M-3028-QA	Lead	32.9	0.11	mg/kg	J-	LL1SS-523M-3027-SO	19.7	0.197	J	50.2	HIGH
LL1SS-523M-3028-QA	Magnesium	1440	0.34	mg/kg	J-	LL1SS-523M-3027-SO	1090	18.2		27.7	
LL1SS-523M-3028-QA	Manganese	475	0.11	mg/kg		LL1SS-523M-3027-SO	431	0.364		9.7	
LL1SS-523M-3028-QA	Mercury	0.097	0.0038	mg/kg		LL1SS-523M-3027-SO	0.025	0.0957	J	118.0	HIGH
LL1SS-523M-3028-QA	Nickel	15	0.045	mg/kg	J-	LL1SS-523M-3027-SO	10.2	0.789	J	38.1	
LL1SS-523M-3028-QA	Sodium	43.5	7.2	mg/kg	J	LL1SS-523M-3027-SO	25.7	18.2		51.4	HIGH
LL1SS-523M-3028-QA	Thallium	0.07	0.016	mg/kg	J-	LL1SS-523M-3027-SO	0.106	0.0197	J	40.9	
LL1SS-523M-3028-QA	Arsenic	6.6	2.4	mg/kg	J-	LL1SS-523M-3027-SO	5.4	0.296	J	20.0	
LL1SS-523M-3028-QA	Barium	31.4	0.055	mg/kg		LL1SS-523M-3027-SO	22.7	0.364		32.2	
LL1SS-523M-3028-QA	Beryllium	0.24	0.017	mg/kg	J-	LL1SS-523M-3027-SO	0.198	0.0182		19.2	
LL1SS-523M-3028-QA	Cadmium	0.22	0.014	mg/kg	J	LL1SS-523M-3027-SO	0.729	0.0727		107.3	HIGH
LL1SS-523M-3028-QA	Chromium	159	0.043	mg/kg	J-	LL1SS-523M-3027-SO	17.9	0.182		159.5	HIGH
LL1SS-523M-3028-QA	Hexavalent Chromium	6.4	6.4	mg/kg	UJ	LL1SS-523M-3027-SO	0.0493	0.0987	U	193.9	HIGH
LL1SS-523M-3028-QA	Cobalt	4.3	0.03	mg/kg	J-	LL1SS-523M-3027-SO	2.58	0.182		50.0	
LL1SS-523M-3028-QA	Copper	13.4	0.19	mg/kg	J-	LL1SS-523M-3027-SO	11.1	0.182		18.8	
LL1SS-523M-3028-QA	Vanadium	8.9	0.057	mg/kg	J	LL1SS-523M-3027-SO	8.25	0.364		7.6	
LL1SS-523M-3028-QA	Zinc	59	0.11	mg/kg	J	LL1SS-523M-3027-SO	51.7	0.727		13.2	
LL1SS-523M-3028-QA	Calcium	6760	1.1	mg/kg	J-	LL1SS-523M-3027-SO	4390	7.27		42.5	
LL1SS-523M-3028-QA	Selenium	0.083	0.12	mg/kg	J	LL1SS-523M-3027-SO	0.0986	0.197	UJ	17.2	
LL1SS-523M-3028-QA	Nitrocellulose	5	16	mg/kg	U	LL1SS-523M-3027-SO	2.48	4.97	UJ	0.6	
LL1SS-523M-3028-QA	Nitroguanidine	0.14	0.14	mg/kg	UJ	LL1SS-523M-3027-SO	125	250	U	199.8	HIGH
LL1SS-523M-3028-QA	Aroclor 1260	30	30	ug/kg	UJ	LL1SS-523M-3027-SO	8.62	17.2	U	54.2	
LL1SS-523M-3028-QA	Aroclor 1254	3200	300	ug/kg		LL1SS-523M-3027-SO	1220	172		89.6	HIGH
LL1SS-523M-3028-QA	Aroclor 1221	41	41	ug/kg	UJ	LL1SS-523M-3027-SO	8.62	17.2	U	81.8	HIGH
LL1SS-523M-3028-QA	Aroclor 1232	47	47	ug/kg	UJ	LL1SS-523M-3027-SO	8.62	17.2	U	92.8	HIGH
LL1SS-523M-3028-QA	Aroclor 1248	30	30	ug/kg	UJ	LL1SS-523M-3027-SO	8.62	17.2	U	54.2	
LL1SS-523M-3028-QA	Aroclor 1016	31	31	ug/kg	UJ	LL1SS-523M-3027-SO	8.62	17.2	U	57.3	
LL1SS-523M-3028-QA	Aroclor 1242	34	34	ug/kg	UJ	LL1SS-523M-3027-SO	8.62	17.2	U	65.6	
LL1SS-523M-3028-QA	Heptachlor epoxide	1.7	1.7	ug/kg	UJ	LL1SS-523M-3027-SO	0.345	1.72	U	1.2	

Sample	Analyte	Result	RL	Units	Qualifier	Sample	Result	RL	Qualifier	RPD	RPD >50%?
LL1SS-523M-3028-QA	Endosulfan sulfate	3.1	3.1	ug/kg	UJ	LL1SS-523M-3027-SO	0.345	1.72	U	57.3	
LL1SS-523M-3028-QA	Aldrin	1.7	1.7	ug/kg	UJ	LL1SS-523M-3027-SO	0.345	1.72	U	1.2	
LL1SS-523M-3028-QA	alpha-BHC	3.4	1.9	ug/kg	J	LL1SS-523M-3027-SO	0.345	1.72	U	65.6	HIGH
LL1SS-523M-3028-QA	beta-BHC	2	2	ug/kg	UJ	LL1SS-523M-3027-SO	0.345	1.72	U	15.1	
LL1SS-523M-3028-QA	delta-BHC	3	1.1	ug/kg	J	LL1SS-523M-3027-SO	0.345	1.72	U	54.2	HIGH
LL1SS-523M-3028-QA	Endosulfan II	1.2	1.2	ug/kg	UJ	LL1SS-523M-3027-SO	0.345	1.72	U	35.6	
LL1SS-523M-3028-QA	4,4'-DDT	800	30	ug/kg	J	LL1SS-523M-3027-SO	0.345	1.72	U	199.1	HIGH
LL1SS-523M-3028-QA	alpha-Chlordane	130	22	ug/kg	J-	LL1SS-523M-3027-SO	0.345	1.72	U	198.9	HIGH
LL1SS-523M-3028-QA	gamma-Chlordane	1.1	1.1	ug/kg	UJ	LL1SS-523M-3027-SO	0.345	1.72	U	44.0	
LL1SS-523M-3028-QA	Endrin ketone	2.8	2.8	ug/kg	UJ	LL1SS-523M-3027-SO	0.345	1.72	U	47.8	
LL1SS-523M-3028-QA	GAMMA-BHC	1.6	1.6	ug/kg	UJ	LL1SS-523M-3027-SO	0.345	1.72	U	7.2	
LL1SS-523M-3028-QA	Endrin	1.4	1.4	ug/kg	UJ	LL1SS-523M-3027-SO	0.345	1.72	U	20.5	
LL1SS-523M-3028-QA	Methoxychlor	160	46	ug/kg	J-	LL1SS-523M-3027-SO	0.345	1.72	U	199.1	HIGH
LL1SS-523M-3028-QA	4,4'-DDD	1.2	1.2	ug/kg	UJ	LL1SS-523M-3027-SO	0.345	1.72	U	35.6	
LL1SS-523M-3028-QA	4,4'-DDE	170	22	ug/kg	J	LL1SS-523M-3027-SO	0.345	1.72	U	196.0	HIGH
LL1SS-523M-3028-QA	Endrin aldehyde	150	72	ug/kg	J	LL1SS-523M-3027-SO	0.345	1.72	J	199.1	HIGH
LL1SS-523M-3028-QA	Heptachlor	9.7	1.2	ug/kg	J+	LL1SS-523M-3027-SO	0.345	1.72	U	186.3	HIGH
LL1SS-523M-3028-QA	Toxaphene	30	30	ug/kg	UJ	LL1SS-523M-3027-SO	17.5	34.5	U	14.0	
LL1SS-523M-3028-QA	Endosulfan I	130	44	ug/kg	J	LL1SS-523M-3027-SO	0.345	1.72	U	194.8	HIGH
LL1SS-523M-3028-QA	4-Nitroaniline	110	110	ug/kg	UJ	LL1SS-523M-3027-SO	2140	4280	UJ	190.0	HIGH
LL1SS-523M-3028-QA	4-Nitrophenol	1100	1100	ug/kg	UJ	LL1SS-523M-3027-SO	2140	4280	UJ	118.2	HIGH
LL1SS-523M-3028-QA	Benzyl alcohol	270	270	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	104.2	HIGH
LL1SS-523M-3028-QA	4-Bromophenyl phenyl ether	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	2,4-Dimethylphenol	260	260	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	106.9	HIGH
LL1SS-523M-3028-QA	1,4-Dichlorobenzene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	4-Chloroaniline	220	220	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	118.3	HIGH
LL1SS-523M-3028-QA	Bis(2-chloroisopropyl) ether	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Phenol	410	410	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	70.6	HIGH
LL1SS-523M-3028-QA	Bis(2-chloroethyl) ether	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Bis(2-chloroethoxy)methane	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Bis(2-ethylhexyl) phthalate	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Di-n-octyl phthalate	130	130	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	147.3	HIGH
LL1SS-523M-3028-QA	Hexachlorobenzene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Anthracene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	1,2,4-Trichlorobenzene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	2,4-Dichlorophenol	320	320	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	91.2	HIGH

Sample	Analyte	Result	RL	Units	Qualifier	Sample	Result	RL	Qualifier	RPD	RPD >50%?
LL1SS-523M-3028-QA	2,4-Dinitrotoluene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Pyrene	13	100	ug/kg	J-	LL1SS-523M-3027-SO	428	857	UJ	188.2	HIGH
LL1SS-523M-3028-QA	Dimethyl phthalate	28	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	187.3	HIGH
LL1SS-523M-3028-QA	Dibenzofuran	130	130	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	147.3	HIGH
LL1SS-523M-3028-QA	Benzo(g,h,i)perylene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Indeno(1,2,3-cd)pyrene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Benzo(b)fluoranthene	20	100	ug/kg	J-	LL1SS-523M-3027-SO	428	857	UJ	182.1	HIGH
LL1SS-523M-3028-QA	Fluoranthene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Benzo(k)fluoranthene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Acenaphthylene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Chrysene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Benzo(a)pyrene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	2,4-Dinitrophenol	710	710	ug/kg	UJ	LL1SS-523M-3027-SO	2140	4280	UJ	143.1	HIGH
LL1SS-523M-3028-QA	2-Methyl-4,6-dinitrophenol	500	500	ug/kg	UJ	LL1SS-523M-3027-SO	2140	4280	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Dibenzo(a,h)anthracene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	1,3-Dichlorobenzene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Benzo(a)anthracene	14	100	ug/kg	J-	LL1SS-523M-3027-SO	428	857	UJ	187.3	HIGH
LL1SS-523M-3028-QA	4-Chloro-3-methylphenol	310	310	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	93.7	HIGH
LL1SS-523M-3028-QA	2,6-Dinitrotoluene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	N-Nitroso-di-n-propylamine	110	110	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	154.5	HIGH
LL1SS-523M-3028-QA	Hexachloroethane	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	4-Chlorophenyl phenyl ether	110	110	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	154.5	HIGH
LL1SS-523M-3028-QA	Isophorone	450	100	ug/kg	J-	LL1SS-523M-3027-SO	428	857	UJ	5.0	
LL1SS-523M-3028-QA	Acenaphthene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Diethyl phthalate	130	130	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	147.3	HIGH
LL1SS-523M-3028-QA	Di-n-butyl phthalate	94	140	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	160.5	HIGH
LL1SS-523M-3028-QA	Phenanthrene	12	100	ug/kg	J-	LL1SS-523M-3027-SO	428	857	UJ	189.1	HIGH
LL1SS-523M-3028-QA	Butylbenzyl phthalate	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	N-Nitrosodiphenylamine	200	200	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	124.3	HIGH
LL1SS-523M-3028-QA	Fluorene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Carbazole	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Hexachlorobutadiene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	Pentachlorophenol	500	500	ug/kg	UJ	LL1SS-523M-3027-SO	2140	4280	UJ	158.2	HIGH
LL1SS-523M-3028-QA	2,4,6-Trichlorophenol	260	260	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	106.9	HIGH
LL1SS-523M-3028-QA	2-Nitroaniline	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	2140	4280	UJ	190.9	HIGH
LL1SS-523M-3028-QA	2-Nitrophenol	400	400	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	72.7	HIGH

Sample	Analyte	Result	RL	Units	Qualifier	Sample	Result	RL	Qualifier	RPD	RPD >50%?
LL1SS-523M-3028-QA	Naphthalene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	2-Methylnaphthalene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	2-Chloronaphthalene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	2-Methylphenol	340	340	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	86.4	HIGH
LL1SS-523M-3028-QA	1,2-Dichlorobenzene	100	100	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	2-Chlorophenol	350	350	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	84.0	HIGH
LL1SS-523M-3028-QA	2,4,5-Trichlorophenol	350	350	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	84.0	HIGH
LL1SS-523M-3028-QA	Nitrobenzene	100	140	ug/kg	UJ	LL1SS-523M-3027-SO	428	857	UJ	158.2	HIGH
LL1SS-523M-3028-QA	3-Nitroaniline	110	110	ug/kg	UJ	LL1SS-523M-3027-SO	2140	4280	UJ	190.0	HIGH
LL1SS-537M-3051-QA	2,4,6-Trinitrotoluene	0.24	0.24	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	4.1	
LL1SS-537M-3051-QA	2,4-Dinitrotoluene	0.27	0.27	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	7.7	
LL1SS-537M-3051-QA	RDX	0.29	0.29	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	14.8	
LL1SS-537M-3051-QA	4-Amino-2,6-dinitrotoluene	0.26	0.26	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	3.9	
LL1SS-537M-3051-QA	HMX	0.26	0.26	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	3.9	
LL1SS-537M-3051-QA	2-Amino-4,6-dinitrotoluene	0.24	0.24	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	4.1	
LL1SS-537M-3051-QA	Nitroglycerin	1.4	1.4	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	139.4	HIGH
LL1SS-537M-3051-QA	2,6-Dinitrotoluene	0.27	0.27	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	7.7	
LL1SS-537M-3051-QA	PETN	1.4	1.4	mg/kg	UJ	LL1SS-537M-3050-SO	0.5	1.5	U	6.9	
LL1SS-537M-3051-QA	2-Nitrotoluene	0.29	0.29	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	14.8	
LL1SS-537M-3051-QA	Nitrobenzene	0.24	0.24	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	4.1	
LL1SS-537M-3051-QA	3-Nitrotoluene	0.27	0.27	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	7.7	
LL1SS-537M-3051-QA	1,3,5-Trinitrobenzene	0.25	0.25	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	0.0	
LL1SS-537M-3051-QA	1,3-Dinitrobenzene	0.24	0.24	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	4.1	
LL1SS-537M-3051-QA	4-Nitrotoluene	0.33	0.33	mg/kg	UJ	LL1SS-537M-3050-SO	0.1	0.25	U	27.6	
LL1SS-537M-3051-QA	Potassium	630	13	mg/kg		LL1SS-537M-3050-SO	415	33.7	J	41.1	
LL1SS-537M-3051-QA	Aluminum	6930	0.22	mg/kg	J-	LL1SS-537M-3050-SO	5070	13.5	J	31.0	
LL1SS-537M-3051-QA	Iron	21300	1.2	mg/kg	J-	LL1SS-537M-3050-SO	16300	1.35		26.6	
LL1SS-537M-3051-QA	Lead	15.9	0.11	mg/kg	J-	LL1SS-537M-3050-SO	13.6	0.192		15.6	
LL1SS-537M-3051-QA	Magnesium	2140	0.34	mg/kg	J-	LL1SS-537M-3050-SO	1880	16.8		12.9	
LL1SS-537M-3051-QA	Manganese	428	0.11	mg/kg	J-	LL1SS-537M-3050-SO	356	0.337	J	18.4	
LL1SS-537M-3051-QA	Mercury	0.017	0.0038	mg/kg		LL1SS-537M-3050-SO	0.0166	0.0998	J	2.4	
LL1SS-537M-3051-QA	Sodium	27.2	7.3	mg/kg		LL1SS-537M-3050-SO	20.2	16.8		29.5	
LL1SS-537M-3051-QA	Thallium	0.091	0.016	mg/kg	J-	LL1SS-537M-3050-SO	0.0954	0.0192	J	4.7	
LL1SS-537M-3051-QA	Antimony	0.55	0.18	mg/kg	J-	LL1SS-537M-3050-SO	0.455	0.0982		18.9	
LL1SS-537M-3051-QA	Beryllium	0.33	0.017	mg/kg	J-	LL1SS-537M-3050-SO	0.293	0.0168		11.9	
LL1SS-537M-3051-QA	Cadmium	0.014	0.014	mg/kg	UJ	LL1SS-537M-3050-SO	0.917	0.0674		194.0	HIGH

Appendix C - QA Sample Comparison

Sample	Analyte	Result	RL	Units	Qualifier	Sample	Result	RL	Qualifier	RPD	RPD >50%?
LL1SS-537M-3051-QA	Hexavalent Chromium	6.4	6.4	mg/kg	UJ	LL1SS-537M-3050-SO	0.0989	0.198	U	188.0	HIGH
LL1SS-537M-3051-QA	Cobalt	5.7	0.03	mg/kg	J-	LL1SS-537M-3050-SO	4.26	0.168		28.9	
LL1SS-537M-3051-QA	Copper	15.9	0.19	mg/kg	J-	LL1SS-537M-3050-SO	18	0.168		12.4	
LL1SS-537M-3051-QA	Zinc	53.4	0.11	mg/kg	J-	LL1SS-537M-3050-SO	59.7	0.674	J	11.1	
LL1SS-537M-3051-QA	Calcium	3500	1.1	mg/kg	J-	LL1SS-537M-3050-SO	3100	6.74		12.1	
LL1SS-537M-3051-QA	Selenium	0.11	0.12	mg/kg	J	LL1SS-537M-3050-SO	0.267	0.192	J	83.3	HIGH
LL1SS-537M-3051-QA	Nitrocellulose	16	16	mg/kg	U	LL1SS-537M-3050-SO	2.49	4.97	UJ	105.2	HIGH
LL1SS-537M-3051-QA	Nitroguanidine	0.3	0.14	mg/kg	J	LL1SS-537M-3050-SO	146	291	U	199.6	HIGH
LL4SS-280M-2001-QA	2,4,6-Trinitrotoluene	0.24	0.24	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	1.7	
LL4SS-280M-2001-QA	2,4-Dinitrotoluene	0.27	0.27	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	10.1	
LL4SS-280M-2001-QA	RDX	0.29	0.29	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	17.2	
LL4SS-280M-2001-QA	4-Amino-2,6-dinitrotoluene	0.26	0.26	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	6.3	
LL4SS-280M-2001-QA	HMX	0.26	0.26	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	6.3	
LL4SS-280M-2001-QA	2-Amino-4,6-dinitrotoluene	0.24	0.24	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	1.7	
LL4SS-280M-2001-QA	Nitroglycerin	1.4	1.4	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	140.6	HIGH
LL4SS-280M-2001-QA	2,6-Dinitrotoluene	0.27	0.27	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	10.1	
LL4SS-280M-2001-QA	PETN	1.4	1.4	mg/kg	UJ	LL4SS-280M-2000-SO	0.488	1.46	U	4.2	
LL4SS-280M-2001-QA	2-Nitrotoluene	0.29	0.29	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	17.2	
LL4SS-280M-2001-QA	Nitrobenzene	0.24	0.24	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	1.7	
LL4SS-280M-2001-QA	3-Nitrotoluene	0.27	0.27	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	10.1	
LL4SS-280M-2001-QA	1,3,5-Trinitrobenzene	0.25	0.25	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	2.4	
LL4SS-280M-2001-QA	1,3-Dinitrobenzene	0.24	0.24	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	1.7	
LL4SS-280M-2001-QA	4-Nitrotoluene	0.33	0.33	mg/kg	UJ	LL4SS-280M-2000-SO	0.0976	0.244	U	30.0	
LL4SS-280M-2001-QA	Aluminum	12100	0.22	mg/kg	J-	LL4SS-280M-2000-SO	10200	15.2		17.0	
LL4SS-280M-2001-QA	Lead	28.4	0.11	mg/kg	J-	LL4SS-280M-2000-SO	23.4	0.202	J	19.3	
LL4SS-280M-2001-QA	Magnesium	3670	0.34	mg/kg	J-	LL4SS-280M-2000-SO	3250	19		12.1	
LL4SS-280M-2001-QA	Mercury	0.024	0.0039	mg/kg		LL4SS-280M-2000-SO	0.0234	0.0937	J	2.5	
LL4SS-280M-2001-QA	Sodium	74	7.3	mg/kg		LL4SS-280M-2000-SO	64.8	19		13.3	
LL4SS-280M-2001-QA	Thallium	0.12	0.016	mg/kg	J-	LL4SS-280M-2000-SO	0.146	0.0202		19.5	
LL4SS-280M-2001-QA	Beryllium	0.48	0.017	mg/kg	J-	LL4SS-280M-2000-SO	0.448	0.019		6.9	
LL4SS-280M-2001-QA	Cadmium	0.38	0.014	mg/kg	J	LL4SS-280M-2000-SO	1.09	0.076		96.6	HIGH
LL4SS-280M-2001-QA	Hexavalent Chromium	6.4	6.4	mg/kg	UJ	LL4SS-280M-2000-SO	0.0504	0.101	U	193.8	HIGH
LL4SS-280M-2001-QA	Copper	21.7	0.19	mg/kg	J-	LL4SS-280M-2000-SO	22.3	0.19		2.7	
LL4SS-280M-2001-QA	Vanadium	17.8	0.058	mg/kg		LL4SS-280M-2000-SO	18.9	0.38		6.0	
LL4SS-280M-2001-QA	Zinc	76.7	0.11	mg/kg	J-	LL4SS-280M-2000-SO	79.9	0.76		4.1	
LL4SS-280M-2001-QA	Calcium	5420	1.1	mg/kg	J-	LL4SS-280M-2000-SO	4130	7.6	J	27.0	

APPENDIX D

Validator Checklists

NITROAROMATICS & NITRAMINE DATA ANALYSIS (EXPLOSIVE RESIDUES) CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group: 76078

	Yes	No
1. Holding Time: Were samples analyzed within holding time?	[N]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of five standards? N/A Level II	[ ]	[ ]
• Did the RSD meet the criteria ≤ 20% for each individual Calibration Compound or r ≥ 0.99?	[N]	[ ]
• Was manual integration "M" performed? N/A Level III 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 percentage "D" for QC/MRL ≤ 30%?	[ ]	[ ]
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?	[ ]	[ ]
• 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%)?	[N]	[ ]
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires? N/A Level III	[ ]	[ ]
• 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]	[ ]
• Was there a shoulder on the 2,4,6-TNT peak? N/A Level III	[ ]	[ ]
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?	[N]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?		

	Yes	No
• MS/MSD: Were the percent recoveries within limits? LL155-523M-3028-QA	[X]	[ ]
Were the RPDs within control limits?		
• System Monitoring Compounds (Surrogates): Were surrogate recoveries within QC limits?	[X]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: _____ Date: _____

Name: _____

NITROAROMATICS & NITRAMINE DATA ANALYSIS (EXPLOSIVE RESIDUES) CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group: 76265

	Yes	No
1. Holding Time: Were samples analyzed within holding time?	[N]	[ ]
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? N/A @ Level III	[N]	[ ]
• 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 percentage "D" for QC/MRL ≤ 30%?	[ ]	[ ]
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/A @ Level III	[ ]
• Were all identified hits, above the initial calibration curve, diluted and reanalyzed?	[ ]	[ ]
• 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?	[ ]	[ ]
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?	[N]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?		

	Yes	No
• MS/MSD: Were the percent recoveries within limits? LLISS-537M-3051-QA	[X]	[ ]
Were the RPDs within control limits?		
• System Monitoring Compounds (Surrogates): Were surrogate recoveries within QC limits?	[X]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: _____ Date: _____

Name: _____

POLY CHLORINATED BIPHENYLS (PCB/AROCLORS) CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group: 78078

	Yes	No
1. Holding Time:		
(a) Were samples extracted within holding time?	[N]	[ ]
(b) Were samples analyzed within holding time?	[N]	[ ]
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?	[N]	[ ]
• Was manual integration "M" performed? N/A Level III 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	[ ]	[ ]
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?	[N]	[ ]	
7. Sample Analysis:			
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[ ]	[ ]	N/A level III
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[N]	[ ]	
• 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.)	[N]	[ ]	
• Was RPD of target analyte conformation ≤ 40?	[N]	[ ]	
8. 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? none performed	[ ]	[ ]	
Were the RPDs within control limits?	[ ]	[ ]	
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[N]	[ ]	

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meek

Date: 7/7/10

Name: Patti Meek

ORGANOCHLORINE PESTICIDES ANALYSIS CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group: 76078

	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? N/A level III 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?	[ ]	[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	[ ]	[ ]

	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?	[ ]	[N]	
8. Sample Analysis:			
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[ ]	[ ]	N/A Level IV
• 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]	[N]	
• MS/MSD: Were the percent recoveries within limits?	[ ]	[N]	
Were the RPD within control limits? (on sample)	[N]	[ ]	
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[N]	[ ]	

10. Comments (attach additional sheets if necessary):

MS LCS: heptachlor epoxide = ~~134%~~ 50-130% MSD ~~134%~~ ND
DDD = 1362 ~~1408~~ ND
→ α-chlordane = NR NR J-/Q
~~dieldrin = 132~~ ~~181~~
~~endosulfan sulfate = 466~~
~~endrin = 279~~ ~~314~~ ND
~~δ-chlordane = 641~~ ~~163 649~~ ND
~~DDT~~

ICV: methoxychlor = 80% on 1° J-/C

CCV: heptachlor = 16.2% on 2° J+/C

No MRL - goal all ≤10xRL

Highest - heptachlor = 10
dieldrin = 310

endrin aldehyde 2° conf?

Validated/Reviewed by:

Signature: Patti Meeks Date: 7/7/10

Name: Patti Meeks

SEMIVOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group: 76078

	Yes	No
1. Sample Holding Time:		
(a) Were samples extracted within holding time?	[Y]	[ ]
(b) Were samples analyzed within holding time?	[Y]	[ ]
2. Instrument Tuning:		
Was the DFTPP tune performed at the beginning of each 12-hour period during which samples were analyzed?	[Y]	[ ]
3. Ion Mass Assignments:		
Was mass assignment based on m/z 198?	[Y]	[ ]
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 %	[Y]	[ ]
68 — < 2% of mass 69	[Y]	[ ]
70 — < 2% of mass 69	[Y]	[ ]
127 — 40-60%	[Y]	[ ]
197 — < 1%	[Y]	[ ]
198 — 100%, Base peak	[Y]	[ ]
199 — 5-9%	[Y]	[ ]
275 — 10 - 30%	[Y]	[ ]
365 — > 1%	[Y]	[ ]
441 — present but < mass 443	[Y]	[ ]
442 — > 40%	[Y]	[ ]
443 — 17-23% of mass 442	[Y]	[ ]

	Yes	No
5.0 Initial Calibration:		
• Did the initial calibration consist of five or more standards?	5-stds [X] more [ ]	[ ] [ ]
If the calibration curve consists of 5-standards, check validity of the calibration model.		
Was the linear model applied? for some	[X]	[ ]
• Did the followings System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?		
N-nitroso-di-n-propylamine (RF 0.05)	[X]	[ ]
Hexachlorocyclopentadiene (RF 0.05)	[X]	[ ]
2,4-dinitrophenol (RF 0.05)	[X]	[ ]
4-nitrophenol (RF 0.05)	[X]	[ ]
• Did the RSD meet the criteria ≤ 30% for the followings each individual Calibration Check Compound (CCC)?		
Base/Neutral Fraction:		
Acenaphthene	[X]	[ ]
1,4-Dichlorobenzene	[X]	[ ]
Hexachlorobutadiene	[X]	[ ]
Diphenylamine	[X]	[ ]
Di-n-octylphthalate	[X]	[ ]
Fluoranthene	[X]	[ ]
Benzo(a)pyrene	[X]	[ ]
Acid Fraction:		
4-Chloro-3-methylphenol	[X]	[ ]
2,4-Dichlorophenol	[X]	[ ]
2-Nitrophenol	[X]	[ ]
Phenol	[X]	[ ]
Pentachlorophenol	[X]	[ ]
2,4,6-Trichlorophenol	[X]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15%?	[X]	[ ]
• If the answer is "No", are the mean RSDs ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 30%?	[ ] [X]	[ ] [ ]

	Yes	No
• Was manual integration "M" performed? N/A level III	[ ]	[ ]
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:

• 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 Not analyzed	[ ]	[ ]
• For the non-contaminants of concern was the QC/MRL between 50-150% (Sporadic Marginal Failure)?	[ ]	[ ]

8. Initial Calibration Verification (ICV):

	N	[ ]
• 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)?	[ ]	[ ]

9. Continuing Calibration Verification (CCV):

• Was CCV conducted every 12 hours?	[ ]	[ ]
• Did any of SPCC meet the minimum RF values?	N	[ ]

		Yes	No
N-nitroso-di-n-propylamine	0.05	[X]	[ ]
Hexachlorocyclopentadiene	0.05	[X]	[ ]
2,4-dinitrophenol	0.05	[X]	[ ]
4-nitrophenol	0.05	[X]	[ ]

- Did the CCC meet the minimum requirements (D ≤ 20%) for the followings?

Base/Neutral Fraction:

Acenaphthene	[X]	[ ]
1,4-Dichlorobenzene	[X]	[ ]
Hexachlorobutadiene	[X]	[ ]
Diphenylamine	[X]	[ ]
Di-n-octylphthalate	[X]	[ ]
Fluoranthene	[X]	[ ]
Benzo(a)pyrene	[X]	[ ]

Acid Fraction:

4-Chloro-3-methylphenol	[X]	[ ]
2,4-Dichlorophenol	[X]	[ ]
2-Nitrophenol	[X]	[ ]
Phenol	[X]	[ ]
Pentachlorophenol	[X]	[ ]
2,4,6-Trichlorophenol	[X]	[ ]

- Primary Evaluation: Was Drift or D ≤ 20% calculated from the initial calibration? [X] [ ]
- Alternative Evaluation: Maximum allowable Drift/D for each target analyte is ≤ 30%. [ ] [ ]

10. Sample Analysis:

- Was the RRT of an identified component within ± 0.06 RRT units of the RRT of the standard component? [X] [ ] N/A Level III
- 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%)? [X] [ ]

11. Sample Quality Control:

	Yes	No
• 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? None analyzed	[ ]	[ ]
Were the RPD within control limits?	[ ]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits?	[ ]	[N]

12. Comments (attach additional sheets if necessary):

MB: dimethylphthalate = 58.4 µg/kg } U/B
di-n-butyl = 62.9
Surr: 2,4,6-tribromophenol = 29%
LCS: benzoic acid = 19%

CCV 11/9 benzidine 53.1%D

Validated/Reviewed by:

Signature: Patti Meeks Date: 7/6/10

Name: Patti Meeks

VERSION 5
June 2002

U.S. Army Corps of Engineers Louisville District - LCG

VOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group (SDG): 76078

	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

	Yes	No
5. Initial Calibration:		
• Did the initial calibration consist of five standards?	[X]	[ ]
• Did the System Performance Check Compounds (SPCC) meet the minimum mean response factor (RF)?		
RF		
Chloromethane 0.1	[X]	[ ]
1,1-Dichloroethane 0.1	[X]	[ ]
Bromoform 0.1	[X]	[ ]
Chlorobenzene 0.3	[X]	[ ]
1,1,2,2-Tetrachloroethane 0.3	[X]	[ ]
• Did the RSD meet the criteria ≤ 30% for each individual Calibration Check Compound (CCC)?		
1,1-Dichloroethene	[X]	[ ]
Chloroform	[X]	[ ]
1,2-Dichloropropane	[X]	[ ]
Toluene	[X]	[ ]
Ethylbenzene	[X]	[ ]
Vinyl chloride	[X]	[ ]
• Are the RSDs for the remaining target analytes ≤ 15% or r ≥ 0.99 with a mean RSD ≤ 15% with a maximum RSD ≤ 20%?	[X]	[ ]
If the answer is "No", are the mean RSDs ≤ 15%?	[ ]	[ ]
• Was manual integration "M" performed? N/A Level IV	[ ]	[ ]
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:	[ ]	[X]
• Was MDL Check performed?		
7. QCMRL:	[X]	[ ]

	Yes	No
• 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]
• 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)?	[ ]	[N]

9. Continuing Calibration Verification (CCV):

• Was CCV conducted every 12 hours?		[ ]	[ ]
• Did SPCC meet the RF values?		[N]	[ ]
RF			
Chloromethane	0.1	[N]	[ ]
1,1-Dichloroethane	0.1	[N]	[ ]
Bromoform	0.1	[N]	[ ]
Chlorobenzene	0.3	[N]	[ ]
1,1,2,2-Tetrachloroethane	0.3	[N]	[ ]
• Did the CCC meet the minimum requirements (D ≤ 20%)?		[N]	[ ]
1,1-Dichloroethene		[N]	[ ]
Chloroform		[N]	[ ]
1,2-Dichloropropane		[N]	[ ]
Toluene		[N]	[ ]
Ethylbenzene		[N]	[ ]
Vinyl chloride		[N]	[ ]
• Primary Evaluation: Was the mean, Drift or D ≤ 20% from the initial calibration?		[N]	[ ]

• 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 Level III
• 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]	
• LCS: Were the percent recoveries for LCS within the limits?	[N]	[ ]	
• MS/MSD: Were the percent recoveries within limits? None analyzed	[ ]	[ ]	
Were the RPD within control limits?	[ ]	[ ]	
System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits (50-150%)?	[N]	[ ]	

12. Comments (attach additional sheets if necessary):

MB: 2-hex = 14.5 mg/kg
4-methyl-2pentanone = 6.10
} U/B @ RL

MRL: Me Cl = 10% + 0% R all others ↑

Validated/Reviewed by:
Signature: Patti Meeks

Date: 7/6/10

Name: Patti Meeks

ICV Me Cl 140% R
~~hexachlorobutadiene 80% R~~ → Not target
~~naphthalene 130% R~~ 173

CCV ~~trichlorotrifluoroethane~~ 21.3% D
Me Cl 50.1
~~hexachlorobutadiene~~ 28.5

ICP METALS ANALYSIS (6010) CHECKLIST

III

LLISS-280M-2001 (900)
517M-3019 (899)
523M-3028 (913)

Project Name: Ravenna Oct/Nov 2009

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group: 76078

	Yes	No	
1. Holding Time:			
• Were samples analyzed within holding time (6-Months)?	~~N~~	[ ]	
2. Initial Calibration:			
• Did the initial calibration consist of (N/A)			
One calibration standard and a blank? level III	[ ]	[ ]	
three calibration standards and a blank?	[ ]	[ ]	
• Was $R \geq 0.995$	~~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~~	no MRL for ICP analytes
• Was the QC/MRL between 70-130% R? Common Elements can be between the MRL and 2X MRL level (Fe, Al, Mg and Ca)	~~N~~	[ ]	
	~~N~~	[ ]	
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~~	but insufficient to qualify
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?	~~N~~	[ ]	
• Was CCB conducted at end of the analytical sequence?	~~N~~	[ ]	
• Were analytes ≤ 1/2 MRL?	~~N~~	[ ]	
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?	[ ]	~~N~~	insufficient to qualify
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~~	insufficient to qualify
• LCS: Were the percent recoveries for LCS within the limits?	~~N~~	[ ]	
• MS: Were the percent recoveries within limits? LL155-280M-2001-QA	[ ]	~~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%)?	[ ]	N

12. Method of Standard Addition (MSA):

• Was MSA performed on samples suspected of matrix effect (R ≥ 0.995)?	N	N

13. Comments (attach additional sheets if necessary):

MS: Al(15), Sb(11), Be(25), Cr(0), Cu(69), Zn(72), As(0)
Se(14), Tl(69)

Post Digest: ~~Al~~ Be (OK), Cr (74x), Al(74x), Cu(67), Zn(56)
As (OK), Se (18), Tl (OK)

Dup: Cd(24),

Standard Additions for Se in all samples all r ok

SD: Cd(74), Ca(11), Cr(15), Co(18), Cu(31), Fe(16), Pb(17), Mg(11)
Ni(14), Zn(20), ~~As(32)~~, ~~Se(242)~~, Tl(67)

No MRL for ICP analytes

GFAA - no ending ccv for Se, ~~Tl~~

Validated/Reviewed by:

Signature: Patti Meeks Date: 6/30/10

Name: Patti Meeks

CVAA METALS ANALYSIS CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group: 76078

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time?	[N]	[ ]
2. Initial Calibration: N/A Level III		
• Did the initial calibration consist of		
One calibration standard and a blank?	[ ]	[ ]
five calibration standards and a blank?	[ ]	[ ]
• Was R ≥ 0.995	[N]	[ ]
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 80-120%?	[N]	[ ]
6. Initial calibration Blank (ICP):		
• Were analytes in the blank ≤ 1/2 MRL?	[N]	[ ]

	Yes	No
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]	[ ]
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 80-120?	[Y]	[ ]
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]	[ ]
• 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?	[Y]	[ ]

11. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meeks

Date: 6/30/10

Name: Patti Meeks

ICP METALS ANALYSIS (6010) CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group: 76265

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time (6-Months)?	[N]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of N/A @ Level III		
One calibration standard and a blank?	[ ]	[ ]
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)	[ ]	[N]
	[N]	[N]
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]	[ ]

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]	[ ]

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?	[N]	[ ]

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 insufficient to qualify
• LCS: Were the percent recoveries for LCS within the limits?	[N]	[ ]
• MS: Were the percent recoveries within limits? LCISS - 537M - 3051 - QA	[ ]	[N]
• MD: Were the RPDs within control limits?	[N]	[N/A]

11. Serial Dilution:

• Was serial dilution (1:4) conducted when needed?	[N]	[ ]

	Yes	No
• Was there an agreement between diluted and undiluted results (<10%)?	[ ]	~~N~~

12. Method of Standard Addition (MSA):

• Was MSA performed on samples suspected of matrix effect (R ≥ 0.995)?	~~N~~	[ ] for Se

13. Comments (attach additional sheets if necessary):

~~Tl~~ CCV = 112% AA

MRL: Fe = 139 but 710x RL & Mn = 141% but 710x RL

MS: Sb (15), Cd (72), Co (73), Pb (55), Tl (74), Se (30) (~~NR~~)

Post digest: Cd & Co still ↓, Pb OK, Tl OK, Se ↓, Sb OK

SP: Al (19), Ba (25), Be (45), Ca (30), Cr (41), Co (50), Cu (40), Fe (24), Mg (29), Mn (12), Ni (48), Zn (53), ~~As (11)~~.

Validated/Reviewed by:

Signature: Patt MS Date: 6/30/10

Name: Patt. Meeks

CVAA METALS ANALYSIS CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group: 76265

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time?	[N]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of (NA Level III)		
One calibration standard and a blank?	[ ]	[ ]
five calibration standards and a blank?	[ ]	[ ]
• Was $R \geq 0.995$	[N]	[ ]
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 80-120%?	[N]	[ ]
6. Initial calibration Blank (ICP):		
• Were analytes in the blank ≤ 1/2 MRL?	[N]	[ ]

	Yes	No
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]	[ ]
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 80-120?	[N]	[ ]
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]	[ ]
• 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. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meek Date: 6/30/10

Name: Pa H. Meeks

U.S. Army Corps of Engineers Louisville District - LCG

Hexavalent Chromium + Nitrocellulose

~~CYANIDE~~ ANALYSIS CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group: 76078

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time?	[N]	[ ]
2. Initial Calibration: N/A Level III		
• Did the initial calibration consist of		
One calibration standard and a blank?	[ ]	[ ]
Six calibration standards and a blank?	[ ]	[ ]
• Was R ≥ 0.995	[N]	[ ]
3. QCMDL:		
• Was MDL Check performed?	[ ]	[N]
4. QCMRL:		
• Were QC/MRL run at the beginning of every daily sequence??	[ ]	[N]
• Was the QC/MRL between 70-130% R?	[ ]	[ ]
5. Initial Calibration Verification (ICV):		
• Is the mid level (2nd source) recovery within ~~80-120~~ 90-110%?	[N]	[ ]
7. Initial calibration Blank (ICP):		
• Were analytes in the blank ≤ 1/2 MRL?	[N]	[ ]

	Yes	No
7. Continuing calibration Blank (CCB):	[X]	[ ]
• Was CCB conducted every 10 samples?	[X]	[ ]
• Was CCB conducted at end of the analytical sequence?	[X]	[ ]
• Were analytes ≤ 1/2 MRL?		
8. Continuing Calibration Verification (CCV):		
• Was CCV conducted every 10 samples?	[X]	[ ]
• Was CCV conducted at end of the analytical sequence?	[X]	[ ]
• Was the %R between ~~80-120~~ 90-110%?	[X]	[ ]
9. Sample Analysis:		
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[ ]	[ ]
12. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[X]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[X]	[ ]
• MS: Were the percent recoveries within limits? LLISS-280M-2001 QA Cr^{6+} only	[X]	[ ]
• MD: Were the RPDs within control limits?	[X]	[ ]

13. Comments (attach additional sheets if necessary):

	Yes	No

Validated/Reviewed by:

Signature: Patti Meeks Date: 7/1/10

Name: Patti Meeks

CYANIDE ANALYSIS CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: CT

Batch Number(s): _____

Sample Delivery Group: 76265

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time?	[ ]	[ ]
2. Initial Calibration:		
N/A Level III		
• Did the initial calibration consist of		
One calibration standard and a blank?	[ ]	[ ]
Six calibration standards and a blank?	[ ]	[ ]
• Was R ≥ 0.995	[ ]	[ ]
3. QCMDL:		
• Was MDL Check performed?	[ ]	[N]
4. QCMRL:		
• Were QC/MRL run at the beginning of every daily sequence??	[ ]	[N]
• Was the QC/MRL between 70-130% R?	[ ]	[ ]
5. Initial Calibration Verification (ICV):		
90-110%		
• Is the mid level (2nd source) recovery within ~~80-120~~%?	[N]	[ ]
7. Initial calibration Blank (ICP):		
• Were analytes in the blank ≤ 1/2 MRL?	[N]	[ ]

	Yes	No
7. Continuing calibration Blank (CCB):	[N]	[ ]
• Was CCB conducted every 10 samples?	[N]	[ ]
• Was CCB conducted at end of the analytical sequence?	[N]	[ ]
• Were analytes ≤ 1/2 MRL?		
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 80-120?	[N]	[ ]
9. Sample Analysis:		
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[ ]	[ ]
12. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[N]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[N]	[ ]
• MS: Were the percent recoveries within limits? LL1SS-537M-3051-QA Cr^{6+}	[ ]	[ ]
• MD: Were the RPDs within control limits?	[ ]	[ ]

13. Comments (attach additional sheets if necessary):

MS - NC F1SSS-012M-0501-QA 73%
Dup NC " 46%

	Yes	No

Validated/Reviewed by:

Signature: Patti Meeks Date: 7/1/10

Name: Patti Meeks

U.S. Army Corps of Engineers
Louisville District

Ravenna Army Ammunition Plant
Load Line 1 and Other Building Locations
Ravenna, Ohio

DRAFT Data Validation Report
Sample Delivery Groups:
Multiple

June 2010

Prepared for:
U.S. Army Corps of Engineers
Louisville District
Contract No. W912QR-08-D-0001
Delivery Order 0014

Prepared by:
MEC^X, LP
12269 East Vassar Drive
Aurora, Colorado 80014

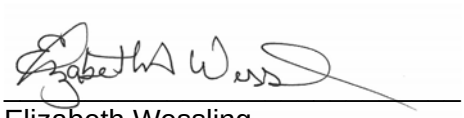
CONTRACTOR STATEMENT OF INDEPENDANT TECHNICAL REVIEW

MEC^X, LP (MEC^X) has completed the Data Validation Report for Multiple Sample Delivery Groups from the Ravenna Army Ammunition Plant Load Line 1 and Other Building Locations in Ravenna, Ohio. 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:

The analysis for pesticides by method SW-846 8081 performed at the primary laboratory, Microbac, is likely to have missed some target compounds due to the method the laboratory used to establish retention time windows. The data user should rely on the split laboratory data for this analysis.

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 of the project described in this document was to determine if contaminants are present in the soils below the floor slabs of Load Line 1 and other building locations.

The following analyses were performed for all primary samples by Microbac Laboratories, Inc. (Microbac) in Marietta, Ohio:

- United States Environmental Protection Agency (USEPA) SW-846 Methods 6010B and 6020 for metals
- USEPA SW-846 Method 7471A for mercury
- USEPA SW-846 Method 8260B for volatile organic compounds (VOCs)
- USEPA SW-846 Method 8270C for semivolatile compounds (SVOCs)
- USEPA SW-846 Method 8081 for pesticides
- USEPA SW-846 Method 8082 for polychlorinated biphenyls (PCBs)
- USEPA SW-846 Method 8330B for explosive compounds
- USEPA SW-846 Method 7196A for hexavalent chromium
- United States Army Cold Regions Research and Engineering Laboratory (USACRREL) Method for nitrocellulose

Quality assurance (QA) split samples were submitted to CT Laboratories (CT) in Baraboo, Wisconsin and were analyzed for all of the aforementioned analyses.

Some data were rejected due to calibration outliers. All remaining data is usable for its intended purposes as qualified by MEC^X. Specific concerns regarding the data are noted below:

- False negatives were identified in the pesticide data. When a compound retention time (RT) shift exceeded half of the defined RT window, the laboratory flagged the compound with an "F," only on the quantitation report, and did not report the compound as detected. In these instances, MEC^X qualified the results as false negatives.

  It is likely that false negatives exist in the unvalidated data.

  Please see section 6.2 for further details and recommendations.

- The Microbac mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data.

- The laboratory reported total xylenes and total 1,2-dichloroethene instead of the specific isomers, m,p-xylene, o-xylene, cis-1,2-dichloroethene, and trans-1,2-dichloroethene.

- Although the semivolatile samples had no target compound detects or apparent non-target matrix interference, the validated samples were analyzed at 5× dilutions, attributed

to extract appearance and viscosity. All semivolatile reporting limits in the validated samples exceeded the reporting limit criteria.

ACRONYMS AND ABBREVIATIONS

ADR	Automated Data Review
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CCB	Continuing Calibration Blank
CCC	Calibration Check Compounds
CCV	Continuing Calibration Verification
DoD	Department of Defense
ICSA	Interference Check Sample A
ICSAB	Interference Check Sample AB
ICV	Initial Calibration Verification
ICP	Inductively Coupled Plasma
LCG	Louisville Chemistry Guidance
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection
LODV	Limit of Detection Verification
LUST	Leaking Underground Storage Tank
MRL	Method Reporting Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
MDL	Method Detection Limit
PAH	Polynuclear Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
PE	Performance Evaluation
PDS	Post Digestion Spike
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
QSM	Quality Systems Manual
RL	Reporting Limit
RPD	Relative Percent Difference
RSD	Relative Standard Deviation
RVAAP	Ravenna Army Ammunition Plant
SAIC	Science Applications International Corporation
SDG	Sample Delivery Group
SPCC	System Performance Check Compound
SVOC	Semivolatile Organic Compounds
TIC	Tentatively Identified Compounds
TS	Total Solids
USACE	United State Army Corps of Engineers
USACERREL	United States Army Cold Regions Research and Engineering Laboratory
USEPA	United State Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound

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TABLES

APPENDICES

1. INTRODUCTION

1.1 PROJECT OVERVIEW

The overall objective of the project described in this document was to determine if contaminants are present in the soils below the floor slabs of Load Line 1 and other building locations.

Sampling was conducted by URS Corporation (URS) in October and November 2009. Sixty-seven primary, three field duplicate, three blind field duplicates, and one blind VOC duplicate soil samples were collected and analyzed for the following parameters:

The following analyses were performed for all primary samples by Microbac Laboratories, Inc. (Microbac) of Marietta, Ohio:

- USEPA SW-846 Methods 6010B and 6020 for metals
- USEPA SW-846 Method 7471A for mercury
- USEPA SW-846 Method 8260B for volatile organic compounds (VOCs)
- USEPA SW-846 Method 8270C for semivolatile compounds (SVOCs)
- USEPA SW-846 Method 8081 for pesticides
- USEPA SW-846 Method 8082 for polychlorinated biphenyls (PCBs)
- USEPA SW-846 Method 8330B for explosive compounds
- USEPA SW-846 Method 7196A for hexavalent chromium
- United States Army Cold Regions Research and Engineering Laboratory (USACERREL) Method for nitrocellulose

This report describes findings of data validation performed by MEC^X, LP (MEC^X) on the site samples reported in eight sample delivery groups (SDGs) from Microbac.

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).

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 as the Ravenna Arsenal, and the government assumed control of all operations. 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.

In 1989, the USEPA contracted Jacobs Engineering to perform a Resource Conservation and Recovery Act Facility Assessment. Thirty-one solid areas of concern were identified during the assessment, 13 of which were recommended for no further action. In 1996 the United States Army Corps of Engineers (USACE) performed a facility-wide preliminary assessment and conducted Phase I remedial investigations at 11 areas of concern. Salvage and demolition operations were performed in 1998. Monitoring wells were installed in 19999 and a Phase II remedial investigation was performed at Load Line 1 by the USACE in 2000.

Operations at Load Line 1 consisted of melting and loading energetic compounds into large caliber shells. Water to wash down the lines and the building was collected in concrete sumps and discharged to a drainage ditch or settling pond. Soil and dry sediments outside the footprints of the buildings were removed by Shaw Engineering in 2003 and demolition of the buildings began in 2001. Soil samples collected by Shaw in 2003 found that the soils below the building slabs and foundations of Load Line 1 were more contaminated than Load Lines 2-4. At the time, the slabs and foundations were left intact in order to prevent water infiltration to the contaminated soils below.

Floor slabs were removed as part of the project described in this report and the soil samples described in this report were collected from beneath the floor slabs at Load Line 1, Buildings F-15 and F-16, Building EB-803 (Load Line 3), and Buildings G-1, G-1A, and G-3 (Load Line 4).

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 six SDGs from Microbac.

2.1 DATA VALIDATION PROCESS

A total of 67 primary, three field duplicate, three blind field duplicates, one blind VOC duplicate soils, and seven aqueous field quality control samples were collected in association with the field effort. 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 randomly chosen for Level IV validation. Field duplicate samples were validated at Level IIII.

Table 1. Validated sample identification table

Sample ID	SDG	Matrix	Collection Date	Validation Level	Validated Methods
LL1SS-523M-3027-SO	L09100645	Soil	10/26/09	IV	6010B, 6020, 7196A, 7471A, 8081, 8082, 8270C, 8330, 8330B
LL1SS-523M-3029-SO	L09100645	Soil	10/26/09	III	6010B, 6020, 7196A, 7471A, 8081, 8082, 8270C, 8330, 8330B
LL1SS-523M-3030-SO	L09100645	Soil	10/26/09	III	6010B, 6020, 7196A, 7471A, 8081, 8082, 8270C, 8330, 8330B
LL1SS-523D-3031-SO	L09100645	Soil	10/26/09	IV	8260B
LL1SS-523D-3032-SO	L09100645	Soil	10/26/09	III	8260B
LL1SS-523D-3033-SO	L09100645	Soil	10/26/09	III	8260B
LL1SS-517M-3018-SO	L09100553	Soil	10/21/09	IV	6010B, 6020, 7196A, 7471A, 8330, 8330B
LL1SS-517M-3020-SO	L09100553	Soil	10/21/09	III	6010B, 6020, 7196A, 7471A, 8330, 8330B
LL1SS-517M-3021-SO	L09100553	Soil	10/21/09	III	6010B, 6020, 7196A, 7471A, 8330, 8330B
LL1SS-537M-3050-SO	L09110136	Soil	11/4/09	IV	6010B, 6020, 7196A, 7471A, 8330, 8330B, USACRREL
LL1SS-537M-3052-SO	L09110136	Soil	11/4/09	III	6010B, 6020, 7196A, 7471A, 8330, 8330B, USACRREL
LL1SS-537M-3053-SO	L09110136	Soil	11/4/09	III	6010B, 6020, 7196A, 7471A, 8330, 8330B, USACRREL
F15SS-012M-0500-SO	L09110136	Soil	11/4/09	IV	6010B, 6020, 7196A, 7471A, 8330, 8330B, USACRREL
F15SS-012M-0502-SO	L09110136	Soil	11/4/09	III	6010B, 6020, 7196A,

Sample ID	SDG	Matrix	Collection Date	Validation Level	Validated Methods
					7471A, 8330, 8330B, USACRREL
F15SS-012M-0503-SO	L09110136	Soil	11/4/09	III	6010B, 6020, 7196A, 7471A, 8330, 8330B, USACRREL
LL4SS-280M-2000-SO	L09100553	Soil	10/21/09	IV	8260B
LL4SS-280M-2003-SO	L09100553	Soil	10/21/09	III	8260B

Table 2. Duplicate identification table

Duplicate Sample ID	Sample Type	Parent Sample
LL1SS-523M-3029-SO	Field MI Duplicate	LL1SS-523M-3027-SO
LL1SS-523M-3030-SO	Blind Duplicate	LL1SS-523M-3027-SO
LL1SS-523D-3033-SO	VOC Blind Duplicate	LL1SS-523D-3031-SO
LL1SS-517M-3020-SO	Field MI Duplicate	LL1SS-517M-3018-SO
LL1SS-517M-3021-SO	Blind Duplicate	LL1SS-517M-3018-SO
LL1SS-537M-3052-SO	Field MI Duplicate	LL1SS-537M-3050-SO
LL1SS-537M-3053-SO	Blind Duplicate	LL1SS-537M-3050-SO
F15SS-012M-0502-SO	Field MI Duplicate	F15SS-012M-0500-SO
F15SS-012M-0503-SO	Blind Duplicate	F15SS-012M-0500-SO
LL4SS-280M-2002-SO	Field MI Duplicate	LL4SS-280M-2000-SO
LL4SS-280M-2003-SO	Blind Duplicate	LL4SS-280M-2000-SO

Data validators assessed results based on the FWQAPP, Quality Assurance Project Plan Addendum for the Sampling of Soils Below Floor Slabs at LLS-2, 3, 4, and Excavation and Transportation of Contaminated Soils to Load Line 4 (QAPP Addendum), Louisville Chemistry Guideline Version 5 (LCG), Shell for Analytical Chemistry Requirements (Shell), Department of Defense Quality Systems Manual for Environmental Laboratories Version 3 (DoD QSM), the specific EPA methods, the National Functional Guidelines for Organic Data Review (1994), and the National Functional Guidelines for Inorganic Data Review (1994). The following were reviewed for Level IV validation:

- Sample management (collection techniques, sample containers, preservation, handling, transport, chain-of-custody, holding times),
- Calibration data summary forms (initial and continuing),
- Method blank sample results,
- Laboratory control sample (LCS) or LCS/LCS duplicate (LCS/LCSD) recoveries and/or precision,
- Surrogate recoveries (if applicable),
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries and precision,
- Field QA/QC sample results,
- Other QC indicators as applicable,
- Gas Chromatography/Mass Spectrometry (GC/MS) tuning, if a GC/MS is used,
- Internal standards performance,
- Sample results verification,

- Target compound identification,
- Raw data.

For Level III validation, data validators reviewed the following and assessed the results based on the criteria listed above:

- Sample management (collection techniques, sample containers, preservation, handling, transport, chain-of-custody, holding times),
- Calibration data summary forms (initial and continuing),
- Method blank sample results,
- Laboratory control sample (LCS) or LCS/LCS duplicate (LCS/LCSD) recoveries and/or precision,
- Surrogate recoveries (if applicable),
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries and precision,
- Field QA/QC sample results,
- Other QC indicators as applicable.

All validated samples were initially assessed using Automated Data Review (ADR) and the ADR Library provided by P. Schuler of URS and P. Letterer of Microbac. The ADR libraries were subsequently modified by MEC^X based upon direction from USACE Louisville chemist direction to resolve conflicts between the various documents and QC criteria.

2.2 DATA VALIDATION QUALIFIERS

Data qualifiers, as defined below, were applied following the FWQAPP, DoD QSM and the LCG:

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 reporting limit.

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 in the EDD appended to this report.

Table 3. 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 Blank Spike/Blank Spike 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).

3. DATA ACQUISITION ACTIVITIES

3.1 SAMPLE COLLECTION

Soil samples were collected in October and November 2009. The samples were submitted under chain of custody to the primary laboratory, Microbac.

Unless otherwise noted below, the chains of custody 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 with the following remaining deficiencies. No further requests were made to the primary contractor or the laboratories, and no data were qualified.

SDG	Issue
L09100553	Two of the three coolers were received below 2°C; however, the samples were not noted to be frozen or damaged.
L09100645	According to the laboratory cooler inspection report, the Terra Cores and PCTS had no labels on the bottles; however, these containers were bagged and the bags were labeled.
L09100645	Analyses for nitroguanidine and nitrocellulose were requested on the chain-of-custody for sample LL1SS-527M-3029-SO. The analyses were cancelled as per an email from URS personnel, but nitrocellulose was analyzed and reported.
L09110136	The sampler obliterated the relinquish date on the chain-of-custody instead of lining out the incorrect entry.
L09110136	The aliquot for hexavalent chromium for LL1SS-520M-000-ER was received beyond the 24-hour holding time.
L09100563	One container for SV and one container for EX were received broken for sample LL1SS-534M-0000-ER. There was sufficient volume in the remaining containers to complete the requested analyses.

3.2 SAMPLE ANALYSIS

Microbac, the primary laboratory, analyzed a total of 74 primary soil and field duplicate samples and seven aqueous field QC samples by USEPA SW-846 Methods 6010B and 6020 for various metals, USEPA SW-846 Method 7470A or 741A for mercury, USEPA SW-846 Method 8270C for SVOCs, USEPA SW-846 Method 8081 for pesticides, USEPA SW-846 Method 8082 for PCBs, USEPA SW-846 Method 8330 and 8330B for explosives, USEPA SW-846 Method 8260B for VOCs, USACERREL method for nitrocellulose, and USEPA Method 7196A for hexavalent chromium.

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 METHOD REQUIRMENTS

All method preservation requirements were met.

3.5 HOLDING TIME REQUIREMENTS

The soil extraction and analytical holding times for the analyses reviewed in this document are as follows:

Method	Analysis	Extraction Holding Time	Analysis Holding Time
SW-846 Methods 6010B/6020	Metals	N/A	180 days
SW-846 Method 7471A	Mercury	N/A	28 days
SW-846 Method 8260B	VOCs	14 days	40 days
SW-846 Method 8270C	SVOCs	14 days	40 days
SW-846 Method 8081	Pesticides	14 days	40 days
SW-846 Method 8082	PCBs	14 days	40 days
SW-846 Method 8330B	Explosives	14 days	40 days
SW-846 Method 8330	Nitroguanidine	14 days	40 days
USACERRL	Nitrocellulose	14 days	28 days
SW-846 Method 7196A	Hexavalent chromium	30 days	7 days

3.6 DETECTION LIMIT REQUIREMENTS

The following reporting limits exceeded the criteria listed in Table 3-3 of the FWQAPP and Appendix A of the QAPP Addendum:

- Although the samples had no target compound detects or apparent non-target matrix interference, the validated semivolatile samples were analyzed at 5× dilutions. The case narrative attributed the dilution to extract appearance and viscosity. All semivolatile reporting limits in the validated samples exceeded the reporting limit criteria.

4. DATA QUALITY EVALUATION

This section summarizes the data quality of validated samples for each analytical method evaluated.

4.1 EXPLOSIVES

Forty-nine of the 74 soil samples collected were analyzed by Microbac Laboratories for explosives by USEPA SW-846 Method 8330B and 21 analyzed for nitroguanidine by USEPA SW-846 Method 8330.

- MDL studies were not evaluated as part of this project.
- Calibration
    - Initial calibration average percent relative standard deviations (%RSDs) were within the control limits listed in the LCG Table 5 of ≤20%, or the linear regression r values were ≥0.990.
    - Except as noted below, the second source initial calibration verification standard (ICV) for both the primary and confirmation calibrations were within the control limits listed in LCG Table 5 of 85-115%.

      Nondetected results associated with recoveries below 80% were rejected as per the LCG validation procedure (section 5.3) and were noted in **bold** in the table below. All qualified results were coded with a "C" qualification code.

Samples Qualified for ICV recovery outliers			
Analyte	**Calibration**	**%R**	**Qualified Samples**
Tetryl	08/25/09	39	Tetryl in all validated samples

Nondetected analytes noted in **bold** were rejected.

    - Except as noted below, the continuing calibration verification (CCV) standard %Ds were within the control limits listed in LCG Table 5 of ≤15%. As per the LCG validation procedure (section 5.4), nondetected results associated with %Ds >15% with a negative bias were rejected, "R." All qualified results were coded with a "C," qualification code.

Samples qualified for CCV %D outliers			
Analyte	**Calibration**	**%D**	**Qualified Samples**
Tetryl	11/6/09 (1957)	28.2%	Tetryl in the validated samples of L09100645
Tetryl	11/11/09 (2310)	16.3%	Tetryl in the validated samples of L09110136
Tetryl	11/12/09 (0739)	21.5%	Tetryl in the validated samples of L09110136

Nondetected analytes noted in **bold** were rejected.

- Except as noted below, the MRL standard recoveries were within the control limit listed in LCG Table 5 of ±30%. As per the LCG validation procedure (section 5.3), nondetected results associated with recoveries <65% were rejected, "R." All qualified results were coded with a "C," qualification code.

Samples qualified for MRL recovery outliers		
Analyte	**Recovery**	**Qualified Samples**
Tetryl	55%	Tetryl in the validated samples of L09100553

Nondetected analytes noted in **bold** were rejected.

- MDL checks are required once per quarter per instrument as per LCG Table 5. The quarterly MDL check standard result was not provided.

- Blanks: The method blanks associated with those samples validated at Levels III and IV had no target compound detects above the control limits listed in LCG Table 5, of one-half the reporting limit for target compounds, and no common laboratory contaminant detects above the reporting limit. There were no detects above the MDL for nitroguanidine.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the control limits listed in LCG Appendix C for all listed target compounds. LCS/LCSD %RPDs were within the control limit listed in FWQAPP Table 3-1 of ≤35%. PETN and nitroguanidine were not included in Appendix C; however, the recoveries were within the laboratory-established control limits of 50-150%.

- Surrogate Recovery: All surrogate recoveries were within the control limits listed in LCG Table 5 of 50-150%. A surrogate was not used for the analysis of nitroguanidine.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were not performed on a validated sample. MS/MSD analyses were performed on LL1SS-525M-3036 SO. There were recovery outliers for 3-nitrotoluene and tetryl and RPD outliers for nitroglycerin. The remaining MS/MSD recoveries were within the control limits listed in FWQAPP Table 3-1 of 40-140%. Remaining RPDs were within the laboratory control limit of 35%.

- Compound Identification: Compound identification was verified for those samples validated at a 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 those samples validated at a Level IV. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any result reported between the MDL and the reporting limit was qualified as estimated, "J."

  For samples LL1SS-517M-3018-SO and LL1SS-517M-3020-SO, the laboratory reported results from both the primary and confirmation analyses. In accordance with LCG, the higher of the two values should be reported unless there was an indication of

chromatographic interference in the higher concentration result. The higher value for the reported compound in each sample, 2,4,6-trinitrotoluene, was from the confirmation column. In these instances, the reviewer chose not to report the confirmation result as the confirmation and primary analyses yielded similar results and the confirmation analyses were performed past the holding time. All unreported results were considered duplicate data and were rejected, "R," and coded with a "D," qualification code.

- Target compound confirmation was performed for detects in the validated samples. Intercolumn RPDs were within the control limit listed in LCG Table 5 of ≤ 40%.

- System Performance: Review of the raw data indicated no problems with system performance.

- There were no manual integrations performed for data reviewed at Level IV.

- 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: Three equipment rinsate samples were collected and analyzed for explosives but only LL1SS-523M-0000-ER was associated with a portion of the validated samples: LL1SS-523M-3027-SO, LL1SS-523M-3029-SO, and LL1SS-523M-3030-SO. There were no detects in LL1SS-523M-0000-ER.

    - Field Duplicates: Five field duplicates and five blind field duplicates were collected and analyzed for explosive compounds. Except as noted below, RPDs were within the control limits in FWQAPP Table 3-1 of ≤50%. See Appendix A for comparisons of all samples and analytes.

Table 4. Explosives field duplicate comparisons

Primary Sample	Field Duplicate Sample	Analyte(s)	RPD
LL1SS-517M-3018-SO	LL1SS-517M-3020-SO	2,4,6-trinitrotoluene	174%

Table 5. Explosives blind field duplicate comparisons

Primary Sample	Blind Duplicate Sample	Analyte(s)	RPD
LL1SS-517M-3018-SO	LL1SS-517M-3020-SO	2,4,6-trinitrotoluene	191%*

*The reporting limit was used for calculating the RPD in instances where a nondetect was reported in the primary or duplicate sample.

4.2 POLYCHLORINATED BIPHENYLS (PCBS)

Nine of the 74 soil samples collected were analyzed by Microbac Laboratories for PCBs by USEPA SW-846 Method 8082.

- MDL studies were not evaluated as part of this project.

- Calibration: Calibration criteria were met. Initial calibration average percent relative standard deviations (%RSDs) were within the control limits listed in the LCG Table 3 of ≤20%, or the linear regression r values were ≥0.990. The second source initial calibration verification standard (ICV) was within the control limits listed in LCG Table 3 of 85-115%.

  The continuing calibration verification (CCV) standard %Ds were within the control limits listed in LCG Table 3 of ≤15%.

  The MRL standard recoveries were within the control limits listed in LCG Table 3 of 70-130%.

  MDL checks are required once per quarter per instrument as per LCG Table 5. The quarterly MDL check standard result was not provided.

- Blanks: The method blanks associated with those samples validated at Levels III and IV had no target compound detects above the control limits listed in LCG Table 3, of one-half the reporting limit for target compounds, and no common laboratory contaminant detects above the reporting limit.

- Blank Spikes and Laboratory Control Samples: LCS recoveries were within the control limits listed in LCG Appendix C of 53-143% and 71-134%, respectively, for Aroclor 1016 and Aroclor 1260.

- Surrogate Recovery: Recoveries were within the control limits listed in LCG Table 3 of 50-150%. For samples analyzed at dilutions of 10× or higher, surrogates were considered diluted out and recoveries were not evaluated.

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed for sample LL1SS-525M-3036-S0. The sample was not validated for this report, but was processed using ADR. Recoveries for Aroclor 1260 were above the QC limits at 251% and 213%, respectively. Recoveries for Aroclor 1016 were within the control limits listed in FWQAPP Tables 3-1 of 40-140%. RPDs were within the laboratory control limit of 50%.

- Compound Identification: Compound identification was verified for the sample validated at Level IV. Review of the sample chromatograms, standards, and retention times indicated no problems with target compound identification. Although Aroclor 1260 was identified on the initial quantitation report for the validated sample, the laboratory reported only Aroclor 1254. Review of the standard and sample chromatograms showed Aroclor 1254 to be the best pattern match. It should be noted that Aroclor 1254 was accurately quantitated using the Aroclor 1254 calibration.

  According to the laboratory extraction sheet, a fluorisil clean up and acid wash were performed for the samples in these SDGs.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the sample validated at a Level IV. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. The Level IV validated sample was reanalyzed at 10× dilutions in order to report Aroclor 1254 within linear range of the calibration. All other results were reported from the undiluted analysis of the sample. Aroclor 1254 in the undiluted analysis and all other results in the diluted analysis were rejected, "R," as duplicate data and coded with a "D" qualification code. Any result reported between the MDL and the reporting limit was qualified as estimated, "J."

- Second column confirmation was performed for detects in the validated samples. Intercolumn RPDs were within the control limit listed in LCG Table 3 of ≤40%. In accordance with LCG, the laboratory reported the higher of the two values unless there was an indication of chromatographic interference in the higher concentration result.

- System Performance: Review of the raw data indicated no problems with system performance.

- No manual integrations were performed for data associated with the validated samples in this SDG.

- 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 samples validated for this SDG had no associated field blank. Equipment rinsate LL1SS-523M-0000-ER (SDG L09100770) was collected and analyzed for PCBs. The equipment rinsate had no target compounds detected above the MDL.

    - Field Duplicates: One field duplicate and one blind duplicate were associated with parent sample LL1SS-523M-3027-SO. All results were within the control limits as noted in FWQAPP Table 3-1 of ≤50%. See Appendix A for comparisons of all samples and analytes.

4.3 PESTICIDES

Five of the 74 soil samples collected were analyzed by Microbac Laboratories for Pesticides by USEPA SW-846 Method 8081.

- MDL studies were not evaluated as part of this project.

- Calibration: Calibration criteria were met. Initial calibration average percent relative standard deviations (%RSDs) were within the control limits listed in the LCG Table 4 of ≤20%, or the linear regression r values were ≥0.990. The second source initial calibration

verification standard (ICV) recoveries affecting sample data were within the control limits listed in LCG Table 4 of 85-115%. As the laboratory did not report any detects, no secondary column confirmation analyses were performed.

- The DDT/Endrin breakdown standards were within the control limits listed in LCG Table 4 of ≤15%.
- The continuing calibration verification (CCV) standard %Ds affecting sample data were within the control limits listed in LCG Table 4 of ≤15%.
- The MRL standard recoveries affecting sample data were within the control limits listed in LCG Table 4 of 70-130%.
- MDL checks are required once per quarter per instrument as per LCG Table 5. The quarterly MDL check standard result was not provided.

- Blanks: The method blank associated with those samples validated at Levels III and IV had no target compound detects above the control limits listed in LCG Table 4, of one-half the reporting limit for target compounds, and no common laboratory contaminant detects above the reporting limit.
- Blank Spikes and Laboratory Control Samples: Recoveries were within the control limits listed in LCG Appendix C.
- Surrogate Recovery: Recoveries were within the control limits listed in LCG Table 4 of 50-150%.
- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed for sample LL1SS-525M-3036-S0. The sample was not validated for this report, but was processed using ADR. According to the case narrative for this SDG, due to sample matrix interference (SMI) one spiked compound in the MS and two in the MSD were not recovered, and one compound in the MS and three in the MSD were recovered above the QC limits.
- Compound Identification: Compound identification was verified for the sample validated at Level IV. When a compound retention time (RT) shift exceeded half of the defined RT window, the laboratory flagged the compound with an "F," only on the quantitation report, and did not report the compound as detected. These false negatives, noted in the table below, were reported as detects by the reviewer and were coded with "-" and "$" qualification codes. Please note that there are likely false negatives in the unvalidated samples.

Sample results qualified as false negatives	
Sample	**Analyte(s)**
LL1SS-523M-3027-SO	dieldrin, endrin aldehyde

Review of the sample chromatogram, retention times, and spectra indicated no other problems with target compound identification. It should be noted that the intercolumn %D comparison exceeded 100% for some results. As per the National Functional Guidelines (10/99), these results are considered tentatively identified. The result noted in the table below was qualified as tentatively identified, "N," and was coded with a *III qualification code.

Results qualified as tentatively identified		
Sample	**Analyte**	**Intercolumn RPD**
LL1SS-523M-3027-SO	dieldrin	136%

According to the laboratory extraction sheet, a fluorisil cleanup was performed for the samples in these SDGs.

- Compound Quantification and Reported Detection Limits: Compound quantification was verified for the sample validated at a Level IV; however, as the laboratory provided only primary column calibration data (see Calibration section,) only the primary column results were verified. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any result reported between the MDL and the reporting limit was qualified as estimated, "J." As the reviewer manually calculated the results reported in sample LL1SS-523M-3027-SO from rounded values on the raw data quantitation report, the results were qualified as estimated, "J," and coded with "*III" and "$"qualification codes.

  For all validated samples, the laboratory or reviewer reported results from both the primary and confirmation analyses. In accordance with LCG, the laboratory reported the higher of the two values unless there was an indication of chromatographic interference in the higher concentration result.

- The samples were analyzed on two analytical columns for target compound confirmation. Except as noted below, the intercolumn RPDs were within the control limits listed in LCG Table 4 of ≤ 40%. Results with RPDs >40% were qualified as estimated, "J," and coded with *III qualification code.

Results qualified for intercolumn RPDs >40%		
Sample	**Analyte**	**Intercolumn RPD**
LL1SS-523M-3027-SO	endrin aldehyde	79%

- System Performance: Review of the raw data indicated no problems with system performance.

- Some manual integrations were performed for QC data associated with the sample data. 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:

- o Field Blanks and Equipment Rinsates: The samples validated for this SDG had no associated field blank. Equipment rinsate LL1SS-523M-0000-ER (SDG L09100770) was collected and analyzed for pesticides. The equipment rinsate had no target compounds detected above the MDL.

- o Field Duplicate Samples: One field duplicate and one blind duplicate were associated with parent sample LL1SS-523M-3027-SO; however, as false negatives were identified in the Level IV validation of the primary sample (see Compound Identification), the duplicate samples (field duplicate and blind duplicate) were not considered a valid comparison.

4.4 SEMIVOLATILE ORGANIC COMPOUNDS (SVOCS)

Seven of the 74 soil samples collected were analyzed by Microbac for semivolatile compounds by USEPA Method 8270C.

- 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 were met, with exceptions affecting sample results noted in the tables below.

  - o Initial calibration average RRFs and ICV and CCV RRFs were within method control limits of ≥0.050 for system performance check compounds (SPCCs). All initial calibration %RSDs were within the method control limits listed in the LCG Table 2, of ≤30% for calibration check compounds (CCCs) and ≤15% for remaining compounds, or linear regression r values ≥0.995.

  - o With one exception listed in the table below, all second source initial calibration verification standard recoveries affecting sample data were within the control limits listed in the LCG Table 2 of 70-130%. Nondetects for outliers below 70% were rejected, "R," and coded with a "C" qualification code.

Samples qualified for MRL recovery outliers			
Analyte	**Recovery**	**Date / Instrument**	**Affected Samples**
3,3'-dichlorobenzidine	54.2%	11/03/09 / HPMS4	All validated samples of L09100645

Bold analytes and recoveries indicate rejected results.

  - o Continuing calibration %Ds affecting sample data were within the method control limits of ≤20% listed in the LCG Table 2.

- With one exception listed in the table below, MRL standard recoveries affecting sample data were within the control limits of 70-130% listed in the LCG Table 2. Sample results for recovery outliers below 50% were rejected, "R," in the affected samples, and coded with a "C" qualification code.

Samples qualified for MRL recovery outliers			
Analyte	**Recovery Begin / End**	**Date / Instrument**	**Affected Samples**
hexachlorocyclopentadiene	— / 0.0%	11/04/09 / HPMS4	All validated samples of L09100645

Bold analytes and recoveries indicate rejected results.

- MDL checks are required once per quarter per instrument as per LCG Table 5. The quarterly MDL check standard result was not provided.

- Blanks: The method blank associated with those samples validated at Levels III and IV had no target compound detects above the control limits listed in the LCG Table 2 of one-half the reporting limit for target compounds, and no common laboratory contaminants.

- Blank Spikes and Laboratory Control Samples: LCS recoveries were within the control limits listed in the LCG Appendix C for soils.

- Surrogate Recovery: With exceptions listed in the table below, surrogate recoveries were within the control limits of 50-150% listed in the LCG Table 2. The reviewer noted that the associated method blank and LCS also had surrogate outliers, indicating a problem either with the surrogate spiking mix or with sample preparation. When no other qualifications with conflicting bias were assigned to a result, the results listed in the table below were qualified as estimated, "UJ," for nondetects, and coded with an "S" qualification code.

Samples qualified for surrogate recovery outliers			
Sample	**Surrogate**	**Recovery**	**Qualified Analytes**
LL1SS-523M-3027-SO	2-fluorobiphenyl 2-fluorophenol nitrobenzene-d5 phenol-d5	39.7% 43.1% 40.2% 40.6%	All retained analytes
LL1SS-523M-3029-SO	2-fluorobiphenyl 2-fluorophenol nitrobenzene-d5 phenol-d5	43.8% 44.3% 42.5% 43.3%	All retained analytes
LL1SS-523M-3030-SO	2-fluorobiphenyl 2-fluorophenol nitrobenzene-d5 phenol-d5	40.2% 41.7% 40.4% 41.0%	All retained analytes

- Matrix Spike/Matrix Spike Duplicate: MS/MSD analyses were performed on sample LL1SS-523M-3036-SO. The sample was not validated for this report, but was processed using ADR. One analyte was not recovered, resulting in an RPD outlier, and another was

recovered marginally below 45%. Remaining recoveries and RPDs were within of the control limits of 45-135% and ≤50%, respectively, listed in the LCG Table 2.

- Internal Standards Performance: The internal standard area counts and retention times were within the LCG Table 2 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 a 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 a Level IV. The reviewer noted that although the samples had no target compound detects or apparent non-target matrix interference, the validated samples were analyzed at 5× dilutions, attributed by the case narrative to the extract appearance and viscosity. The samples were not reanalyzed undiluted. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any result reported between the MDL and the reporting limit was qualified as estimated, "J," by the laboratory.

- System Performance: Review of the raw data indicated no problems with system performance.

- Some routine manual integrations were performed for calibration and QC data associated with the sample data. 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: The samples validated for this SDG had no associated field blank. Equipment rinsate LL1SS-523M-0000-ER (SDG L09100770) was collected and analyzed for semivolatiles. The equipment rinsate had no target compounds detected above the MDL.

    - Field Duplicate Samples: One field duplicate and one blind duplicate were associated with parent sample LL1SS-523M-3027-SO. All results were within the control limits as noted in FWQAPP Table 3-1 of ≤50% or +/- the reporting limit for results less than the reporting limit. See Appendix A for comparisons of all samples and analytes.

4.5 VOLATILE ORGANIC COMPOUNDS (VOCS)

Five of the 74 soil samples collected were analyzed by Microbac for volatile compounds by USEPA Method 8260B.

- 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 were met.
    - Initial calibration average RRFs and ICV and CCV RRFs were within method control limits of ≥0.050 for system performance check compounds (SPCCs). All initial calibration %RSDs were within the method control limits listed in the LCG Table 1, of ≤30% for calibration check compounds (CCCs) and ≤15% for remaining compounds, or linear regression r values ≥0.995.
    - All second source initial calibration verification standard recoveries were within the control limits listed in the LCG Table 1 of 80-120%.
    - Continuing calibration %Ds affecting validated sample data were within the method control limits of ≤20% listed in the LCG Table 1.
    - MRL standard recoveries affecting validated sample data were within the control limits of 70-130% listed in the LCG Table 1.
    - MDL checks are required once per quarter per instrument as per LCG Table 5. The quarterly MDL check standard result was not provided.
- Blanks: The method blank associated with those samples validated at Levels III and IV had no target compound detects above the control limits listed in the LCG Table 1 of one-half the reporting limit for target compounds, and no common laboratory contaminants.
- Blank Spikes and Laboratory Control Samples: LCS recoveries were within the control limits listed in the LCG Appendix C.
- Surrogate Recovery: Surrogate recoveries were within the control limits of 50-150% listed in the LCG Table 1.
- Matrix Spike/Matrix Spike Duplicate: Batch MS/MSD analyses were performed on sample LL1SS-525D-3037-SO. The sample was not validated for this report, but was processed using ADR. Acetone was recovered above the control limits listed in FWQAPP Table 3-1 of 70-130%. The RPDs were within 35%.

- Internal Standards Performance: The internal standard area counts and retention times were within the LCG Table 1 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 a 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 a Level IV. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any result reported between the MDL and the reporting limit was qualified as estimated, "J," by the laboratory.

- System Performance: Review of the raw data indicated no problems with system performance.

- Manual integrations were not performed for the sample validated at Level IV, 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:

    o Trip Blanks: Sample TRIP BLANK-1026 was associated with the validated samples. As listed in the table below, the site sample detect for acetone was qualified as nondetected, "U," at the level of contamination, and coded with a "T" qualification code.

Sample results qualified for trip blank contamination		
Sample	**Analyte**	**Trip Blank / Sample Concentrations**
LL1SS-523M-3033-SO	acetone	3.16(J) µg/L / 12.0 µg/Kg

    o Field Blanks and Equipment Rinsates: The samples validated for this SDG had no associated field blank. Equipment rinsate LL1SS-523M-0000-ER (SDG L09100770) was collected and analyzed for volatiles. The equipment rinsate had no target compounds detected above the MDL.

    o Field Duplicate Samples: One blind duplicate was associated with parent sample LL1SS-523M-3027-SO. All results were within the control limits as noted in FWQAPP Table 3-1 of ≤50% or +/- the reporting limit for results less than the reporting limit. See Appendix A for comparisons of all samples and analytes.

4.6 METALS

Forty-nine of the 74 soil samples collected were analyzed by Microbac for various metals by USEPA Methods 6010B, 6020 and 7471A.

- MDL studies were not evaluated as part of this project.
- Calibration: Except as noted below, calibration criteria were met.
    - o Initial calibration: Linear regression r values were within the control limit listed in the LCG Tables 7 and 9 of ≥0.995.
    - o The %RSDs for the ICV and continuing calibration verification (CCV) standards were within the control limit listed in the LCG Table 7 of <5%.
    - o Except as noted in the table below, the inductively coupled plasma (ICP) and ICP-mass spectrometer (ICPMS) ICV and CCV recoveries were within the control limits listed in LCG Table 7 of 90-110%. ICV and CCV recoveries were within the control limits listed in the LCG Table 9 of 80-120% for mercury.

      Results noted in the table below were qualified as estimated, "J," for detects in the associated sample. All qualified results were coded with a "C" 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-."

Samples qualified for CCV recovery outliers		
Analyte	**Recovery**	**Qualified Samples**
Nickel	89%	Nickel in validated sample LL4SS-280M-2000 SO
Arsenic	89%	Arsenic in validated sample LL4SS-280M-2000 SO

    - o As per the DoD QSM Table B-7, ICPMS mass calibrations were within 0.1 atomic mass units (amu) of the true values, peak resolutions were less than 0.9 amu (full width-10% height) and the %RSDs were less than 5%.
    - o Except as noted below, MRL recoveries were within the control limits listed in the LCG Tables 7 and 9 of 70-130%. Nondetected results were not qualified for high recoveries. Samples with results that were greater than 10× the reporting limit were not qualified for MRL recovery outliers as it was the reviewer's professional opinion that at those concentrations, the CCV recoveries were more indicative of the instrument performance relative to the sample.

      Results noted in the table below were qualified as estimated, "J," for detects and "UJ," for nondetects in the associated samples. All qualified results were coded with a "C" qualification code. Nondetected results associated with recoveries less than 60% were rejected, "R," and the analyte was noted in **bold** in the table below. 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 MRL recovery outliers		
Analyte	**Recovery**	**Qualified Samples**
Silver	22%, 0%	Silver in validated samples of L09110136
Selenium	138%	Selenium in validated samples of L09110136
Thallium	69%	Thallium in validated samples of L09110136
Silver	43%, 27%	Silver in validated samples of L0900553
Silver	21%, 41%	Silver in the validated samples of L09100645
Thallium	148%	Thallium in the validated samples of L09100645

Nondetected analytes noted in **bold** were rejected in the associated samples.

- MDL Verification: The laboratory analyzed MDL check samples but was not able to provide summary information listing the spiked concentrations; therefore, the MDL check results were not assessed.

- Blanks: Method blanks and CCBs (Level IV only) had no applicable detects above the control limit listed in the LCG Tables 7 and 9 of one-half the MRL.

- Interference Check Samples: ICP and ICPMS interference check sample A (ICSA) and AB (ICSAB) recoveries were within the control limits listed in QAPP Table 7 of 80-120%.

- Blank Spikes and Laboratory Control Samples: Recoveries were within the control limits listed in LCG Appendix C of 80-120%.

- Laboratory Duplicates: Except as noted below, laboratory duplicate RPDs were within the control limits listed in the FWQAPP Table 3-1 of ≤25% for soil. The duplicate criterion was only applied when the original sample result was nominally ≥5× the reporting limit. In cases where the original sample result was <5× the reporting limit, the reasonable control limit of ± the reporting limit was applied. In instances where more than one laboratory duplicate was analyzed in an SDG, parent samples were qualified only for the RPD outliers in the sample's laboratory duplicate. Otherwise, as per the National Functional Guidelines, all samples in an SDG were qualified for associated RPD outliers.

  Detected analytes noted in the table below were qualified as estimated detects, "J." All qualified results were coded with an "E" qualification code.

Samples qualified for laboratory duplicate RPD outliers			
Parent Sample	**Analyte**	**RPD**	**Qualified Samples**
F14SS-008M-0504 SO	Manganese	31%	Manganese in all validated samples of L09110136.
	Potassium	26%	Potassium in all validated samples of L09110136
	Selenium	31%	Selenium in all validated samples of

Samples qualified for laboratory duplicate RPD outliers			
Parent Sample	**Analyte**	**RPD**	**Qualified Samples**
			L09110136
	Zinc	63%	Zinc in all validated samples of L09110136
LL4SS-282M-2005 SO	Calcium	29%	Calcium in all validated samples of L0900553
LL1SS-525M-3036 SO	Arsenic	29%	Arsenic in all validated samples of L0900645
	Lead	67%	Lead in all validated samples of L0900645
	Nickel	25%	Nickel in all validated samples of L0900645
	Selenium	200%	Selenium in all validated samples of L0900645
	Thallium	95%	Thallium in all validated samples of L0900645

In addition to the unvalidated samples listed in the table above, acceptable laboratory duplicate analyses were performed on the following unvalidated samples: LL1SS-515M-3016 SO, LL1SS-519M-3023 SO (mercury), and LL1SS-515M-3000 SO.

- Matrix Spike/Matrix Spike Duplicate: Except as noted below, recoveries were within the control limits listed in FWQAPP Table 3-1 of 75-125%. Matrix spike control limits were not applied when the native sample concentration exceeded the spiked amount by a factor of four or more. In instances where more than one matrix spike was analyzed in an SDG, parent samples were qualified only for the recovery outliers in the sample's matrix spike. Otherwise, as per the National Functional Guidelines, all samples in an SDG were qualified for associated recovery outliers.

  Results noted in the table below were qualified as estimated, "J," for detects and "UJ," for nondetects in the associated samples; however, nondetected results were not qualified for recoveries above the control limit. All qualified results were 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**	**Recovery**	**Qualified Samples**
F14SS-008M-0504 SO	Barium	173%	Barium in all samples in L09110136
	Chromium	140%	Chromium in all samples in L09110136.
	Potassium	155%	Potassium in all samples in L09110136.
	Vanadium	129%	Vanadium in all samples in L09110136
	Zinc	158%	Zinc in all samples in L09110136
	Arsenic	70%	Arsenic in all samples in L09110136
	Selenium	61%	Selenium in all samples in L09110136
LL4SS-282M-2005 SO	Barium	126%	Barium in all validated samples in L0900553
	Potassium	135%	Potassium in all validated samples in L0900553
	Lead	157%	Lead in all validated samples in L0900553
	Arsenic	68%	Arsenic in all validated samples in L0900553
	Selenium	62%	Selenium in all validated samples in L0900553

Samples qualified for matrix spike recovery outliers			
Parent Sample	**Analyte**	**Recovery**	**Qualified Samples**
LL1SS-525M-3036 SO	Selenium	73%	Selenium in all validated samples in L0900645

In addition to the unvalidated samples listed in the table above, acceptable matrix spike analyses were performed on the following unvalidated samples: LL1SS-515M-3016 SO, LL1SS-519M-3023 SO (mercury), LL1SS-525M-3036 SO.

- Serial Dilution: Except as noted below, serial dilution %Ds were within the control limit listed in LCG Table 7 of ≤10%. The serial dilution control limit is only applicable when the original sample concentration is minimally ≥50× the MDL for ICP analytes and ≥25× the MDL for mercury. As per the National Functional Guidelines, all samples in an SDG were qualified for associated %D outliers.

  All detect results for the analytes noted in the table below were qualified as estimated, "J," and were coded with an "A" qualification code. When no other qualifications with conflicting bias were assigned to a result, detected results noted in the table below were assigned a negative bias, "J-."

Samples qualified for serial dilution %D outliers			
Parent Sample	**Analyte**	**%D**	**Qualified Samples**
LL1SS-522M-3026 SO	Nickel	12%	Nickel in all validated samples in L09110136
LL1SS-517M-3018 SO	Lead	10.3%	Lead in all validated samples in L0900553
LL1SS-500M-3000 SO	Chromium	11%	Chromium in validated samples of L0900553
	Cobalt	43%	Cobalt in validated samples of L0900553
LL1SS-501M-3001 SO	Chromium	16.4%	Chromium in all samples in L0900553
	Iron	11.1%	Iron in validated samples of L0900553
	Manganese	13.7%	Manganese in validated samples of L0900553
	Lead	10.5%	Lead in validated samples of L0900553

In addition to the unvalidated samples listed in the table above, acceptable serial dilution analyses were performed on the following unvalidated samples: L1SS-520M-3024 SO (6010B analytes), LL1SS-519M-3019 SO (6010 analytes), and LL1SS-516M-3017 SO (6020 analytes). An acceptable serial dilution analysis was performed on validated sample LL1SS523M-3029 SO.

- Internal Standards: As per the DOD QSM Table B-7, the ICPMS sample internal standards intensities were within 30-120% of those in the ICB.

- 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 MDL and the reporting limit was qualified as estimated, "J."

  The Microbac mercury raw data did not list the sample absorbances; therefore, the reviewer was not able to calculate the sample results from the raw data.

- 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:

    - o Field Blanks and Equipment Rinsates: Three equipment rinsate samples were collected and analyzed for metals but only LL1SS-523M-0000-ER was associated with a portion of the validated samples: LL1SS-523M-3027-SO, LL1SS-523M-3029 SO, and LL1SS-523M-3030 SO. There were detects in LL1SS-523M-0000-ER, but none were sufficient to qualify the validated samples.

    - o Field Duplicate Samples: Five field duplicates and five blind field duplicate pairs were analyzed for metals. Except as noted in the table below, all results were within the control limits as noted in FWQAPP Table 3-1 of ≤50% or +/- the reporting limit for results less than the reporting limit. See Appendix A for comparisons of all samples and analytes

Table 6. Metals field duplicate comparison

Primary Sample	Field Duplicate Sample	Analyte	RPD
LL1SS-537M-3050-SO	LL1SS-537M-3052-SO	Antimony	65%

Table 7. Metals blind field duplicate comparison

Primary Sample	Blind Duplicate Sample	Analyte	RPD
LL1SS-537M-3050-SO	LL1SS-537M-3053-SO	Antimony	59%
		Thallium	58%

4.7 GENERAL CHEMISTRY - HEXAVALENT CHROMIUM AND NITROCELLULOSE

Forty-nine of the 74 soil samples collected were analyzed by Microbac for hexavalent chromium by USEPA Method 7196A and 22 samples of the 74 collected were analyzed by Microbac for nitrocellulose as nitrate/nitrite by USEPA Method Cold Regions Research and Engineering Laboratory's method for nitrocellulose.

- MDL studies were not evaluated as part of this project.

- Calibration: Except as noted below, calibration criteria were met.

    - o Initial calibration: Hexavalent chromium and nitrocellulose linear regression r values were within the control limit listed in the DoD QSM Table B-8 of ≥0.995.

    - o The hexavalent chromium ICV and CCV recoveries were within the control limits listed in DoD QSM Tables B-8 and B-10 of 90-110%. The DoD QSM Table B-8 for hexavalent chromium also requires a CCV be analyzed every 15 samples. The laboratory only analyzed hexavalent chromium CCVs at the beginning and

end of the analytical sequences. However, MRL check samples were analyzed with acceptable recoveries at the end of every analytical sequence. As hexavalent chromium was not detected in the validated samples, it was the reviewer's professional opinion that the data was not adversely affected.

- o Hexavalent chromium MRL recoveries were within the control limits listed in the LCG Table 7 (for metals) of 70-130%. No nitrate/nitrite MRL standards were analyzed for the nitrocellulose analyses; therefore, nondetected results in the validated samples were qualified as estimated, "UJ," and results detected at concentrations less than 5× the reporting limit were qualified as estimated, "J." All qualified results were coded with a "C" qualification code.

- o MDL Verification: MDL verification standards were not analyzed.

- Blanks: Method blanks and CCBs (Level IV only) had no applicable detects above the control limit listed in the DoD QSM Tables B-8 and B-10 of one-half the MRL.

- Blank Spikes and Laboratory Control Samples: Hexavalent chromium recoveries were within the laboratory-established control limits of 90-110% and the nitrocellulose recoveries were within the laboratory-established control limits of 50-110%.

- Laboratory Duplicates: Hexavalent chromium laboratory duplicate RPDs were within the control limits listed in the DoD QSM Table B-8 of ≤30%. The duplicate criterion was only applied when the original sample result was nominally ≥5× the reporting limit. In cases where the original sample result was <5× the reporting limit, the reasonable control limit of ± the reporting limit was applied. No laboratory duplicates were performed for nitrocellulose by nitrate/nitrite.

- Matrix Spike/Matrix Spike Duplicate: Hexavalent chromium recoveries were within the control limits listed in the DoD QSM Table B-8 of 85-115% and the nitrocellulose recoveries were within the laboratory-established control limits of 50-150%. %RSDs were within the control limit listed in FWQAPP 3-1 of 35%. Matrix spike control limits were not applied when the native sample concentration exceeded the spiked amount by a factor of four or more. In instances where more than one matrix spike was analyzed in an SDG, parent samples were qualified only for the recovery outliers in the sample's matrix spike. Otherwise, as per the National Functional Guidelines, all samples in an SDG were qualified for an associated recovery outlier.

- 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. Due to color interference, numerous hexavalent chromium samples in all SDGs were reported from dilutions. Any result reported between the MDL and the reporting limit was qualified as estimated, "J."

- Manual Integrations: Manual integrations are not applicable to these 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: Three equipment rinsate samples were collected and analyzed for wet chemistry parameters but only LL1SS-523M-0000-ER was associated with a portion of the validated samples: LL1SS-523M-3027-SO, LL1SS-523M-3029 SO, and LL1SS-523M-3030 SO. There were no detects in LL1SS-523M-0000-ER.

    - Field Duplicate Samples: Five field duplicate pairs and blind field duplicate pair were analyzed for hexavalent chromium and three field duplicate and blind field duplicate pairs were analyzed for nitrocellulose. All results were within the control limits as noted in FWQAPP Table 3-1 of ≤50% or +/- the reporting limit for results less than the reporting limit. See Appendix A for comparisons of all samples and analytes.

5. DATA DEFICIENCIES

5.1 REJECTED DATA

As noted in Table 8 below, some data were rejected for calibration criteria outliers. Calibration criteria outliers accounted for all rejections. 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 Table 8.

5.1.1 Data Qualification Summary

Table 8, below, lists the number of analytes qualified for quality control outliers. A summary of the qualifications applied to the data can be found in Appendix A.

5.2 DATA USABILITY

As the data validated in this report are not inclusive of the entire field effort, no field completeness value was calculated. As noted in Table 8 below some data were rejected; however, all remaining data is usable for its intended purposes as qualified by MEC^{X}.

The analytical completeness goal for the project that was established in the FWQAPP was 90% for each method. Data with reporting limits that exceeded the established criteria and data estimated for quality control outliers or for detects between the MDL and the RL were included in Table 8 for informational purposes only. The following table summarizes the calculated completeness for the project.

Table 8. Analytical completeness for primary data

			Number of Results					
Analysis	**Samples Analyzed**	**Analytes per Sample**	**Total**	**Rejected**	**MDLs Exceeding Criteria**	**Estimated for QC Outliers**	**Estimated for Detects <RL**	**Percent Complete**
Explosives	15	16	240	15	0	0	0	93.8%
Pesticides	3	21	63	0	0	2	2	100%
PCBs	3	7	21	0	0	0	0	100%
SVOCs	3	66	198	6	198	192	0	97%
VOCs	2	35	70	0	0	1	3	100%
Metals	15	23	345	15	0	142	15	95.7%
Hexavalent Chromium	15	1	15	0	0	0	0	100%
Nitroguanidine	9	1	9	0	0	0	0	100%
Nitrocellulose	9	1	9	0	0	9	0	100%
Totals			**970**	**36**	**198**	**346**	**20**	**96.3%**

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 PRIMARY AND FIELD DUPLICATE SAMPLE COMPARISON SUMMARY

Primary and field duplicate sample comparisons were considered to be in good agreement. About 1% of the field duplicate and blind field duplicate pair results were above the FWQAPP control limit of 50%, or +/- the reporting limit for results below the reporting limit. The few RPD outliers were spread across most of the duplicate pairs.

False negatives were identified in the Level IV validation of the pesticide data. As not all primary, field duplicate, and blind field duplicate samples were validated at Level IV, the results for the pesticide field duplicate and blind duplicate pairs were not assessed due to the potential for unidentified false negative in the samples validated at Level III. Rejected data were not included in the comparison and results entered in the "Total Analytes" column below do not include rejected results.

Table 9. Primary/field duplicate sample comparison summary

Method	Number of Analytes	Primary/Field Duplicate Pairs	Total Analytes	Number of RPDs within control limit	Number of RPDs above control limit
Explosives	16	5	75	75	0
Pesticides	21	1	21	Not calculated	
PCBs	7	1	7	7	0
SVOCs	66	1	60	60	0
Metals	23	5	110	109	1
Hexavalent chromium	1	5	5	4	1
Nitroguanidine	1	3	3	3	0
Nitrocellulose	1	3	3	3	0

Table 10. Primary/blind field duplicate sample comparison summary

Method	Number of Analytes	Primary/Field Duplicate Pairs	Total Analytes	Number of RPDs within control limit	Number of RPDs above control limit
Explosives	16	5	75	74	1
Pesticides	21	1	21	Not calculated	
PCBs	7	1	7	7	0
SVOCs	66	1	64	64	0
VOCs	35	1	35	35	0
Metals	23	5	110	108	2
Hexavalent chromium	1	5	5	4	1
Nitroguanidine	1	3	3	3	0
Nitrocellulose	1	3	3	3	0

6.2 SPECIFIC DATA CONCERNS

Specific concerns regarding the data are noted below:

- False negatives were identified in the pesticide data. When a compound retention time (RT) shift exceeded half of the defined RT window, the laboratory flagged the compound with an "F," only on the quantitation report, and did not report the compound as detected. In these instances, MEC^X qualified the results as false negatives.

  It is likely that false negatives exist in the unvalidated data.

- 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.

- The laboratory reported total xylenes and total 1,2-dichloroethene instead of the specific isomers, m,p-xylene, o-xylene, cis-1,2-dichloroethene, and trans-1,2-dichloroethene.

- The following reporting limits exceeded the criteria listed in Table 3-3 of the FWQAPP and Appendix A of the QAPP Addendum:

  - Although the semivolatile samples had no target compound detects or apparent non-target matrix interference, the validated samples were analyzed at 5× dilutions, attributed to extract appearance and viscosity. All semivolatile reporting limits in the validated samples exceeded the reporting limit criteria.

In order to avoid repetition of the issues noted above, the following actions should be taken:

- P. Schuler of URS contacted Microbac concerning the process used to confirm analyte identification in gas chromatographic methods. Microbac explained their identification method as follows:

  "*Our actual statistical RT windows are 0 or 0.017 minutes, but we use a default of .03 minutes to ensure an adequate width for detection of compounds. The peaks should be right in the middle of the window. Generally speaking, if a peak is even halfway out of the window, we do not call it a hit, especially if the surrogate peaks are perfectly aligned within their windows.*"

  P. Schuler then contacted Methods Information Communication Exchange (MICE) Service, operated for the EPA by Science Applications International Corporation (SAIC), to inquire about Microbac's retention time window practice. The response from MICE was as follows

  "*We may have to agree to disagree on your initial inquiry, but a retention time window of 0.03 minutes is in fact +/- 3 times the default standard deviation of 0.01. Which further translates to 0.015 minutes on each side of the peak. If you use the logic of a window of +/- 0.03 or 0.03 minutes on each side of the peak, this actually equates to a window of*

0.06 or six times the default standard deviation. Also, from a historical perspective this Method 8000 guidance originated using packed column technology which invariably generated much more variability while performing the 72 hour retention time window study and therefore created wider windows. However, with the newer capillary column technology there is much less variability and thereby the default standard deviation is one possible option should one choose to use the Method 8000 guidance. In reality, the retention time windows should be both method and instrument specific using retention times obtained from the initial calibrations. In other words the generic retention time window guidance in Method 8000 will not always be appropriate for many GC methods and most certainly the HPLC methods."

While MICE may agree with Microbac on a total retention time window of 0.03 minutes, MEC^X's evaluation of the data indicates the presence of potential target compounds partially within the Microbac's retention time windows. These target compounds are confirmed by split laboratory analysis. The restrictive nature of Microbac's use of the retention time window continues to result in false negatives.

If pesticides are a contaminant of concern at this site, MEC^X recommends either:

1. **Have the analysis performed at a laboratory with a less restrictive gas chromatography retention time window policy;**

2. **Confirm potential pesticide detects by a mass spectrometer method when the detects are above the detection limit of the mass spectrometer; or**

3. **Perform comprehensive data validation on all pesticide data.**

- A list of the primary compounds of concern should be provided to the laboratory project manager. This list can be used by the laboratory analysts in order to determine if undiluted analyses should be performed to confirm specific compounds of concern or to meet project reporting limit requirements.

- A comprehensive list of items in a Level IV data packages should be listed in the QAPP and provided to the laboratory project manager. This list should note that the raw data for all spectroscopic methods must include the raw absorbance data.

7. REFERENCES

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Final Work Plan Addendum #1 for the Sampling of Soils Below Floor Slabs at RVAAP-08 Load Line 1 and Other Building Locations – Ravenna Army Ammunition Plant. URS Group, Inc. July 2009.

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Shell for Analytical Chemistry Requirements. United State Army Corps of Engineers. February 2001.

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APPENDIX A

Qualified Sample Result Forms

Validated Sample Result Forms: L09110136

Analysis Method 6010B

Sample Name F15SS-012M-0500-SO **AnalysisType:** RES

Lab Sample Name: L09110136-14 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	12200	14.1	7.07	mg/kg		J	E
Barium	7440-39-3	76.1	0.354	0.0707	mg/kg		J+	Q
Beryllium	7440-41-7	0.588	0.0177	0.00849	mg/kg			
Cadmium	7440-43-9	1.03	0.0707	0.0354	mg/kg			
Calcium	7440-70-2	5690	7.07	3.54	mg/kg			
Chromium	7440-47-3	21.9	0.177	0.0849	mg/kg		J+	Q
Cobalt	7440-48-4	6.83	0.177	0.0849	mg/kg			
Copper	7440-50-8	16.9	0.177	0.0849	mg/kg			
Iron	7439-89-6	22800	1.41	0.707	mg/kg	B		
Magnesium	7439-95-4	3300	17.7	8.49	mg/kg			
Manganese	7439-96-5	330	0.354	0.0707	mg/kg		J	E
Potassium	7440-09-7	981	35.4	17.7	mg/kg		J	Q, E
Silver	7440-22-4	0.177	0.354	0.177	mg/kg	U	R	C
Sodium	7440-23-5	102	17.7	3.54	mg/kg			
Vanadium	7440-62-2	22	0.354	0.177	mg/kg		J+	Q
Zinc	7440-66-6	56	0.707	0.354	mg/kg		J	Q, E

Analysis Method 6010B

Sample Name F15SS-012M-0502-SO **AnalysisType:** RES

Lab Sample Name: L09110136-15 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	11600	15.6	7.79	mg/kg		J	E
Barium	7440-39-3	76.7	0.39	0.0779	mg/kg		J+	Q
Beryllium	7440-41-7	0.578	0.0195	0.00935	mg/kg			
Cadmium	7440-43-9	1.06	0.0779	0.039	mg/kg			
Calcium	7440-70-2	5760	7.79	3.9	mg/kg			
Chromium	7440-47-3	19.8	0.195	0.0935	mg/kg		J+	Q
Cobalt	7440-48-4	6.33	0.195	0.0935	mg/kg			
Copper	7440-50-8	16.3	0.195	0.0935	mg/kg			
Iron	7439-89-6	22600	1.56	0.779	mg/kg	B		
Magnesium	7439-95-4	3190	19.5	9.35	mg/kg			
Manganese	7439-96-5	340	0.39	0.0779	mg/kg		J	E
Potassium	7440-09-7	859	39	19.5	mg/kg		J	Q, E
Silver	7440-22-4	0.195	0.39	0.195	mg/kg	U	R	C
Sodium	7440-23-5	85.9	19.5	3.9	mg/kg			
Vanadium	7440-62-2	21.8	0.39	0.195	mg/kg		J+	Q
Zinc	7440-66-6	56.5	0.779	0.39	mg/kg		J	Q, E

Analysis Method 6010B

Sample Name F15SS-012M-0503-SO **AnalysisType:** RES

Lab Sample Name: L09110136-16 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	11600	15.1	7.54	mg/kg		J	E
Barium	7440-39-3	80	0.377	0.0754	mg/kg		J+	Q
Beryllium	7440-41-7	0.592	0.0189	0.00905	mg/kg			
Cadmium	7440-43-9	1.09	0.0754	0.0377	mg/kg			
Calcium	7440-70-2	6150	7.54	3.77	mg/kg			
Chromium	7440-47-3	18.5	0.189	0.0905	mg/kg		J+	Q
Cobalt	7440-48-4	6.58	0.189	0.0905	mg/kg			
Copper	7440-50-8	17.2	0.189	0.0905	mg/kg			
Iron	7439-89-6	23200	1.51	0.754	mg/kg	B		
Magnesium	7439-95-4	3410	18.9	9.05	mg/kg			
Manganese	7439-96-5	366	0.377	0.0754	mg/kg		J	E
Potassium	7440-09-7	848	37.7	18.9	mg/kg		J	Q, E
Silver	7440-22-4	0.189	0.377	0.189	mg/kg	U	R	C
Sodium	7440-23-5	91.8	18.9	3.77	mg/kg			
Vanadium	7440-62-2	21.6	0.377	0.189	mg/kg		J+	Q
Zinc	7440-66-6	58.9	0.754	0.377	mg/kg		J	Q, E

Analysis Method 6010B

Sample Name F16SS-012M-0504-SO **AnalysisType:** RES

Lab Sample Name: L09110136-17 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	9410	14.7	7.34	mg/kg		J	Q
Barium	7440-39-3	58.4	0.367	0.0734	mg/kg		J+	Q
Beryllium	7440-41-7	0.495	0.0184	0.00881	mg/kg			
Cadmium	7440-43-9	0.987	0.0734	0.0367	mg/kg			
Calcium	7440-70-2	6870	7.34	3.67	mg/kg		J+	Q
Chromium	7440-47-3	15.8	0.184	0.0881	mg/kg		J+	Q
Cobalt	7440-48-4	6.13	0.184	0.0881	mg/kg			
Copper	7440-50-8	15.9	0.184	0.0881	mg/kg			
Iron	7439-89-6	20700	1.47	0.734	mg/kg	B	J+	Q
Magnesium	7439-95-4	3420	18.4	8.81	mg/kg		J+	Q
Manganese	7439-96-5	340	0.367	0.0734	mg/kg		J	Q
Potassium	7440-09-7	826	36.7	18.4	mg/kg		J	Q
Silver	7440-22-4	0.184	0.367	0.184	mg/kg	U	UJ	E
Sodium	7440-23-5	54.8	18.4	3.67	mg/kg			
Vanadium	7440-62-2	16.8	0.367	0.184	mg/kg		J+	Q
Zinc	7440-66-6	53.8	0.734	0.367	mg/kg		J	Q

Analysis Method 6010B

Sample Name LL1SS-520M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09110136-18 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	0.05	0.1	0.05	mg/L	U		
Barium	7440-39-3	0.0025	0.01	0.0025	mg/L	U		
Beryllium	7440-41-7	0.0005	0.002	0.0005	mg/L	U		
Cadmium	7440-43-9	#######	0.0005	0.00025	mg/L	U		
Calcium	7440-70-2	0.1	0.2	0.1	mg/L	U		
Chromium	7440-47-3	#######	0.005	0.0025	mg/L	J	J	
Cobalt	7440-48-4	0.0025	0.005	0.0025	mg/L	U		
Copper	7440-50-8	0.0025	0.005	0.0025	mg/L	U		
Iron	7439-89-6	0.464	0.1	0.025	mg/L			
Magnesium	7439-95-4	0.25	0.5	0.25	mg/L	U		
Manganese	7439-96-5	0.005	0.01	0.005	mg/L	U		
Potassium	7440-09-7	0.25	1	0.25	mg/L	U		
Silver	7440-22-4	0.002	0.004	0.002	mg/L	U		
Sodium	7440-23-5	0.25	0.5	0.25	mg/L	U		
Vanadium	7440-62-2	0.005	0.01	0.005	mg/L	U		
Zinc	7440-66-6	0.005	0.02	0.005	mg/L	U		

Analysis Method 6010B

Sample Name LL1SS-520M-3024-SO **AnalysisType:** RES

Lab Sample Name: L09110136-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	3060	14.8	7.42	mg/kg		J	Q
Barium	7440-39-3	24	0.371	0.0742	mg/kg		J+	Q
Beryllium	7440-41-7	0.194	0.0186	0.00891	mg/kg			
Cadmium	7440-43-9	0.612	0.0742	0.0371	mg/kg			
Calcium	7440-70-2	2930	7.42	3.71	mg/kg		J+	Q
Chromium	7440-47-3	16.1	0.186	0.0891	mg/kg		J+	Q
Cobalt	7440-48-4	2.85	0.186	0.0891	mg/kg			
Copper	7440-50-8	10.7	0.186	0.0891	mg/kg			
Iron	7439-89-6	11100	1.48	0.742	mg/kg	B	J+	Q
Magnesium	7439-95-4	931	18.6	8.91	mg/kg		J+	Q
Manganese	7439-96-5	291	0.371	0.0742	mg/kg		J	Q
Potassium	7440-09-7	340	37.1	18.6	mg/kg		J	Q
Silver	7440-22-4	0.186	0.371	0.186	mg/kg	U	UJ	E
Sodium	7440-23-5	23.3	18.6	3.71	mg/kg			
Vanadium	7440-62-2	7.74	0.371	0.186	mg/kg		J+	Q
Zinc	7440-66-6	52	0.742	0.371	mg/kg		J	Q

Analysis Method 6010B

Sample Name LL1SS-521M-3025-SO **AnalysisType:** RES

Lab Sample Name: L09110136-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	2850	14.2	7.1	mg/kg		J	Q
Barium	7440-39-3	18	0.355	0.071	mg/kg		J+	Q
Beryllium	7440-41-7	0.178	0.0177	0.00852	mg/kg			
Cadmium	7440-43-9	0.556	0.071	0.0355	mg/kg			
Calcium	7440-70-2	2500	7.1	3.55	mg/kg		J+	Q
Chromium	7440-47-3	21.5	0.177	0.0852	mg/kg		J+	Q
Cobalt	7440-48-4	2.66	0.177	0.0852	mg/kg			
Copper	7440-50-8	46.5	0.177	0.0852	mg/kg			
Iron	7439-89-6	11000	1.42	0.71	mg/kg	B	J+	Q
Magnesium	7439-95-4	825	17.7	8.52	mg/kg		J+	Q
Manganese	7439-96-5	245	0.355	0.071	mg/kg		J	Q
Potassium	7440-09-7	317	35.5	17.7	mg/kg		J	Q
Silver	7440-22-4	0.177	0.355	0.177	mg/kg	U	UJ	E
Sodium	7440-23-5	17.6	17.7	3.55	mg/kg	J	J	
Vanadium	7440-62-2	7.49	0.355	0.177	mg/kg		J+	Q
Zinc	7440-66-6	42.3	0.71	0.355	mg/kg		J	Q

Analysis Method 6010B

Sample Name LL1SS-522M-3026-SO **AnalysisType:** RES

Lab Sample Name: L09110136-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	4900	14.2	7.1	mg/kg		J	Q
Barium	7440-39-3	34.1	0.355	0.071	mg/kg		J+	Q
Beryllium	7440-41-7	0.256	0.0178	0.00852	mg/kg			
Cadmium	7440-43-9	0.782	0.071	0.0355	mg/kg			
Calcium	7440-70-2	4880	7.1	3.55	mg/kg		J+	Q
Chromium	7440-47-3	17.3	0.178	0.0852	mg/kg		J+	Q
Cobalt	7440-48-4	3.32	0.178	0.0852	mg/kg			
Copper	7440-50-8	12.6	0.178	0.0852	mg/kg			
Iron	7439-89-6	13100	1.42	0.71	mg/kg	B	J+	Q
Magnesium	7439-95-4	1330	17.8	8.52	mg/kg		J+	Q
Manganese	7439-96-5	278	0.355	0.071	mg/kg		J	Q
Potassium	7440-09-7	505	35.5	17.8	mg/kg		J	Q
Silver	7440-22-4	0.184	0.355	0.178	mg/kg	J	J	E
Sodium	7440-23-5	32.2	17.8	3.55	mg/kg			
Vanadium	7440-62-2	10.3	0.355	0.178	mg/kg		J+	Q
Zinc	7440-66-6	49.9	0.71	0.355	mg/kg		J	Q

Analysis Method 6010B

Sample Name LL1SS-526M-3038-SO **AnalysisType:** RES

Lab Sample Name: L09110136-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	8280	15.2	7.62	mg/kg		J	Q
Barium	7440-39-3	55.6	0.381	0.0762	mg/kg		J+	Q
Beryllium	7440-41-7	0.476	0.0191	0.00915	mg/kg			
Cadmium	7440-43-9	1.45	0.0762	0.0381	mg/kg			
Calcium	7440-70-2	9520	7.62	3.81	mg/kg		J+	Q
Chromium	7440-47-3	18	0.191	0.0915	mg/kg		J+	Q
Cobalt	7440-48-4	6.19	0.191	0.0915	mg/kg			
Copper	7440-50-8	17.2	0.191	0.0915	mg/kg			
Iron	7439-89-6	20100	1.52	0.762	mg/kg	B	J+	Q
Magnesium	7439-95-4	3530	19.1	9.15	mg/kg		J+	Q
Manganese	7439-96-5	514	0.381	0.0762	mg/kg		J	Q
Potassium	7440-09-7	809	38.1	19.1	mg/kg		J	Q
Silver	7440-22-4	0.191	0.381	0.191	mg/kg	U	UJ	E
Sodium	7440-23-5	45.7	19.1	3.81	mg/kg			
Vanadium	7440-62-2	17	0.381	0.191	mg/kg		J+	Q
Zinc	7440-66-6	77	0.762	0.381	mg/kg		J	Q

Analysis Method 6010B

Sample Name LL1SS-529M-3041-SO **AnalysisType:** RES

Lab Sample Name: L09110136-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	3550	14.5	7.24	mg/kg		J	Q
Barium	7440-39-3	29	0.362	0.0724	mg/kg		J+	Q
Beryllium	7440-41-7	0.212	0.0181	0.00868	mg/kg			
Cadmium	7440-43-9	0.85	0.0724	0.0362	mg/kg			
Calcium	7440-70-2	3290	7.24	3.62	mg/kg		J+	Q
Chromium	7440-47-3	18.6	0.181	0.0868	mg/kg		J+	Q
Cobalt	7440-48-4	3.05	0.181	0.0868	mg/kg			
Copper	7440-50-8	20.7	0.181	0.0868	mg/kg			
Iron	7439-89-6	12000	1.45	0.724	mg/kg	B	J+	Q
Magnesium	7439-95-4	1070	18.1	8.68	mg/kg		J+	Q
Manganese	7439-96-5	291	0.362	0.0724	mg/kg		J	Q
Potassium	7440-09-7	386	36.2	18.1	mg/kg		J	Q
Silver	7440-22-4	0.181	0.362	0.181	mg/kg	U	UJ	E
Sodium	7440-23-5	21	18.1	3.62	mg/kg			
Vanadium	7440-62-2	8.57	0.362	0.181	mg/kg		J+	Q
Zinc	7440-66-6	66.4	0.724	0.362	mg/kg		J	Q

Analysis Method 6010B

Sample Name LL1SS-532M-3044-SO **AnalysisType:** RES

Lab Sample Name: L09110136-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	6280	13.7	6.85	mg/kg		J	Q
Barium	7440-39-3	39	0.343	0.0685	mg/kg		J+	Q
Beryllium	7440-41-7	0.342	0.0171	0.00822	mg/kg			
Cadmium	7440-43-9	0.868	0.0685	0.0343	mg/kg			
Calcium	7440-70-2	3980	6.85	3.43	mg/kg		J+	Q
Chromium	7440-47-3	15.9	0.171	0.0822	mg/kg		J+	Q
Cobalt	7440-48-4	4.47	0.171	0.0822	mg/kg			
Copper	7440-50-8	17.7	0.171	0.0822	mg/kg			
Iron	7439-89-6	16900	1.37	0.685	mg/kg	B	J+	Q
Magnesium	7439-95-4	2100	17.1	8.22	mg/kg		J+	Q
Manganese	7439-96-5	373	0.343	0.0685	mg/kg		J	Q
Potassium	7440-09-7	520	34.3	17.1	mg/kg		J	Q
Silver	7440-22-4	0.171	0.343	0.171	mg/kg	U	UJ	E
Sodium	7440-23-5	31.8	17.1	3.43	mg/kg			
Vanadium	7440-62-2	12.9	0.343	0.171	mg/kg		J+	Q
Zinc	7440-66-6	59.9	0.685	0.343	mg/kg		J	Q

Analysis Method 6010B

Sample Name LL1SS-533M-3045-SO **AnalysisType:** RES

Lab Sample Name: L09110136-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	5280	15.3	7.67	mg/kg		J	Q
Barium	7440-39-3	30.8	0.384	0.0767	mg/kg		J+	Q
Beryllium	7440-41-7	0.291	0.0192	0.00921	mg/kg			
Cadmium	7440-43-9	0.871	0.0767	0.0384	mg/kg			
Calcium	7440-70-2	3760	7.67	3.84	mg/kg		J+	Q
Chromium	7440-47-3	16.7	0.192	0.0921	mg/kg		J+	Q
Cobalt	7440-48-4	4.14	0.192	0.0921	mg/kg			
Copper	7440-50-8	17.2	0.192	0.0921	mg/kg			
Iron	7439-89-6	16300	1.53	0.767	mg/kg	B	J+	Q
Magnesium	7439-95-4	2080	19.2	9.21	mg/kg		J+	Q
Manganese	7439-96-5	321	0.384	0.0767	mg/kg		J	Q
Potassium	7440-09-7	524	38.4	19.2	mg/kg		J	Q
Silver	7440-22-4	0.192	0.384	0.192	mg/kg	U	UJ	E
Sodium	7440-23-5	27.8	19.2	3.84	mg/kg			
Vanadium	7440-62-2	11.1	0.384	0.192	mg/kg		J+	Q
Zinc	7440-66-6	66.6	0.767	0.384	mg/kg		J	Q

Analysis Method 6010B

Sample Name LL1SS-537M-3050-SO **AnalysisType:** RES

Lab Sample Name: L09110136-08 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	5070	13.5	6.74	mg/kg		J	E
Barium	7440-39-3	31	0.337	0.0674	mg/kg		J+	Q
Beryllium	7440-41-7	0.293	0.0168	0.00808	mg/kg			
Cadmium	7440-43-9	0.917	0.0674	0.0337	mg/kg			
Calcium	7440-70-2	3100	6.74	3.37	mg/kg			
Chromium	7440-47-3	14.5	0.168	0.0808	mg/kg		J+	Q
Cobalt	7440-48-4	4.26	0.168	0.0808	mg/kg			
Copper	7440-50-8	18	0.168	0.0808	mg/kg			
Iron	7439-89-6	16300	1.35	0.674	mg/kg	B		
Magnesium	7439-95-4	1880	16.8	8.08	mg/kg			
Manganese	7439-96-5	356	0.337	0.0674	mg/kg		J	E
Potassium	7440-09-7	415	33.7	16.8	mg/kg		J	Q, E
Silver	7440-22-4	0.168	0.337	0.168	mg/kg	U	R	C
Sodium	7440-23-5	20.2	16.8	3.37	mg/kg			
Vanadium	7440-62-2	11	0.337	0.168	mg/kg		J+	Q
Zinc	7440-66-6	59.7	0.674	0.337	mg/kg		J	Q, E

Analysis Method 6010B

Sample Name LL1SS-537M-3052-SO **AnalysisType:** RES

Lab Sample Name: L09110136-09 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	5450	14.9	7.45	mg/kg		J	E
Barium	7440-39-3	30.8	0.373	0.0745	mg/kg		J+	Q
Beryllium	7440-41-7	0.3	0.0186	0.00894	mg/kg			
Cadmium	7440-43-9	0.947	0.0745	0.0373	mg/kg			
Calcium	7440-70-2	3100	7.45	3.73	mg/kg			
Chromium	7440-47-3	15.8	0.186	0.0894	mg/kg		J+	Q
Cobalt	7440-48-4	4.05	0.186	0.0894	mg/kg			
Copper	7440-50-8	17.8	0.186	0.0894	mg/kg			
Iron	7439-89-6	17000	1.49	0.745	mg/kg	B		
Magnesium	7439-95-4	1830	18.6	8.94	mg/kg			
Manganese	7439-96-5	332	0.373	0.0745	mg/kg		J	E
Potassium	7440-09-7	523	37.3	18.6	mg/kg		J	Q, E
Silver	7440-22-4	0.186	0.373	0.186	mg/kg	U	R	C
Sodium	7440-23-5	26.2	18.6	3.73	mg/kg			
Vanadium	7440-62-2	11.6	0.373	0.186	mg/kg		J+	Q
Zinc	7440-66-6	60.4	0.745	0.373	mg/kg		J	Q, E

Analysis Method 6010B

Sample Name LL1SS-537M-3053-SO **AnalysisType:** RES

Lab Sample Name: L09110136-10 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	5160	14.5	7.26	mg/kg		J	E
Barium	7440-39-3	30.9	0.363	0.0726	mg/kg		J+	Q
Beryllium	7440-41-7	0.295	0.0182	0.00872	mg/kg			
Cadmium	7440-43-9	0.883	0.0726	0.0363	mg/kg			
Calcium	7440-70-2	3680	7.26	3.63	mg/kg			
Chromium	7440-47-3	15.2	0.182	0.0872	mg/kg		J+	Q
Cobalt	7440-48-4	3.96	0.182	0.0872	mg/kg			
Copper	7440-50-8	17.2	0.182	0.0872	mg/kg			
Iron	7439-89-6	15800	1.45	0.726	mg/kg	B		
Magnesium	7439-95-4	1900	18.2	8.72	mg/kg			
Manganese	7439-96-5	338	0.363	0.0726	mg/kg		J	E
Potassium	7440-09-7	477	36.3	18.2	mg/kg		J	Q, E
Silver	7440-22-4	0.182	0.363	0.182	mg/kg	U	R	C
Sodium	7440-23-5	28.6	18.2	3.63	mg/kg			
Vanadium	7440-62-2	10.7	0.363	0.182	mg/kg		J+	Q
Zinc	7440-66-6	60.9	0.726	0.363	mg/kg		J	Q, E

Analysis Method 6010B

Sample Name LL1SS-538M-3054-SO **AnalysisType:** RES

Lab Sample Name: L09110136-11 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	4350	14.1	7.06	mg/kg		J	Q
Barium	7440-39-3	27.7	0.353	0.0706	mg/kg		J+	Q
Beryllium	7440-41-7	0.266	0.0176	0.00847	mg/kg			
Cadmium	7440-43-9	0.79	0.0706	0.0353	mg/kg			
Calcium	7440-70-2	7600	7.06	3.53	mg/kg		J+	Q
Chromium	7440-47-3	13.5	0.176	0.0847	mg/kg		J+	Q
Cobalt	7440-48-4	3.27	0.176	0.0847	mg/kg			
Copper	7440-50-8	15.5	0.176	0.0847	mg/kg			
Iron	7439-89-6	15100	1.41	0.706	mg/kg	B	J+	Q
Magnesium	7439-95-4	2420	17.6	8.47	mg/kg		J+	Q
Manganese	7439-96-5	351	0.353	0.0706	mg/kg		J	Q
Potassium	7440-09-7	385	35.3	17.6	mg/kg		J	Q
Silver	7440-22-4	0.176	0.353	0.176	mg/kg	U	UJ	E
Sodium	7440-23-5	32.1	17.6	3.53	mg/kg			
Vanadium	7440-62-2	9.56	0.353	0.176	mg/kg		J+	Q
Zinc	7440-66-6	56.4	0.706	0.353	mg/kg		J	Q

Analysis Method 6010B

Sample Name LL1SS-539M-3055-SO **AnalysisType:** RES

Lab Sample Name: L09110136-12 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	8910	15.3	7.66	mg/kg		J	Q
Barium	7440-39-3	70	0.383	0.0766	mg/kg		J+	Q
Beryllium	7440-41-7	0.569	0.0191	0.00919	mg/kg			
Cadmium	7440-43-9	1.16	0.0766	0.0383	mg/kg			
Calcium	7440-70-2	14400	7.66	3.83	mg/kg		J+	Q
Chromium	7440-47-3	16.1	0.191	0.0919	mg/kg		J+	Q
Cobalt	7440-48-4	5.04	0.191	0.0919	mg/kg			
Copper	7440-50-8	18.2	0.191	0.0919	mg/kg			
Iron	7439-89-6	19000	1.53	0.766	mg/kg	B	J+	Q
Magnesium	7439-95-4	2840	19.1	9.19	mg/kg		J+	Q
Manganese	7439-96-5	475	0.383	0.0766	mg/kg		J	Q
Potassium	7440-09-7	945	38.3	19.1	mg/kg		J	Q
Silver	7440-22-4	0.191	0.383	0.191	mg/kg	U	UJ	E
Sodium	7440-23-5	117	19.1	3.83	mg/kg			
Vanadium	7440-62-2	16.1	0.383	0.191	mg/kg		J+	Q
Zinc	7440-66-6	67.3	0.766	0.383	mg/kg		J	Q

Analysis Method 6010B

Sample Name LL1SS-540M-3056-SO **AnalysisType:** RES

Lab Sample Name: L09110136-13 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	9200	14.6	7.28	mg/kg		J	Q
Barium	7440-39-3	65	0.364	0.0728	mg/kg		J+	Q
Beryllium	7440-41-7	0.527	0.0182	0.00874	mg/kg			
Cadmium	7440-43-9	1.16	0.0728	0.0364	mg/kg			
Calcium	7440-70-2	10800	7.28	3.64	mg/kg		J+	Q
Chromium	7440-47-3	16.4	0.182	0.0874	mg/kg		J+	Q
Cobalt	7440-48-4	5.54	0.182	0.0874	mg/kg			
Copper	7440-50-8	16.6	0.182	0.0874	mg/kg			
Iron	7439-89-6	21000	1.46	0.728	mg/kg	B	J+	Q
Magnesium	7439-95-4	2640	18.2	8.74	mg/kg		J+	Q
Manganese	7439-96-5	396	0.364	0.0728	mg/kg		J	Q
Potassium	7440-09-7	870	36.4	18.2	mg/kg		J	Q
Silver	7440-22-4	0.182	0.364	0.182	mg/kg	U	UJ	E
Sodium	7440-23-5	88.2	18.2	3.64	mg/kg			
Vanadium	7440-62-2	17.5	0.364	0.182	mg/kg		J+	Q
Zinc	7440-66-6	62.5	0.728	0.364	mg/kg		J	Q

Analysis Method 6020

Sample Name F15SS-012M-0500-SO **AnalysisType:** RES

Lab Sample Name: L09110136-14 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.444	0.0998	0.0499	mg/kg			
Arsenic	7440-38-2	10	0.292	0.073	mg/kg		J-	Q
Lead	7439-92-1	16.9	0.195	0.0973	mg/kg			
Nickel	7440-02-0	30.6	0.779	0.195	mg/kg		J-	A
Selenium	7782-49-2	0.367	0.195	0.0973	mg/kg		J	C, Q, E
Thallium	7440-28-0	0.143	0.0195	0.00973	mg/kg		J	C

Sample Name F15SS-012M-0502-SO **AnalysisType:** RES

Lab Sample Name: L09110136-15 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.278	0.0994	0.0497	mg/kg			
Arsenic	7440-38-2	9.18	0.303	0.0758	mg/kg		J-	Q
Lead	7439-92-1	18	0.202	0.101	mg/kg			
Nickel	7440-02-0	35.5	0.808	0.202	mg/kg		J-	A
Selenium	7782-49-2	0.307	0.202	0.101	mg/kg		J	C, Q, E
Thallium	7440-28-0	0.143	0.0202	0.0101	mg/kg		J	C

Sample Name F15SS-012M-0503-SO **AnalysisType:** RES

Lab Sample Name: L09110136-16 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.441	0.101	0.0506	mg/kg			
Arsenic	7440-38-2	10	0.302	0.0756	mg/kg		J-	Q
Lead	7439-92-1	19.8	0.202	0.101	mg/kg			
Nickel	7440-02-0	35.3	0.806	0.202	mg/kg		J-	A
Selenium	7782-49-2	0.36	0.202	0.101	mg/kg		J	C, Q, E
Thallium	7440-28-0	0.155	0.0202	0.0101	mg/kg		J	C

Analysis Method 6020

Sample Name F16SS-012M-0504-SO **AnalysisType:** RES

Lab Sample Name: L09110136-17 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.423	0.101	0.0506	mg/kg			
Arsenic	7440-38-2	11.8	0.298	0.0744	mg/kg		J-	Q
Lead	7439-92-1	15.2	0.198	0.0992	mg/kg			
Nickel	7440-02-0	29.6	0.794	0.198	mg/kg			
Selenium	7782-49-2	0.408	0.198	0.0992	mg/kg		J-	Q
Thallium	7440-28-0	0.137	0.0198	0.00992	mg/kg			

Sample Name LL1SS-520M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09110136-18 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	######	0.001	0.00025	mg/L	U		
Arsenic	7440-38-2	######	0.001	0.00025	mg/L	U		
Lead	7439-92-1	######	0.001	0.00025	mg/L	U		
Nickel	7440-02-0	0.0136	0.004	0.001	mg/L			
Selenium	7782-49-2	0.0005	0.001	0.0005	mg/L	U		
Thallium	7440-28-0	######	0.0002	0.00005	mg/L	U		

Sample Name LL1SS-520M-3024-SO **AnalysisType:** RES

Lab Sample Name: L09110136-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.153	0.098	0.049	mg/kg			
Arsenic	7440-38-2	5.98	0.283	0.0708	mg/kg		J-	Q
Lead	7439-92-1	21.9	0.189	0.0943	mg/kg			
Nickel	7440-02-0	11.6	0.755	0.189	mg/kg			
Selenium	7782-49-2	0.215	0.189	0.0943	mg/kg		J-	Q
Thallium	7440-28-0	0.0533	0.0189	0.00943	mg/kg			

Analysis Method 6020

Sample Name LL1SS-521M-3025-SO **AnalysisType:** RES

Lab Sample Name: L09110136-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.11	0.0976	0.0488	mg/kg			
Arsenic	7440-38-2	4.66	0.299	0.0746	mg/kg		J-	Q
Lead	7439-92-1	9.84	0.199	0.0995	mg/kg			
Nickel	7440-02-0	11.4	0.796	0.199	mg/kg			
Selenium	7782-49-2	0.164	0.199	0.0995	mg/kg	J	J	Q
Thallium	7440-28-0	0.0398	0.0199	0.00995	mg/kg			

Sample Name LL1SS-522M-3026-SO **AnalysisType:** RES

Lab Sample Name: L09110136-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.271	0.1	0.0502	mg/kg			
Arsenic	7440-38-2	6.79	0.3	0.075	mg/kg		J-	Q
Lead	7439-92-1	32.5	0.2	0.1	mg/kg			
Nickel	7440-02-0	22	0.8	0.2	mg/kg			
Selenium	7782-49-2	0.43	0.2	0.1	mg/kg		J-	Q
Thallium	7440-28-0	0.0819	0.02	0.01	mg/kg			

Sample Name LL1SS-526M-3038-SO **AnalysisType:** RES

Lab Sample Name: L09110136-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.262	0.101	0.0503	mg/kg			
Arsenic	7440-38-2	9.46	0.287	0.0717	mg/kg		J-	Q
Lead	7439-92-1	57.8	9.56	4.78	mg/kg			
Nickel	7440-02-0	20.8	0.765	0.191	mg/kg			
Selenium	7782-49-2	0.397	0.191	0.0956	mg/kg		J-	Q
Thallium	7440-28-0	0.127	0.0191	0.00956	mg/kg			

Analysis Method 6020

Sample Name LL1SS-529M-3041-SO **AnalysisType:** RES

Lab Sample Name: L09110136-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.203	0.0991	0.0496	mg/kg			
Arsenic	7440-38-2	5.45	0.297	0.0742	mg/kg		J-	Q
Lead	7439-92-1	28.5	0.198	0.0989	mg/kg			
Nickel	7440-02-0	12.7	0.792	0.198	mg/kg			
Selenium	7782-49-2	0.155	0.198	0.0989	mg/kg	J	J	Q
Thallium	7440-28-0	0.0516	0.0198	0.00989	mg/kg			

Sample Name LL1SS-532M-3044-SO **AnalysisType:** RES

Lab Sample Name: L09110136-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.405	0.0992	0.0496	mg/kg			
Arsenic	7440-38-2	8.76	0.299	0.0747	mg/kg		J-	Q
Lead	7439-92-1	15.8	0.199	0.0996	mg/kg			
Nickel	7440-02-0	19.9	0.797	0.199	mg/kg			
Selenium	7782-49-2	0.279	0.199	0.0996	mg/kg		J-	Q
Thallium	7440-28-0	0.104	0.0199	0.00996	mg/kg			

Sample Name LL1SS-533M-3045-SO **AnalysisType:** RES

Lab Sample Name: L09110136-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.283	0.0979	0.049	mg/kg			
Arsenic	7440-38-2	9.88	0.299	0.0748	mg/kg		J-	Q
Lead	7439-92-1	14.3	0.199	0.0997	mg/kg			
Nickel	7440-02-0	20.1	0.798	0.199	mg/kg			
Selenium	7782-49-2	0.266	0.199	0.0997	mg/kg		J-	Q
Thallium	7440-28-0	0.114	0.0199	0.00997	mg/kg			

Analysis Method 6020

Sample Name LL1SS-537M-3050-SO **AnalysisType:** RES

Lab Sample Name: L09110136-08 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.455	0.0982	0.0491	mg/kg			
Arsenic	7440-38-2	10.4	0.288	0.072	mg/kg		J-	Q
Lead	7439-92-1	13.6	0.192	0.096	mg/kg			
Nickel	7440-02-0	15.2	0.768	0.192	mg/kg		J-	A
Selenium	7782-49-2	0.267	0.192	0.096	mg/kg		J	C, Q, E
Thallium	7440-28-0	0.0954	0.0192	0.0096	mg/kg		J	C

Sample Name LL1SS-537M-3052-SO **AnalysisType:** RES

Lab Sample Name: L09110136-09 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.232	0.101	0.0503	mg/kg			
Arsenic	7440-38-2	10.8	0.285	0.0713	mg/kg		J-	Q
Lead	7439-92-1	13.7	0.19	0.0951	mg/kg			
Nickel	7440-02-0	20.6	0.76	0.19	mg/kg		J-	A
Selenium	7782-49-2	0.255	0.19	0.0951	mg/kg		J	C, Q, E
Thallium	7440-28-0	0.0923	0.019	0.00951	mg/kg		J	C

Sample Name LL1SS-537M-3053-SO **AnalysisType:** RES

Lab Sample Name: L09110136-10 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.249	0.0991	0.0496	mg/kg			
Arsenic	7440-38-2	8.78	0.298	0.0745	mg/kg		J-	Q
Lead	7439-92-1	12.2	0.199	0.0993	mg/kg			
Nickel	7440-02-0	16.5	0.794	0.199	mg/kg		J-	A
Selenium	7782-49-2	0.299	0.199	0.0993	mg/kg		J	C, Q, E
Thallium	7440-28-0	0.081	0.0199	0.00993	mg/kg		J	C

Analysis Method 6020

Sample Name LL1SS-538M-3054-SO **AnalysisType:** RES

Lab Sample Name: L09110136-11 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.293	0.0992	0.0496	mg/kg			
Arsenic	7440-38-2	12	0.293	0.0734	mg/kg		J-	Q
Lead	7439-92-1	12.4	0.196	0.0978	mg/kg			
Nickel	7440-02-0	13.5	0.782	0.196	mg/kg			
Selenium	7782-49-2	0.275	0.196	0.0978	mg/kg		J-	Q
Thallium	7440-28-0	0.0822	0.0196	0.00978	mg/kg			

Sample Name LL1SS-539M-3055-SO **AnalysisType:** RES

Lab Sample Name: L09110136-12 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.27	0.0992	0.0496	mg/kg			
Arsenic	7440-38-2	10.2	0.304	0.076	mg/kg		J-	Q
Lead	7439-92-1	39.6	10.1	5.07	mg/kg			
Nickel	7440-02-0	21.4	0.811	0.203	mg/kg			
Selenium	7782-49-2	0.424	0.203	0.101	mg/kg		J-	Q
Thallium	7440-28-0	0.105	0.0203	0.0101	mg/kg			

Sample Name LL1SS-540M-3056-SO **AnalysisType:** RES

Lab Sample Name: L09110136-13 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.303	0.0997	0.0499	mg/kg			
Arsenic	7440-38-2	10.1	0.288	0.0721	mg/kg		J-	Q
Lead	7439-92-1	31	0.192	0.0961	mg/kg			
Nickel	7440-02-0	18.2	0.769	0.192	mg/kg			
Selenium	7782-49-2	0.296	0.192	0.0961	mg/kg		J-	Q
Thallium	7440-28-0	0.102	0.0192	0.00961	mg/kg			

Analysis Method 7470A

Sample Name LL1SS-520M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09110136-18 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0001	0.0002	0.0001	mg/L	U		

Analysis Method 7471A

Sample Name F15SS-012M-0500-SO **AnalysisType:** RES

Lab Sample Name: L09110136-14 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.03	0.0985	0.00985	mg/kg	J	J	

Sample Name F15SS-012M-0502-SO **AnalysisType:** RES

Lab Sample Name: L09110136-15 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0361	0.101	0.0101	mg/kg	J	J	

Sample Name F15SS-012M-0503-SO **AnalysisType:** RES

Lab Sample Name: L09110136-16 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0366	0.0999	0.00999	mg/kg	J	J	

Sample Name F16SS-012M-0504-SO **AnalysisType:** RES

Lab Sample Name: L09110136-17 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0224	0.0972	0.00972	mg/kg	J	J	

Sample Name LL1SS-520M-3024-SO **AnalysisType:** RES

Lab Sample Name: L09110136-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0239	0.0997	0.00997	mg/kg	J	J	

Analysis Method 7471A

Sample Name LL1SS-521M-3025-SO **AnalysisType:** RES

Lab Sample Name: L09110136-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0187	0.1	0.01	mg/kg	J	J	

Sample Name LL1SS-522M-3026-SO **AnalysisType:** RES

Lab Sample Name: L09110136-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0314	0.0949	0.00949	mg/kg	J	J	

Sample Name LL1SS-526M-3038-SO **AnalysisType:** RES

Lab Sample Name: L09110136-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.117	0.0987	0.00987	mg/kg			

Sample Name LL1SS-529M-3041-SO **AnalysisType:** RES

Lab Sample Name: L09110136-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0302	0.0971	0.00971	mg/kg	J	J	

Sample Name LL1SS-532M-3044-SO **AnalysisType:** RES

Lab Sample Name: L09110136-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0194	0.0992	0.00992	mg/kg	J	J	

Analysis Method 7471A

Sample Name LL1SS-533M-3045-SO **AnalysisType:** RES

Lab Sample Name: L09110136-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0182	0.099	0.0099	mg/kg	J	J	

Sample Name LL1SS-537M-3050-SO **AnalysisType:** RES

Lab Sample Name: L09110136-08 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0166	0.0998	0.00998	mg/kg	J	J	

Sample Name LL1SS-537M-3052-SO **AnalysisType:** RES

Lab Sample Name: L09110136-09 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0148	0.0975	0.00975	mg/kg	J	J	

Sample Name LL1SS-537M-3053-SO **AnalysisType:** RES

Lab Sample Name: L09110136-10 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0175	0.0968	0.00968	mg/kg	J	J	

Sample Name LL1SS-538M-3054-SO **AnalysisType:** RES

Lab Sample Name: L09110136-11 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0165	0.0991	0.00991	mg/kg	J	J	

Analysis Method 7471A

Sample Name	LL1SS-539M-3055-SO	**AnalysisType:**	RES
Lab Sample Name:	L09110136-12	**Validation Level:**	ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0349	0.1	0.01	mg/kg	J	J	

Sample Name	LL1SS-540M-3056-SO	**AnalysisType:**	RES
Lab Sample Name:	L09110136-13	**Validation Level:**	ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0312	0.101	0.0101	mg/kg	J	J	

Analysis Method 8082

Sample Name LL1SS-520M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09110136-18 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-xylene	877-09-8	12.9	0	0	ug/L			
Aroclor-1016	12674-11-2	0.255	0.51	0.255	ug/L	U		
Aroclor-1221	11104-28-2	0.255	0.51	0.255	ug/L	U		
Aroclor-1232	11141-16-5	0.255	0.51	0.255	ug/L	U		
Aroclor-1242	53469-21-9	0.255	0.51	0.255	ug/L	U		
Aroclor-1248	12672-29-6	0.255	0.51	0.255	ug/L	U		
Aroclor-1254	11097-69-1	0.255	0.51	0.255	ug/L	U		
Aroclor-1260	11096-82-5	0.255	0.51	0.255	ug/L	U		
Decachlorobiphenyl	2051-24-3	13.4	0	0	ug/L			

Analysis Method 8082

Sample Name LL1SS-520M-3024-SO **AnalysisType:** RES

Lab Sample Name: L09110136-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	14.1	0	0	ug/kg			
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	13.4	0	0	ug/kg			
Aroclor-1016	12674-11-2	8.2	16.4	8.2	ug/kg	U		
Aroclor-1016	12674-11-2	8.2	16.4	8.2	ug/kg	U		
Aroclor-1221	11104-28-2	8.2	16.4	8.2	ug/kg	U		
Aroclor-1221	11104-28-2	8.2	16.4	8.2	ug/kg	U		
Aroclor-1232	11141-16-5	8.2	16.4	8.2	ug/kg	U		
Aroclor-1232	11141-16-5	8.2	16.4	8.2	ug/kg	U		
Aroclor-1242	53469-21-9	8.2	16.4	8.2	ug/kg	U		
Aroclor-1242	53469-21-9	8.2	16.4	8.2	ug/kg	U		
Aroclor-1248	12672-29-6	8.2	16.4	8.2	ug/kg	U		
Aroclor-1248	12672-29-6	8.2	16.4	8.2	ug/kg	U		
Aroclor-1254	11097-69-1	267	16.4	8.2	ug/kg			
Aroclor-1254	11097-69-1	296	16.4	8.2	ug/kg			
Aroclor-1260	11096-82-5	144	16.4	8.2	ug/kg			
Aroclor-1260	11096-82-5	139	16.4	8.2	ug/kg			
Decachlorobiphenyl	2051-24-3	18.1	0	0	ug/kg			
Decachlorobiphenyl	2051-24-3	18.1	0	0	ug/kg			

Analysis Method 8082

Sample Name LL1SS-521M-3025-SO **AnalysisType:** RE

Lab Sample Name: L09110136-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	13.6	0	0	ug/kg			
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	12.7	0	0	ug/kg			
Aroclor-1016	12674-11-2	8.35	16.7	8.35	ug/kg	U		
Aroclor-1016	12674-11-2	8.35	16.7	8.35	ug/kg	U		
Aroclor-1221	11104-28-2	8.35	16.7	8.35	ug/kg	U		
Aroclor-1221	11104-28-2	8.35	16.7	8.35	ug/kg	U		
Aroclor-1232	11141-16-5	8.35	16.7	8.35	ug/kg	U		
Aroclor-1232	11141-16-5	8.35	16.7	8.35	ug/kg	U		
Aroclor-1242	53469-21-9	8.35	16.7	8.35	ug/kg	U		
Aroclor-1242	53469-21-9	8.35	16.7	8.35	ug/kg	U		
Aroclor-1248	12672-29-6	8.35	16.7	8.35	ug/kg	U		
Aroclor-1248	12672-29-6	8.35	16.7	8.35	ug/kg	U		
Aroclor-1254	11097-69-1	116	16.7	8.35	ug/kg			
Aroclor-1254	11097-69-1	119	16.7	8.35	ug/kg			
Aroclor-1260	11096-82-5	54.5	16.7	8.35	ug/kg			
Aroclor-1260	11096-82-5	45.1	16.7	8.35	ug/kg			
Decachlorobiphenyl	2051-24-3	16.6	0	0	ug/kg			
Decachlorobiphenyl	2051-24-3	15.4	0	0	ug/kg			

Analysis Method 8082

Sample Name LL1SS-522M-3026-SO **AnalysisType:** RE

Lab Sample Name: L09110136-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	13.8	0	0	ug/kg			
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	14.9	0	0	ug/kg			
Aroclor-1016	12674-11-2	8.24	16.5	8.24	ug/kg	U		
Aroclor-1016	12674-11-2	8.24	16.5	8.24	ug/kg	U		
Aroclor-1221	11104-28-2	8.24	16.5	8.24	ug/kg	U		
Aroclor-1221	11104-28-2	8.24	16.5	8.24	ug/kg	U		
Aroclor-1232	11141-16-5	8.24	16.5	8.24	ug/kg	U		
Aroclor-1232	11141-16-5	8.24	16.5	8.24	ug/kg	U		
Aroclor-1242	53469-21-9	8.24	16.5	8.24	ug/kg	U		
Aroclor-1242	53469-21-9	8.24	16.5	8.24	ug/kg	U		
Aroclor-1248	12672-29-6	8.24	16.5	8.24	ug/kg	U		
Aroclor-1248	12672-29-6	8.24	16.5	8.24	ug/kg	U		
Aroclor-1254	11097-69-1	495	16.5	8.24	ug/kg			
Aroclor-1254	11097-69-1	462	16.5	8.24	ug/kg			
Aroclor-1260	11096-82-5	173	16.5	8.24	ug/kg			
Aroclor-1260	11096-82-5	209	16.5	8.24	ug/kg			
Decachlorobiphenyl	2051-24-3	16.9	0	0	ug/kg			
Decachlorobiphenyl	2051-24-3	18.7	0	0	ug/kg			

Analysis Method 8330

Sample Name F15SS-012M-0500-SO **AnalysisType:** RES

Lab Sample Name: L09110136-14 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.105	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.105	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0997	0.249	0.0997	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.0997	0.249	0.0997	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.0997	0.249	0.0997	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.0997	0.249	0.0997	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.0997	0.249	0.0997	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0997	0.249	0.0997	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.0997	0.249	0.0997	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.0997	0.249	0.0997	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0997	0.249	0.0997	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.0997	0.249	0.0997	mg/kg	U	U	
HMX	2691-41-0	0.0997	0.249	0.0997	mg/kg	U	U	
Nitrobenzene	98-95-3	0.0997	0.249	0.0997	mg/kg	U	U	
Nitroglycerin	55-63-0	0.0997	0.249	0.0997	mg/kg	U	U	
PETN	78-11-5	0.499	1.5	0.499	mg/kg	U	U	
RDX	121-82-4	0.0997	0.249	0.0997	mg/kg	U	U	
Tetryl	479-45-8	0.0997	0.249	0.0997	mg/kg	U	R	C

Analysis Method 8330

Sample Name F15SS-012M-0502-SO **AnalysisType:** RES

Lab Sample Name: L09110136-15 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0972	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0972	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0998	0.25	0.0998	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.0998	0.25	0.0998	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.0998	0.25	0.0998	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.0998	0.25	0.0998	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.0998	0.25	0.0998	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0998	0.25	0.0998	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.0998	0.25	0.0998	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.0998	0.25	0.0998	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0998	0.25	0.0998	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.0998	0.25	0.0998	mg/kg	U	U	
HMX	2691-41-0	0.0998	0.25	0.0998	mg/kg	U	U	
Nitrobenzene	98-95-3	0.0998	0.25	0.0998	mg/kg	U	U	
Nitroglycerin	55-63-0	0.0998	0.25	0.0998	mg/kg	U	U	
PETN	78-11-5	0.499	1.5	0.499	mg/kg	U	U	
RDX	121-82-4	0.0998	0.25	0.0998	mg/kg	U	U	
Tetryl	479-45-8	0.0998	0.25	0.0998	mg/kg	U	R	C

Analysis Method 8330

Sample Name F15SS-012M-0503-SO **AnalysisType:** RES

Lab Sample Name: L09110136-16 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.105	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.105	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0999	0.25	0.0999	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.0999	0.25	0.0999	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.0999	0.25	0.0999	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.0999	0.25	0.0999	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.0999	0.25	0.0999	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0999	0.25	0.0999	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.0999	0.25	0.0999	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.0999	0.25	0.0999	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0999	0.25	0.0999	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.0999	0.25	0.0999	mg/kg	U	U	
HMX	2691-41-0	0.0999	0.25	0.0999	mg/kg	U	U	
Nitrobenzene	98-95-3	0.0999	0.25	0.0999	mg/kg	U	U	
Nitroglycerin	55-63-0	0.0999	0.25	0.0999	mg/kg	U	U	
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U	U	
RDX	121-82-4	0.0999	0.25	0.0999	mg/kg	U	U	
Tetryl	479-45-8	0.0999	0.25	0.0999	mg/kg	U	R	C

Analysis Method 8330

Sample Name F16SS-008M-0504-SO **AnalysisType:** RES

Lab Sample Name: L09110136-17 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0987	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.1	0.25	0.1	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U	R	C

Analysis Method 8330

Sample Name F16SS-012M-0504-SO **AnalysisType:** RES

Lab Sample Name: L09110136-17 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0987	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.1	0.25	0.1	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-520M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09110136-18 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	338	0	0	ug/L			
1,2-Dinitrobenzene	528-29-0	338	0	0	ug/L			
1,3,5-Trinitrobenzene	99-35-4	0.255	1.02	0.255	ug/L	U		
1,3,5-Trinitrobenzene	99-35-4	0.255	1.02	0.255	ug/L	U		
1,3-Dinitrobenzene	99-65-0	0.255	1.02	0.255	ug/L	U		
1,3-Dinitrobenzene	99-65-0	0.255	1.02	0.255	ug/L	U		
2,4,6-Trinitrotoluene	118-96-7	0.255	1.02	0.255	ug/L	U		
2,4,6-Trinitrotoluene	118-96-7	0.255	1.02	0.255	ug/L	U		
2,4-Dinitrotoluene	121-14-2	0.255	1.02	0.255	ug/L	U		
2,4-Dinitrotoluene	121-14-2	0.255	1.02	0.255	ug/L	U		
2,6-Dinitrotoluene	606-20-2	0.255	1.02	0.255	ug/L	U		
2,6-Dinitrotoluene	606-20-2	0.255	1.02	0.255	ug/L	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.255	1.02	0.255	ug/L	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.255	1.02	0.255	ug/L	U		
2-Nitrotoluene	88-72-2	0.255	1.02	0.255	ug/L	U		
2-Nitrotoluene	88-72-2	0.255	1.02	0.255	ug/L	U		
3-Nitrotoluene	99-08-1	0.255	1.02	0.255	ug/L	U		
3-Nitrotoluene	99-08-1	0.255	1.02	0.255	ug/L	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.255	1.02	0.255	ug/L	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.255	1.02	0.255	ug/L	U		
4-Nitrotoluene	99-99-0	0.255	1.02	0.255	ug/L	U		
4-Nitrotoluene	99-99-0	0.255	1.02	0.255	ug/L	U		
HMX	2691-41-0	0.255	1.02	0.255	ug/L	U		
HMX	2691-41-0	0.255	1.02	0.255	ug/L	U		
Nitrobenzene	98-95-3	0.255	1.02	0.255	ug/L	U		
Nitrobenzene	98-95-3	0.255	1.02	0.255	ug/L	U		
Nitroglycerin	55-63-0	0.255	1.02	0.255	ug/L	U		
Nitroglycerin	55-63-0	0.255	1.02	0.255	ug/L	U		

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PETN	78-11-5	0.255	1.02	0.255	ug/L	U		
PETN	78-11-5	0.255	1.02	0.255	ug/L	U		
RDX	121-82-4	0.255	1.02	0.255	ug/L	U		
RDX	121-82-4	0.255	1.02	0.255	ug/L	U		
Tetryl	479-45-8	0.255	1.02	0.255	ug/L	U		
Tetryl	479-45-8	0.255	1.02	0.255	ug/L	U	R	C

Analysis Method 8330

Sample Name LL1SS-520M-3024-SO **AnalysisType:** RES

Lab Sample Name: L09110136-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0973	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0973	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0998	0.25	0.0998	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0998	0.25	0.0998	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0998	0.25	0.0998	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0998	0.25	0.0998	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0998	0.25	0.0998	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0998	0.25	0.0998	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0998	0.25	0.0998	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0998	0.25	0.0998	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0998	0.25	0.0998	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0998	0.25	0.0998	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0998	0.25	0.0998	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0998	0.25	0.0998	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0998	0.25	0.0998	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0998	0.25	0.0998	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0998	0.25	0.0998	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0998	0.25	0.0998	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0998	0.25	0.0998	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0998	0.25	0.0998	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0998	0.25	0.0998	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0998	0.25	0.0998	mg/kg	U		
HMX	2691-41-0	0.0998	0.25	0.0998	mg/kg	U		
HMX	2691-41-0	0.0998	0.25	0.0998	mg/kg	U		
Nitrobenzene	98-95-3	0.0998	0.25	0.0998	mg/kg	U		
Nitrobenzene	98-95-3	0.0998	0.25	0.0998	mg/kg	U		
Nitroglycerin	55-63-0	0.0998	0.25	0.0998	mg/kg	U		
Nitroglycerin	55-63-0	0.0998	0.25	0.0998	mg/kg	U		

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PETN	78-11-5	0.499	1.5	0.499	mg/kg	U		
PETN	78-11-5	0.499	1.5	0.499	mg/kg	U		
RDX	121-82-4	0.0998	0.25	0.0998	mg/kg	U		
RDX	121-82-4	0.0998	0.25	0.0998	mg/kg	U		
Tetryl	479-45-8	0.0998	0.25	0.0998	mg/kg	U	R	C
Tetryl	479-45-8	0.0998	0.25	0.0998	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-521M-3025-SO **AnalysisType:** RES

Lab Sample Name: L09110136-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0979	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0979	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0998	0.25	0.0998	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0998	0.25	0.0998	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0998	0.25	0.0998	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0998	0.25	0.0998	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0998	0.25	0.0998	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0998	0.25	0.0998	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0998	0.25	0.0998	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0998	0.25	0.0998	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0998	0.25	0.0998	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0998	0.25	0.0998	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0998	0.25	0.0998	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0998	0.25	0.0998	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0998	0.25	0.0998	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0998	0.25	0.0998	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0998	0.25	0.0998	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0998	0.25	0.0998	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0998	0.25	0.0998	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0998	0.25	0.0998	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0998	0.25	0.0998	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0998	0.25	0.0998	mg/kg	U		
HMX	2691-41-0	0.0998	0.25	0.0998	mg/kg	U		
HMX	2691-41-0	0.0998	0.25	0.0998	mg/kg	U		
Nitrobenzene	98-95-3	0.0998	0.25	0.0998	mg/kg	U		
Nitrobenzene	98-95-3	0.0998	0.25	0.0998	mg/kg	U		
Nitroglycerin	55-63-0	0.0998	0.25	0.0998	mg/kg	U		
Nitroglycerin	55-63-0	0.0998	0.25	0.0998	mg/kg	U		

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PETN	78-11-5	0.499	1.5	0.499	mg/kg	U		
PETN	78-11-5	0.499	1.5	0.499	mg/kg	U		
RDX	121-82-4	0.0998	0.25	0.0998	mg/kg	U		
RDX	121-82-4	0.0998	0.25	0.0998	mg/kg	U		
Tetryl	479-45-8	0.0998	0.25	0.0998	mg/kg	U		
Tetryl	479-45-8	0.0998	0.25	0.0998	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-522M-3026-SO **AnalysisType:** DL

Lab Sample Name: L09110136-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.106	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.104	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.106	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.104	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.217	0	0	mg/kg	*	J	S
1,3,5-Trinitrobenzene	99-35-4	0.465	0.25	0.1	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.465	0.25	0.1	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.5	1.25	0.5	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.5	1.25	0.5	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.511	0.25	0.1	mg/kg		J	S
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.5	1.25	0.5	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.5	1.25	0.5	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U	UJ	H
2,4,6-Trinitrotoluene	118-96-7	11	1.25	0.5	mg/kg		J+	C
2,4,6-Trinitrotoluene	118-96-7	12.1	0.25	0.1	mg/kg		J	S
2,4,6-Trinitrotoluene	118-96-7	11	1.25	0.5	mg/kg			
2,4,6-Trinitrotoluene	118-96-7	11.1	0.25	0.1	mg/kg	I		
2,4,6-Trinitrotoluene	118-96-7	11.1	0.25	0.1	mg/kg	I	J+	C
2,4-Dinitrotoluene	121-14-2	0.5	1.25	0.5	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U	UJ	H
2,4-Dinitrotoluene	121-14-2	0.5	1.25	0.5	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.5	1.25	0.5	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		

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2,6-Dinitrotoluene	606-20-2	0.5	1.25	0.5	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U	UJ	H
2-Amino-4,6-dinitrotoluene	35572-78-2	0.5	1.25	0.5	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.5	1.25	0.5	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U	UJ	H
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
2-Nitrotoluene	88-72-2	0.5	1.25	0.5	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U	UJ	H
2-Nitrotoluene	88-72-2	0.5	1.25	0.5	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.5	1.25	0.5	mg/kg	U		
3-Nitrotoluene	99-08-1	0.5	1.25	0.5	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U	UJ	H
4-Amino-2,6-dinitrotoluene	19406-51-0	0.5	1.25	0.5	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.344	0.25	0.1	mg/kg			
4-Amino-2,6-dinitrotoluene	19406-51-0	0.5	1.25	0.5	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.321	0.25	0.1	mg/kg		J	S
4-Amino-2,6-dinitrotoluene	19406-51-0	0.344	0.25	0.1	mg/kg			
4-Nitrotoluene	99-99-0	0.5	1.25	0.5	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U	R	H
4-Nitrotoluene	99-99-0	0.5	1.25	0.5	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.5	1.25	0.5	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.5	1.25	0.5	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U	UJ	H

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Nitrobenzene	98-95-3	0.5	1.25	0.5	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U	UJ	H
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.5	1.25	0.5	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U	UJ	H
Nitroglycerin	55-63-0	0.5	1.25	0.5	mg/kg	U		
Nitroglycerin	55-63-0	0.5	1.25	0.5	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
RDX	121-82-4	0.5	1.25	0.5	mg/kg	U		
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U	UJ	H
RDX	121-82-4	0.5	1.25	0.5	mg/kg	U		
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U	R	C
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U		
Tetryl	479-45-8	0.5	1.25	0.5	mg/kg	U		
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U	R	C
Tetryl	479-45-8	0.5	1.25	0.5	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-526M-3038-SO **AnalysisType:** RES

Lab Sample Name: L09110136-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.107	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0	0	0	mg/kg	U*	R	S
1,2-Dinitrobenzene	528-29-0	0.107	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0998	0.25	0.0998	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.998	2.5	0.998	mg/kg	U	R	S
1,3,5-Trinitrobenzene	99-35-4	0.0998	0.25	0.0998	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.998	2.5	0.998	mg/kg	U	R	S
1,3-Dinitrobenzene	99-65-0	0.0998	0.25	0.0998	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0998	0.25	0.0998	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0998	0.25	0.0998	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0998	0.25	0.0998	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	25.5	2.5	0.998	mg/kg		J	S
2,4-Dinitrotoluene	121-14-2	0.998	2.5	0.998	mg/kg	U	R	S
2,4-Dinitrotoluene	121-14-2	0.0998	0.25	0.0998	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0998	0.25	0.0998	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.998	2.5	0.998	mg/kg	U	R	S
2,6-Dinitrotoluene	606-20-2	0.0998	0.25	0.0998	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0998	0.25	0.0998	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0998	0.25	0.0998	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.998	2.5	0.998	mg/kg	U	R	S
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0998	0.25	0.0998	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0998	0.25	0.0998	mg/kg	U		
2-Nitrotoluene	88-72-2	0.998	2.5	0.998	mg/kg	U	R	S
2-Nitrotoluene	88-72-2	0.0998	0.25	0.0998	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0998	0.25	0.0998	mg/kg	U		
3-Nitrotoluene	99-08-1	0.998	2.5	0.998	mg/kg	U	R	S
3-Nitrotoluene	99-08-1	0.0998	0.25	0.0998	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0998	0.25	0.0998	mg/kg	U		

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4-Amino-2,6-dinitrotoluene	19406-51-0	0.998	2.5	0.998	mg/kg	U	R	S
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0998	0.25	0.0998	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0998	0.25	0.0998	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0998	0.25	0.0998	mg/kg	U		
4-Nitrotoluene	99-99-0	0.998	2.5	0.998	mg/kg	U	R	S
HMX	2691-41-0	0.0998	0.25	0.0998	mg/kg	U		
HMX	2691-41-0	0.0998	0.25	0.0998	mg/kg	U		
HMX	2691-41-0	0.998	2.5	0.998	mg/kg	U	R	S
Nitrobenzene	98-95-3	0.0998	0.25	0.0998	mg/kg	U		
Nitrobenzene	98-95-3	0.0998	0.25	0.0998	mg/kg	U		
Nitrobenzene	98-95-3	0.998	2.5	0.998	mg/kg	U	R	S
Nitroglycerin	55-63-0	0.0998	0.25	0.0998	mg/kg	U		
Nitroglycerin	55-63-0	0.0998	0.25	0.0998	mg/kg	U		
Nitroglycerin	55-63-0	0.998	2.5	0.998	mg/kg	U	R	S
PETN	78-11-5	0.499	1.5	0.499	mg/kg	U		
PETN	78-11-5	0.499	1.5	0.499	mg/kg	U		
RDX	121-82-4	0.998	2.5	0.998	mg/kg	U	R	S
RDX	121-82-4	0.0998	0.25	0.0998	mg/kg	U		
RDX	121-82-4	0.0998	0.25	0.0998	mg/kg	U		
Tetryl	479-45-8	0.0998	0.25	0.0998	mg/kg	U		
Tetryl	479-45-8	0.998	2.5	0.998	mg/kg	U	R	S
Tetryl	479-45-8	0.0998	0.25	0.0998	mg/kg	U	R	C

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Sample Name LL1SS-529M-3041-SO **AnalysisType:** DL

Lab Sample Name: L09110136-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.127	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.109	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.109	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.22	0	0	mg/kg	*	J	S
1,3,5-Trinitrobenzene	99-35-4	0.0999	0.25	0.0999	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0999	0.25	0.0999	mg/kg	U	UJ	H
1,3,5-Trinitrobenzene	99-35-4	0.0999	0.25	0.0999	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0999	0.25	0.0999	mg/kg	U	UJ	H
1,3-Dinitrobenzene	99-65-0	0.0999	0.25	0.0999	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0999	0.25	0.0999	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	28.2	0.25	0.0999	mg/kg		J	S
2,4,6-Trinitrotoluene	118-96-7	25.6	2.5	0.999	mg/kg			
2,4,6-Trinitrotoluene	118-96-7	26.4	0.25	0.0999	mg/kg	I	J+	C
2,4,6-Trinitrotoluene	118-96-7	26.4	0.25	0.0999	mg/kg	I		
2,4-Dinitrotoluene	121-14-2	0.0999	0.25	0.0999	mg/kg	U	UJ	H
2,4-Dinitrotoluene	121-14-2	0.0999	0.25	0.0999	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0999	0.25	0.0999	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0999	0.25	0.0999	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0999	0.25	0.0999	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0999	0.25	0.0999	mg/kg	U	UJ	H
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0999	0.25	0.0999	mg/kg	U	UJ	H
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0999	0.25	0.0999	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0999	0.25	0.0999	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0999	0.25	0.0999	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0999	0.25	0.0999	mg/kg	U	UJ	H
2-Nitrotoluene	88-72-2	0.0999	0.25	0.0999	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0999	0.25	0.0999	mg/kg	U	UJ	H
3-Nitrotoluene	99-08-1	0.0999	0.25	0.0999	mg/kg	U		

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3-Nitrotoluene	99-08-1	0.0999	0.25	0.0999	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0999	0.25	0.0999	mg/kg	U	UJ	H
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0999	0.25	0.0999	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0999	0.25	0.0999	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0999	0.25	0.0999	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0999	0.25	0.0999	mg/kg	U	R	H
4-Nitrotoluene	99-99-0	0.0999	0.25	0.0999	mg/kg	U		
HMX	2691-41-0	0.0999	0.25	0.0999	mg/kg	U	UJ	H
HMX	2691-41-0	0.0999	0.25	0.0999	mg/kg	U		
HMX	2691-41-0	0.0999	0.25	0.0999	mg/kg	U		
Nitrobenzene	98-95-3	0.0999	0.25	0.0999	mg/kg	U	UJ	H
Nitrobenzene	98-95-3	0.0999	0.25	0.0999	mg/kg	U		
Nitrobenzene	98-95-3	0.0999	0.25	0.0999	mg/kg	U		
Nitroglycerin	55-63-0	0.0999	0.25	0.0999	mg/kg	U		
Nitroglycerin	55-63-0	0.0999	0.25	0.0999	mg/kg	U		
Nitroglycerin	55-63-0	0.0999	0.25	0.0999	mg/kg	U	UJ	H
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
RDX	121-82-4	0.0999	0.25	0.0999	mg/kg	U	UJ	H
RDX	121-82-4	0.0999	0.25	0.0999	mg/kg	U		
RDX	121-82-4	0.0999	0.25	0.0999	mg/kg	U		
Tetryl	479-45-8	0.0999	0.25	0.0999	mg/kg	U	R	C
Tetryl	479-45-8	0.0999	0.25	0.0999	mg/kg	U	R	C
Tetryl	479-45-8	0.0999	0.25	0.0999	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-532M-3044-SO **AnalysisType:** RES

Lab Sample Name: L09110136-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0848	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0848	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.217	0	0	mg/kg	*	J	S
1,3,5-Trinitrobenzene	99-35-4	0.0999	0.25	0.0999	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0999	0.25	0.0999	mg/kg	U	UJ	H
1,3,5-Trinitrobenzene	99-35-4	0.0999	0.25	0.0999	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0999	0.25	0.0999	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0999	0.25	0.0999	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0999	0.25	0.0999	mg/kg	U	UJ	H
2,4,6-Trinitrotoluene	118-96-7	1.51	0.25	0.0999	mg/kg			
2,4,6-Trinitrotoluene	118-96-7	1.51	0.25	0.0999	mg/kg		J+	C
2,4,6-Trinitrotoluene	118-96-7	1.64	0.25	0.0999	mg/kg		J	S
2,4-Dinitrotoluene	121-14-2	0.0999	0.25	0.0999	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0999	0.25	0.0999	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0999	0.25	0.0999	mg/kg	U	UJ	H
2,6-Dinitrotoluene	606-20-2	0.0999	0.25	0.0999	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0999	0.25	0.0999	mg/kg	U	UJ	H
2,6-Dinitrotoluene	606-20-2	0.0999	0.25	0.0999	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0999	0.25	0.0999	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0999	0.25	0.0999	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0999	0.25	0.0999	mg/kg	U	UJ	H
2-Nitrotoluene	88-72-2	0.0999	0.25	0.0999	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0999	0.25	0.0999	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0999	0.25	0.0999	mg/kg	U	UJ	H
3-Nitrotoluene	99-08-1	0.0999	0.25	0.0999	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0999	0.25	0.0999	mg/kg	U	UJ	H
3-Nitrotoluene	99-08-1	0.0999	0.25	0.0999	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0999	0.25	0.0999	mg/kg	U		

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4-Amino-2,6-dinitrotoluene	19406-51-0	0.0999	0.25	0.0999	mg/kg	U	UJ	H
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0999	0.25	0.0999	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0999	0.25	0.0999	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0999	0.25	0.0999	mg/kg	U	R	H
4-Nitrotoluene	99-99-0	0.0999	0.25	0.0999	mg/kg	U		
HMX	2691-41-0	0.0999	0.25	0.0999	mg/kg	U	UJ	H
HMX	2691-41-0	0.0999	0.25	0.0999	mg/kg	U		
HMX	2691-41-0	0.0999	0.25	0.0999	mg/kg	U		
Nitrobenzene	98-95-3	0.0999	0.25	0.0999	mg/kg	U	UJ	H
Nitrobenzene	98-95-3	0.0999	0.25	0.0999	mg/kg	U		
Nitrobenzene	98-95-3	0.0999	0.25	0.0999	mg/kg	U		
Nitroglycerin	55-63-0	0.0999	0.25	0.0999	mg/kg	U		
Nitroglycerin	55-63-0	0.0999	0.25	0.0999	mg/kg	U	UJ	H
Nitroglycerin	55-63-0	0.0999	0.25	0.0999	mg/kg	U		
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
RDX	121-82-4	0.0999	0.25	0.0999	mg/kg	U	UJ	H
RDX	121-82-4	0.0999	0.25	0.0999	mg/kg	U		
RDX	121-82-4	0.0999	0.25	0.0999	mg/kg	U		
Tetryl	479-45-8	0.0999	0.25	0.0999	mg/kg	U	R	C
Tetryl	479-45-8	0.0999	0.25	0.0999	mg/kg	U	R	C
Tetryl	479-45-8	0.0999	0.25	0.0999	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-533M-3045-SO **AnalysisType:** RES

Lab Sample Name: L09110136-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.096	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.096	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.203	0	0	mg/kg	*	J	S
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U	UJ	H
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U	UJ	H
2,4,6-Trinitrotoluene	118-96-7	0.381	0.25	0.1	mg/kg		J	S
2,4,6-Trinitrotoluene	118-96-7	0.31	0.25	0.1	mg/kg			
2,4,6-Trinitrotoluene	118-96-7	0.31	0.25	0.1	mg/kg		J+	C
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U	UJ	H
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U	UJ	H
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U	UJ	H
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U	UJ	H
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U	UJ	H
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U		

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4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U	UJ	H
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U	R	H
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U	UJ	H
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U	UJ	H
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U	UJ	H
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U	UJ	H
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U	R	C
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U	R	C
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-537M-3050-SO **AnalysisType:** RES

Lab Sample Name: L09110136-08 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0979	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0979	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.1	0.25	0.1	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U	U	
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U	U	
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U	U	
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U	U	
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U	U	
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U	U	
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-537M-3052-SO **AnalysisType:** RES

Lab Sample Name: L09110136-09 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.104	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.104	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.1	0.25	0.1	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U	U	
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U	U	
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U	U	
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U	U	
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U	U	
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U	U	
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-537M-3053-SO **AnalysisType:** RES

Lab Sample Name: L09110136-10 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0899	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0899	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.1	0.25	0.1	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U	U	
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U	U	
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U	U	
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U	U	
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U	U	
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U	U	
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-538M-3054-SO **AnalysisType:** RES

Lab Sample Name: L09110136-11 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0887	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0887	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0998	0.25	0.0998	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0998	0.25	0.0998	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0998	0.25	0.0998	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0998	0.25	0.0998	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0998	0.25	0.0998	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0998	0.25	0.0998	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0998	0.25	0.0998	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0998	0.25	0.0998	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0998	0.25	0.0998	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0998	0.25	0.0998	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0998	0.25	0.0998	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0998	0.25	0.0998	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0998	0.25	0.0998	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0998	0.25	0.0998	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0998	0.25	0.0998	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0998	0.25	0.0998	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0998	0.25	0.0998	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0998	0.25	0.0998	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0998	0.25	0.0998	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0998	0.25	0.0998	mg/kg	U		
HMX	2691-41-0	0.0998	0.25	0.0998	mg/kg	U		
HMX	2691-41-0	0.0998	0.25	0.0998	mg/kg	U		
Nitrobenzene	98-95-3	0.0998	0.25	0.0998	mg/kg	U		
Nitrobenzene	98-95-3	0.0998	0.25	0.0998	mg/kg	U		
Nitroglycerin	55-63-0	0.0998	0.25	0.0998	mg/kg	U		
Nitroglycerin	55-63-0	0.0998	0.25	0.0998	mg/kg	U		

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PETN	78-11-5	0.499	1.5	0.499	mg/kg	U		
PETN	78-11-5	0.499	1.5	0.499	mg/kg	U		
RDX	121-82-4	0.0998	0.25	0.0998	mg/kg	U		
RDX	121-82-4	0.0998	0.25	0.0998	mg/kg	U		
Tetryl	479-45-8	0.0998	0.25	0.0998	mg/kg	U		
Tetryl	479-45-8	0.0998	0.25	0.0998	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-539M-3055-SO **AnalysisType:** RES

Lab Sample Name: L09110136-12 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.121	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.121	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.1	0.25	0.1	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.1	0.25	0.1	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		

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PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U	R	C
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-540M-3056-SO **AnalysisType:** RES

Lab Sample Name: L09110136-13 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0972	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0972	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.1	0.25	0.1	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.1	0.25	0.1	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		

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PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U		
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U		
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U	R	C

Analysis Method 8330-NG

Sample Name F15SS-012M-0500-SO **AnalysisType:** RES

Lab Sample Name: L09110136-14 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	156	312	156	ug/kg	U	U	

Sample Name F15SS-012M-0502-SO **AnalysisType:** RES

Lab Sample Name: L09110136-15 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	152	305	152	ug/kg	U	U	

Sample Name F15SS-012M-0503-SO **AnalysisType:** RES

Lab Sample Name: L09110136-16 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	156	311	156	ug/kg	U	U	

Sample Name F16SS-012M-0504-SO **AnalysisType:** RES

Lab Sample Name: L09110136-17 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	149	297	149	ug/kg	U		

Sample Name LL1SS-520M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09110136-18 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	25	50	25	ug/L	U	UJ	H

Analysis Method 8330-NG

Sample Name LL1SS-520M-3024-SO **AnalysisType:** RES

Lab Sample Name: L09110136-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	152	303	152	ug/kg	U		

Sample Name LL1SS-521M-3025-SO **AnalysisType:** RES

Lab Sample Name: L09110136-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	150	301	150	ug/kg	U		

Sample Name LL1SS-522M-3026-SO **AnalysisType:** RES

Lab Sample Name: L09110136-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	147	294	147	ug/kg	U		

Sample Name LL1SS-529M-3041-SO **AnalysisType:** RES

Lab Sample Name: L09110136-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	156	311	156	ug/kg	U		

Sample Name LL1SS-532M-3044-SO **AnalysisType:** RES

Lab Sample Name: L09110136-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	158	316	158	ug/kg	U		

Analysis Method 8330-NG

Sample Name LL1SS-533M-3045-SO **AnalysisType:** RES

Lab Sample Name: L09110136-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	144	288	144	ug/kg	U		

Sample Name LL1SS-537M-3050-SO **AnalysisType:** RES

Lab Sample Name: L09110136-08 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	146	291	146	ug/kg	U	U	

Sample Name LL1SS-537M-3052-SO **AnalysisType:** RES

Lab Sample Name: L09110136-09 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	143	286	143	ug/kg	U	U	

Sample Name LL1SS-537M-3053-SO **AnalysisType:** RES

Lab Sample Name: L09110136-10 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	137	274	137	ug/kg	U	U	

Sample Name LL1SS-538M-3054-SO **AnalysisType:** RES

Lab Sample Name: L09110136-11 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	144	287	144	ug/kg	U		

Analysis Method 8330-NG

Sample Name LL1SS-539M-3055-SO **AnalysisType:** RES

Lab Sample Name: L09110136-12 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	141	282	141	ug/kg	U		

Sample Name LL1SS-540M-3056-SO **AnalysisType:** RES

Lab Sample Name: L09110136-13 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	157	314	157	ug/kg	U		

Analysis Method SM3500Cr-D 7196A

Sample Name F15SS-012M-0500-SO **AnalysisType:** RES

Lab Sample Name: L09110136-14 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.051	0.102	0.051	mg/kg	U	U	

Sample Name F15SS-012M-0502-SO **AnalysisType:** RES

Lab Sample Name: L09110136-15 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0509	0.102	0.0509	mg/kg	U	U	

Sample Name F15SS-012M-0503-SO **AnalysisType:** RES

Lab Sample Name: L09110136-16 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.101	0.201	0.101	mg/kg	U	U	

Sample Name F16SS-012M-0504-SO **AnalysisType:** RES

Lab Sample Name: L09110136-17 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0507	0.101	0.0507	mg/kg	U		

Sample Name LL1SS-520M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09110136-18 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.005	0.01	0.005	mg/L	U	UJ	H

Analysis Method SM3500Cr-D 7196A

Sample Name LL1SS-520M-3024-SO **AnalysisType:** RES

Lab Sample Name: L09110136-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.1	0.201	0.1	mg/kg	U		

Sample Name LL1SS-521M-3025-SO **AnalysisType:** RES

Lab Sample Name: L09110136-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0499	0.0997	0.0499	mg/kg	U		

Sample Name LL1SS-522M-3026-SO **AnalysisType:** RES

Lab Sample Name: L09110136-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.1	0.2	0.1	mg/kg	U		

Sample Name LL1SS-526M-3038-SO **AnalysisType:** RES

Lab Sample Name: L09110136-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.101	0.203	0.101	mg/kg	U		

Sample Name LL1SS-529M-3041-SO **AnalysisType:** RES

Lab Sample Name: L09110136-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.05	0.1	0.05	mg/kg	U		

Analysis Method SM3500Cr-D 7196A

Sample Name LL1SS-532M-3044-SO **AnalysisType:** RES

Lab Sample Name: L09110136-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.101	0.201	0.101	mg/kg	U		

Sample Name LL1SS-533M-3045-SO **AnalysisType:** RES

Lab Sample Name: L09110136-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0497	0.0993	0.0497	mg/kg	U		

Sample Name LL1SS-537M-3050-SO **AnalysisType:** RES

Lab Sample Name: L09110136-08 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0989	0.198	0.0989	mg/kg	U	U	

Sample Name LL1SS-537M-3052-SO **AnalysisType:** RES

Lab Sample Name: L09110136-09 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.05	0.1	0.05	mg/kg	U	U	

Sample Name LL1SS-537M-3053-SO **AnalysisType:** RES

Lab Sample Name: L09110136-10 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.101	0.201	0.101	mg/kg	U	U	

Analysis Method SM3500Cr-D 7196A

Sample Name LL1SS-538M-3054-SO **AnalysisType:** RES

Lab Sample Name: L09110136-11 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.05	0.1	0.05	mg/kg	U		

Sample Name LL1SS-539M-3055-SO **AnalysisType:** RES

Lab Sample Name: L09110136-12 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0503	0.101	0.0503	mg/kg	U		

Sample Name LL1SS-540M-3056-SO **AnalysisType:** RES

Lab Sample Name: L09110136-13 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0994	0.199	0.0994	mg/kg	U		

Analysis Method USACRREL

Sample Name F15SS-012M-0500-SO **AnalysisType:** RES

Lab Sample Name: L09110136-14 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.5	5	2.5	mg/kg	U	UJ	C

Sample Name F15SS-012M-0502-SO **AnalysisType:** RES

Lab Sample Name: L09110136-15 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.65	4.99	2.49	mg/kg	J	J	C

Sample Name F15SS-012M-0503-SO **AnalysisType:** RES

Lab Sample Name: L09110136-16 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.87	4.99	2.49	mg/kg	J	J	C

Sample Name F16SS-012M-0504-SO **AnalysisType:** RES

Lab Sample Name: L09110136-17 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.49	4.98	2.49	mg/kg	U		

Sample Name LL1SS-520M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09110136-18 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	0.25	0.5	0.25	mg/L	U	R	*III

Analysis Method USACRREL

Sample Name LL1SS-520M-3024-SO **AnalysisType:** RES

Lab Sample Name: L09110136-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.5	5	2.5	mg/kg	U		

Sample Name LL1SS-521M-3025-SO **AnalysisType:** RES

Lab Sample Name: L09110136-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.49	4.98	2.49	mg/kg	U		

Sample Name LL1SS-522M-3026-SO **AnalysisType:** RES

Lab Sample Name: L09110136-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	4	4.99	2.5	mg/kg	J	J	

Sample Name LL1SS-529M-3041-SO **AnalysisType:** RES

Lab Sample Name: L09110136-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	8.32	4.98	2.49	mg/kg			

Sample Name LL1SS-532M-3044-SO **AnalysisType:** RES

Lab Sample Name: L09110136-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.5	5	2.5	mg/kg	U		

Analysis Method USACRREL

Sample Name LL1SS-533M-3045-SO **AnalysisType:** RES

Lab Sample Name: L09110136-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.5	5	2.5	mg/kg	U		

Sample Name LL1SS-537M-3050-SO **AnalysisType:** RES

Lab Sample Name: L09110136-08 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.49	4.97	2.49	mg/kg	U	UJ	C

Sample Name LL1SS-537M-3052-SO **AnalysisType:** RES

Lab Sample Name: L09110136-09 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.5	4.99	2.5	mg/kg	U	UJ	C

Sample Name LL1SS-537M-3053-SO **AnalysisType:** RES

Lab Sample Name: L09110136-10 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.5	4.99	2.5	mg/kg	U	UJ	C

Sample Name LL1SS-538M-3054-SO **AnalysisType:** RES

Lab Sample Name: L09110136-11 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	9.66	5	2.5	mg/kg			

Analysis Method USACRREL

Sample Name	LL1SS-539M-3055-SO	**AnalysisType:** RES						
Lab Sample Name:	L09110136-12	**Validation Level:** ADR						
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Nitrocellulose	9004-70-0	18.6	5	2.5	mg/kg			

Sample Name	LL1SS-540M-3056-SO	**AnalysisType:** RES						
Lab Sample Name:	L09110136-13	**Validation Level:** ADR						
	CAS No	**Result Value**	**RL**	**MDL**	**Result Units**	**Lab Qualifier**	**Validation Qualifier**	**Validation Qualifier Code**
Nitrocellulose	9004-70-0	7.02	4.99	2.49	mg/kg			

Validated Sample Result Forms: L09100553

Analysis Method 6010B

Sample Name LL1SS-500M-3000-SO **AnalysisType:** RES

Lab Sample Name: L09100553-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	5690	14.2	7.08	mg/kg		J	Q
Barium	7440-39-3	57	0.354	0.0708	mg/kg			
Beryllium	7440-41-7	0.474	0.0177	0.0085	mg/kg			
Cadmium	7440-43-9	1.48	0.0708	0.0354	mg/kg			
Calcium	7440-70-2	17600	35.4	17.7	mg/kg		J-	Q
Chromium	7440-47-3	23.2	0.177	0.085	mg/kg			
Cobalt	7440-48-4	3.39	0.177	0.085	mg/kg			
Copper	7440-50-8	22.9	0.177	0.085	mg/kg			
Iron	7439-89-6	20400	7.08	3.54	mg/kg		J+	Q
Magnesium	7439-95-4	3240	17.7	8.5	mg/kg		J+	Q
Manganese	7439-96-5	546	1.77	0.354	mg/kg			
Potassium	7440-09-7	630	35.4	17.7	mg/kg			
Silver	7440-22-4	0.177	0.354	0.177	mg/kg	U		
Sodium	7440-23-5	72.6	17.7	3.54	mg/kg			
Vanadium	7440-62-2	12.1	0.354	0.177	mg/kg			
Zinc	7440-66-6	140	0.708	0.354	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-501M-3001-SO **AnalysisType:** RES

Lab Sample Name: L09100553-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	10900	15.5	7.73	mg/kg		J	Q
Barium	7440-39-3	102	0.386	0.0773	mg/kg			
Beryllium	7440-41-7	1.01	0.0193	0.00927	mg/kg			
Cadmium	7440-43-9	0.944	0.0773	0.0386	mg/kg			
Calcium	7440-70-2	28800	773	386	mg/kg		J-	Q
Chromium	7440-47-3	20.4	0.193	0.0927	mg/kg			
Cobalt	7440-48-4	3.85	0.193	0.0927	mg/kg			
Cobalt	7440-48-4	5.32	0.193	0.0927	mg/kg			
Copper	7440-50-8	15.5	0.193	0.0927	mg/kg			
Iron	7439-89-6	19400	1.55	0.773	mg/kg		J+	Q
Magnesium	7439-95-4	4460	19.3	9.27	mg/kg		J+	Q
Manganese	7439-96-5	621	0.386	0.0773	mg/kg			
Potassium	7440-09-7	890	38.6	19.3	mg/kg			
Silver	7440-22-4	0.193	0.386	0.193	mg/kg	U		
Sodium	7440-23-5	151	19.3	3.86	mg/kg			
Vanadium	7440-62-2	14.7	0.386	0.193	mg/kg			
Zinc	7440-66-6	52.8	0.773	0.386	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-502M-3002-SO **AnalysisType:** RES

Lab Sample Name: L09100553-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	10100	14.4	7.19	mg/kg		J	Q
Barium	7440-39-3	85.7	0.36	0.0719	mg/kg			
Beryllium	7440-41-7	0.63	0.018	0.00863	mg/kg			
Cadmium	7440-43-9	0.87	0.0719	0.036	mg/kg			
Calcium	7440-70-2	4370	7.19	3.6	mg/kg		J-	Q
Chromium	7440-47-3	16.6	0.18	0.0863	mg/kg			
Cobalt	7440-48-4	7.13	0.18	0.0863	mg/kg			
Copper	7440-50-8	10.3	0.18	0.0863	mg/kg			
Iron	7439-89-6	18100	1.44	0.719	mg/kg		J+	Q
Magnesium	7439-95-4	2110	18	8.63	mg/kg		J+	Q
Manganese	7439-96-5	475	0.36	0.0719	mg/kg			
Potassium	7440-09-7	621	36	18	mg/kg			
Silver	7440-22-4	0.18	0.36	0.18	mg/kg	U		
Sodium	7440-23-5	71	18	3.6	mg/kg			
Vanadium	7440-62-2	19	0.36	0.18	mg/kg			
Zinc	7440-66-6	50.6	0.719	0.36	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-503M-3003-SO **AnalysisType:** RES

Lab Sample Name: L09100553-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	5260	14	6.99	mg/kg		J	Q
Barium	7440-39-3	32.7	0.349	0.0699	mg/kg			
Beryllium	7440-41-7	0.302	0.0175	0.00839	mg/kg			
Cadmium	7440-43-9	0.914	0.0699	0.0349	mg/kg			
Calcium	7440-70-2	4690	6.99	3.49	mg/kg		J-	Q
Chromium	7440-47-3	15.4	0.175	0.0839	mg/kg			
Cobalt	7440-48-4	4.21	0.175	0.0839	mg/kg			
Copper	7440-50-8	19.3	0.175	0.0839	mg/kg			
Iron	7439-89-6	16900	1.4	0.699	mg/kg		J+	Q
Magnesium	7439-95-4	2190	17.5	8.39	mg/kg		J+	Q
Manganese	7439-96-5	362	0.349	0.0699	mg/kg			
Potassium	7440-09-7	512	34.9	17.5	mg/kg			
Silver	7440-22-4	0.175	0.349	0.175	mg/kg	U		
Sodium	7440-23-5	28.7	17.5	3.49	mg/kg			
Vanadium	7440-62-2	11.3	0.349	0.175	mg/kg			
Zinc	7440-66-6	71.9	0.699	0.349	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-504M-3004-SO **AnalysisType:** RES

Lab Sample Name: L09100553-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	5920	13.9	6.96	mg/kg		J	Q
Barium	7440-39-3	48.4	0.348	0.0696	mg/kg			
Beryllium	7440-41-7	0.35	0.0174	0.00835	mg/kg			
Cadmium	7440-43-9	1.17	0.0696	0.0348	mg/kg			
Calcium	7440-70-2	5200	6.96	3.48	mg/kg		J-	Q
Chromium	7440-47-3	13.6	0.174	0.0835	mg/kg			
Cobalt	7440-48-4	4.18	0.174	0.0835	mg/kg			
Copper	7440-50-8	18.7	0.174	0.0835	mg/kg			
Iron	7439-89-6	16100	1.39	0.696	mg/kg		J+	Q
Magnesium	7439-95-4	2300	17.4	8.35	mg/kg		J+	Q
Manganese	7439-96-5	385	0.348	0.0696	mg/kg			
Potassium	7440-09-7	571	34.8	17.4	mg/kg			
Silver	7440-22-4	0.174	0.348	0.174	mg/kg	U		
Sodium	7440-23-5	40	17.4	3.48	mg/kg			
Vanadium	7440-62-2	11.7	0.348	0.174	mg/kg			
Zinc	7440-66-6	78.6	0.696	0.348	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-505M-3005-SO **AnalysisType:** RES

Lab Sample Name: L09100553-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	4360	14.7	7.36	mg/kg		J	Q
Barium	7440-39-3	27.7	0.368	0.0736	mg/kg			
Beryllium	7440-41-7	0.249	0.0184	0.00883	mg/kg			
Cadmium	7440-43-9	0.833	0.0736	0.0368	mg/kg			
Calcium	7440-70-2	4570	7.36	3.68	mg/kg		J-	Q
Chromium	7440-47-3	12.7	0.184	0.0883	mg/kg			
Cobalt	7440-48-4	4.33	0.184	0.0883	mg/kg			
Copper	7440-50-8	18	0.184	0.0883	mg/kg			
Iron	7439-89-6	14900	1.47	0.736	mg/kg		J+	Q
Magnesium	7439-95-4	2130	18.4	8.83	mg/kg		J+	Q
Manganese	7439-96-5	339	0.368	0.0736	mg/kg			
Potassium	7440-09-7	435	36.8	18.4	mg/kg			
Silver	7440-22-4	0.184	0.368	0.184	mg/kg	U		
Sodium	7440-23-5	23.6	18.4	3.68	mg/kg			
Vanadium	7440-62-2	9.58	0.368	0.184	mg/kg			
Zinc	7440-66-6	61.4	0.736	0.368	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-506M-3006-SO **AnalysisType:** RES

Lab Sample Name: L09100553-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	3340	14.8	7.39	mg/kg		J	Q
Barium	7440-39-3	19.9	0.369	0.0739	mg/kg			
Beryllium	7440-41-7	0.205	0.0185	0.00886	mg/kg			
Cadmium	7440-43-9	0.741	0.0739	0.0369	mg/kg			
Calcium	7440-70-2	2560	7.39	3.69	mg/kg		J-	Q
Chromium	7440-47-3	11.9	0.185	0.0886	mg/kg			
Cobalt	7440-48-4	3.11	0.185	0.0886	mg/kg			
Copper	7440-50-8	13.8	0.185	0.0886	mg/kg			
Iron	7439-89-6	12800	1.48	0.739	mg/kg		J+	Q
Magnesium	7439-95-4	1390	18.5	8.86	mg/kg		J+	Q
Manganese	7439-96-5	263	0.369	0.0739	mg/kg			
Potassium	7440-09-7	347	36.9	18.5	mg/kg			
Silver	7440-22-4	0.185	0.369	0.185	mg/kg	U		
Sodium	7440-23-5	17.8	18.5	3.69	mg/kg	J	J	
Vanadium	7440-62-2	7.59	0.369	0.185	mg/kg			
Zinc	7440-66-6	55.1	0.739	0.369	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-507M-3008-SO **AnalysisType:** RES

Lab Sample Name: L09100553-09 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	4120	15	7.5	mg/kg		J	Q
Barium	7440-39-3	23.4	0.375	0.075	mg/kg			
Beryllium	7440-41-7	0.251	0.0188	0.009	mg/kg			
Cadmium	7440-43-9	0.945	0.075	0.0375	mg/kg			
Calcium	7440-70-2	6550	7.5	3.75	mg/kg		J-	Q
Chromium	7440-47-3	13.1	0.188	0.09	mg/kg			
Cobalt	7440-48-4	3.87	0.188	0.09	mg/kg			
Copper	7440-50-8	13.2	0.188	0.09	mg/kg			
Iron	7439-89-6	15700	1.5	0.75	mg/kg		J+	Q
Magnesium	7439-95-4	2830	18.8	9	mg/kg		J+	Q
Manganese	7439-96-5	309	0.375	0.075	mg/kg			
Potassium	7440-09-7	579	37.5	18.8	mg/kg			
Silver	7440-22-4	0.188	0.375	0.188	mg/kg	U		
Sodium	7440-23-5	30.9	18.8	3.75	mg/kg			
Vanadium	7440-62-2	9.53	0.375	0.188	mg/kg			
Zinc	7440-66-6	77.8	0.75	0.375	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-508M-3009-SO **AnalysisType:** RES

Lab Sample Name: L09100553-10 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	3830	15.4	7.69	mg/kg		J	Q
Barium	7440-39-3	37.3	0.385	0.0769	mg/kg			
Beryllium	7440-41-7	0.264	0.0192	0.00923	mg/kg			
Cadmium	7440-43-9	0.791	0.0769	0.0385	mg/kg			
Calcium	7440-70-2	7820	7.69	3.85	mg/kg		J-	Q
Chromium	7440-47-3	10.5	0.192	0.0923	mg/kg			
Cobalt	7440-48-4	2.87	0.192	0.0923	mg/kg			
Copper	7440-50-8	9.37	0.192	0.0923	mg/kg			
Iron	7439-89-6	11200	1.54	0.769	mg/kg		J+	Q
Magnesium	7439-95-4	1440	19.2	9.23	mg/kg		J+	Q
Manganese	7439-96-5	327	0.385	0.0769	mg/kg			
Potassium	7440-09-7	404	38.5	19.2	mg/kg			
Silver	7440-22-4	0.192	0.385	0.192	mg/kg	U		
Sodium	7440-23-5	38.3	19.2	3.85	mg/kg			
Vanadium	7440-62-2	7.94	0.385	0.192	mg/kg			
Zinc	7440-66-6	61.7	0.769	0.385	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-509M-3010-SO **AnalysisType:** RES

Lab Sample Name: L09100553-11 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	5270	13.7	6.86	mg/kg		J	Q
Barium	7440-39-3	40.9	0.343	0.0686	mg/kg			
Beryllium	7440-41-7	0.393	0.0171	0.00823	mg/kg			
Cadmium	7440-43-9	0.835	0.0686	0.0343	mg/kg			
Calcium	7440-70-2	9840	6.86	3.43	mg/kg		J-	Q
Chromium	7440-47-3	10.1	0.171	0.0823	mg/kg			
Cobalt	7440-48-4	3.59	0.171	0.0823	mg/kg			
Copper	7440-50-8	14.2	0.171	0.0823	mg/kg			
Iron	7439-89-6	14700	1.37	0.686	mg/kg		J+	Q
Magnesium	7439-95-4	2150	17.1	8.23	mg/kg		J+	Q
Manganese	7439-96-5	395	0.343	0.0686	mg/kg			
Potassium	7440-09-7	458	34.3	17.1	mg/kg			
Silver	7440-22-4	0.175	0.343	0.171	mg/kg	J	J	
Sodium	7440-23-5	51	17.1	3.43	mg/kg			
Vanadium	7440-62-2	10	0.343	0.171	mg/kg			
Zinc	7440-66-6	79.2	0.686	0.343	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-511M-3012-SO **AnalysisType:** RES

Lab Sample Name: L09100553-12 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	4730	13.5	6.74	mg/kg		J	Q
Barium	7440-39-3	27.7	0.337	0.0674	mg/kg			
Beryllium	7440-41-7	0.269	0.0169	0.00809	mg/kg			
Cadmium	7440-43-9	0.813	0.0674	0.0337	mg/kg			
Calcium	7440-70-2	3790	6.74	3.37	mg/kg		J-	Q
Chromium	7440-47-3	13.4	0.169	0.0809	mg/kg			
Cobalt	7440-48-4	3.96	0.169	0.0809	mg/kg			
Copper	7440-50-8	14	0.169	0.0809	mg/kg			
Iron	7439-89-6	14600	1.35	0.674	mg/kg		J+	Q
Magnesium	7439-95-4	1920	16.9	8.09	mg/kg		J+	Q
Manganese	7439-96-5	339	0.337	0.0674	mg/kg			
Potassium	7440-09-7	434	33.7	16.9	mg/kg			
Silver	7440-22-4	0.169	0.337	0.169	mg/kg	U		
Sodium	7440-23-5	23.7	16.9	3.37	mg/kg			
Vanadium	7440-62-2	10.3	0.337	0.169	mg/kg			
Zinc	7440-66-6	51.1	0.674	0.337	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-512M-3013-SO **AnalysisType:** RES

Lab Sample Name: L09100553-13 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	11300	14.8	7.41	mg/kg		J	Q
Barium	7440-39-3	76.7	0.371	0.0741	mg/kg			
Beryllium	7440-41-7	0.765	0.0185	0.0089	mg/kg			
Cadmium	7440-43-9	1.19	0.0741	0.0371	mg/kg			
Calcium	7440-70-2	9100	7.41	3.71	mg/kg		J-	Q
Chromium	7440-47-3	18.1	0.185	0.089	mg/kg			
Cobalt	7440-48-4	5.95	0.185	0.089	mg/kg			
Copper	7440-50-8	18.9	0.185	0.089	mg/kg			
Iron	7439-89-6	23100	1.48	0.741	mg/kg		J+	Q
Magnesium	7439-95-4	3730	18.5	8.9	mg/kg		J+	Q
Manganese	7439-96-5	470	0.371	0.0741	mg/kg			
Potassium	7440-09-7	631	37.1	18.5	mg/kg			
Silver	7440-22-4	0.185	0.371	0.185	mg/kg	U		
Sodium	7440-23-5	79.8	18.5	3.71	mg/kg			
Vanadium	7440-62-2	19.7	0.371	0.185	mg/kg			
Zinc	7440-66-6	139	0.741	0.371	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-513M-3014-SO **AnalysisType:** RES

Lab Sample Name: L09100553-14 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	8840	14.2	7.1	mg/kg		J	Q
Barium	7440-39-3	65.1	0.355	0.071	mg/kg			
Beryllium	7440-41-7	0.544	0.0177	0.00852	mg/kg			
Cadmium	7440-43-9	1.19	0.071	0.0355	mg/kg			
Calcium	7440-70-2	3870	7.1	3.55	mg/kg		J-	Q
Chromium	7440-47-3	16.6	0.177	0.0852	mg/kg			
Cobalt	7440-48-4	6.63	0.177	0.0852	mg/kg			
Copper	7440-50-8	18.8	0.177	0.0852	mg/kg			
Iron	7439-89-6	22500	1.42	0.71	mg/kg		J+	Q
Magnesium	7439-95-4	2540	17.7	8.52	mg/kg		J+	Q
Manganese	7439-96-5	454	0.355	0.071	mg/kg			
Potassium	7440-09-7	595	35.5	17.7	mg/kg			
Silver	7440-22-4	0.177	0.355	0.177	mg/kg	U		
Sodium	7440-23-5	27.1	17.7	3.55	mg/kg			
Vanadium	7440-62-2	17.6	0.355	0.177	mg/kg			
Zinc	7440-66-6	63.6	0.71	0.355	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-514M-3015-SO **AnalysisType:** RES

Lab Sample Name: L09100553-15 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	6460	14.4	7.18	mg/kg		J	Q
Barium	7440-39-3	44.4	0.359	0.0718	mg/kg			
Beryllium	7440-41-7	0.461	0.0179	0.00861	mg/kg			
Cadmium	7440-43-9	0.892	0.0718	0.0359	mg/kg			
Calcium	7440-70-2	7700	7.18	3.59	mg/kg		J-	Q
Chromium	7440-47-3	17.6	0.179	0.0861	mg/kg			
Cobalt	7440-48-4	4.35	0.179	0.0861	mg/kg			
Copper	7440-50-8	14.8	0.179	0.0861	mg/kg			
Iron	7439-89-6	15300	1.44	0.718	mg/kg		J+	Q
Magnesium	7439-95-4	2160	17.9	8.61	mg/kg		J+	Q
Manganese	7439-96-5	404	0.359	0.0718	mg/kg			
Potassium	7440-09-7	582	35.9	17.9	mg/kg			
Silver	7440-22-4	0.179	0.359	0.179	mg/kg	U		
Sodium	7440-23-5	43.7	17.9	3.59	mg/kg			
Vanadium	7440-62-2	12.4	0.359	0.179	mg/kg			
Zinc	7440-66-6	66.8	0.718	0.359	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-515M-3016-SO **AnalysisType:** RES

Lab Sample Name: L09100553-16 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	7850	15.1	7.54	mg/kg		J	Q
Barium	7440-39-3	59.8	0.377	0.0754	mg/kg			
Beryllium	7440-41-7	0.509	0.0189	0.00905	mg/kg			
Cadmium	7440-43-9	0.997	0.0754	0.0377	mg/kg			
Calcium	7440-70-2	3650	7.54	3.77	mg/kg		J-	Q
Chromium	7440-47-3	15	0.189	0.0905	mg/kg			
Cobalt	7440-48-4	5.98	0.189	0.0905	mg/kg			
Copper	7440-50-8	13.2	0.189	0.0905	mg/kg			
Iron	7439-89-6	19800	1.51	0.754	mg/kg		J+	Q
Magnesium	7439-95-4	2060	18.9	9.05	mg/kg		J+	Q
Manganese	7439-96-5	472	0.377	0.0754	mg/kg			
Potassium	7440-09-7	563	37.7	18.9	mg/kg			
Silver	7440-22-4	0.189	0.377	0.189	mg/kg	U		
Sodium	7440-23-5	26.6	18.9	3.77	mg/kg			
Vanadium	7440-62-2	16.1	0.377	0.189	mg/kg			
Zinc	7440-66-6	54.2	0.754	0.377	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-516M-3017-SO **AnalysisType:** RES

Lab Sample Name: L09100553-19 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	7110	14.8	7.42	mg/kg		J	Q
Barium	7440-39-3	55.7	0.371	0.0742	mg/kg			
Beryllium	7440-41-7	0.446	0.0185	0.0089	mg/kg			
Cadmium	7440-43-9	0.943	0.0742	0.0371	mg/kg			
Calcium	7440-70-2	3200	7.42	3.71	mg/kg		J-	Q
Chromium	7440-47-3	13.6	0.185	0.089	mg/kg			
Cobalt	7440-48-4	5.57	0.185	0.089	mg/kg			
Copper	7440-50-8	12.6	0.185	0.089	mg/kg			
Iron	7439-89-6	18000	1.48	0.742	mg/kg		J+	Q
Magnesium	7439-95-4	1830	18.5	8.9	mg/kg		J+	Q
Manganese	7439-96-5	414	0.371	0.0742	mg/kg			
Potassium	7440-09-7	511	37.1	18.5	mg/kg			
Silver	7440-22-4	0.185	0.371	0.185	mg/kg	U		
Sodium	7440-23-5	32.7	18.5	3.71	mg/kg			
Vanadium	7440-62-2	14.9	0.371	0.185	mg/kg			
Zinc	7440-66-6	46.4	0.742	0.371	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-517M-3018-SO **AnalysisType:** RES

Lab Sample Name: L09100553-21 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	5220	14.2	7.12	mg/kg			
Barium	7440-39-3	32	0.356	0.0712	mg/kg		J+	Q
Beryllium	7440-41-7	0.308	0.0178	0.00855	mg/kg			
Cadmium	7440-43-9	0.831	0.0712	0.0356	mg/kg			
Calcium	7440-70-2	3980	7.12	3.56	mg/kg		J	E
Chromium	7440-47-3	16.9	0.178	0.0855	mg/kg		J-	A
Cobalt	7440-48-4	4.43	0.178	0.0855	mg/kg		J-	A
Copper	7440-50-8	16.3	0.178	0.0855	mg/kg			
Iron	7439-89-6	15600	1.42	0.712	mg/kg		J	A
Magnesium	7439-95-4	2090	17.8	8.55	mg/kg			
Manganese	7439-96-5	353	0.356	0.0712	mg/kg		J-	A
Potassium	7440-09-7	406	35.6	17.8	mg/kg		J+	Q
Silver	7440-22-4	0.178	0.356	0.178	mg/kg	U	R	C
Sodium	7440-23-5	23.1	17.8	3.56	mg/kg			
Vanadium	7440-62-2	11.1	0.356	0.178	mg/kg			
Zinc	7440-66-6	68.3	0.712	0.356	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-517M-3020-SO **AnalysisType:** RES

Lab Sample Name: L09100553-22 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	5830	14.2	7.1	mg/kg			
Barium	7440-39-3	38	0.355	0.071	mg/kg		J+	Q
Beryllium	7440-41-7	0.352	0.0177	0.00852	mg/kg			
Cadmium	7440-43-9	0.904	0.071	0.0355	mg/kg			
Calcium	7440-70-2	3830	7.1	3.55	mg/kg		J	E
Chromium	7440-47-3	14.2	0.177	0.0852	mg/kg		J-	A
Cobalt	7440-48-4	4.9	0.177	0.0852	mg/kg		J-	A
Copper	7440-50-8	16.4	0.177	0.0852	mg/kg			
Iron	7439-89-6	16300	1.42	0.71	mg/kg		J	A
Magnesium	7439-95-4	2180	17.7	8.52	mg/kg			
Manganese	7439-96-5	386	0.355	0.071	mg/kg		J-	A
Potassium	7440-09-7	453	35.5	17.7	mg/kg		J+	Q
Silver	7440-22-4	0.177	0.355	0.177	mg/kg	U	R	C
Sodium	7440-23-5	28.5	17.7	3.55	mg/kg			
Vanadium	7440-62-2	12	0.355	0.177	mg/kg			
Zinc	7440-66-6	70.6	0.71	0.355	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-517M-3021-SO **AnalysisType:** RES

Lab Sample Name: L09100553-23 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	5370	14.3	7.15	mg/kg			
Barium	7440-39-3	35	0.358	0.0715	mg/kg		J+	Q
Beryllium	7440-41-7	0.381	0.0179	0.00858	mg/kg			
Cadmium	7440-43-9	0.83	0.0715	0.0358	mg/kg			
Calcium	7440-70-2	6230	7.15	3.58	mg/kg		J	E
Chromium	7440-47-3	14.5	0.179	0.0858	mg/kg		J-	A
Cobalt	7440-48-4	4.95	0.179	0.0858	mg/kg		J-	A
Copper	7440-50-8	16	0.179	0.0858	mg/kg			
Iron	7439-89-6	14700	1.43	0.715	mg/kg		J	A
Magnesium	7439-95-4	2300	17.9	8.58	mg/kg			
Manganese	7439-96-5	392	0.358	0.0715	mg/kg		J-	A
Potassium	7440-09-7	410	35.8	17.9	mg/kg		J+	Q
Silver	7440-22-4	0.179	0.358	0.179	mg/kg	U	R	C
Sodium	7440-23-5	34.1	17.9	3.58	mg/kg			
Vanadium	7440-62-2	10.6	0.358	0.179	mg/kg			
Zinc	7440-66-6	65.7	0.715	0.358	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-518M-3022-SO **AnalysisType:** RES

Lab Sample Name: L09100553-24 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	4670	13.8	6.91	mg/kg		J	Q
Barium	7440-39-3	46.3	0.346	0.0691	mg/kg			
Beryllium	7440-41-7	0.404	0.0173	0.00829	mg/kg			
Cadmium	7440-43-9	1.18	0.0691	0.0346	mg/kg			
Calcium	7440-70-2	5810	6.91	3.46	mg/kg		J-	Q
Chromium	7440-47-3	24.5	0.173	0.0829	mg/kg			
Cobalt	7440-48-4	3.24	0.173	0.0829	mg/kg			
Copper	7440-50-8	22	0.173	0.0829	mg/kg			
Iron	7439-89-6	12900	1.38	0.691	mg/kg		J+	Q
Magnesium	7439-95-4	1690	17.3	8.29	mg/kg		J+	Q
Manganese	7439-96-5	450	0.346	0.0691	mg/kg			
Potassium	7440-09-7	381	34.6	17.3	mg/kg			
Silver	7440-22-4	0.173	0.346	0.173	mg/kg	U		
Sodium	7440-23-5	36	17.3	3.46	mg/kg			
Vanadium	7440-62-2	9.62	0.346	0.173	mg/kg			
Zinc	7440-66-6	71	0.691	0.346	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-519M-3023-SO **AnalysisType:** RES

Lab Sample Name: L09100553-25 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	4140	14.3	7.13	mg/kg		J	Q
Barium	7440-39-3	21.3	0.357	0.0713	mg/kg		J+	Q
Beryllium	7440-41-7	0.216	0.0178	0.00856	mg/kg			
Cadmium	7440-43-9	0.716	0.0713	0.0357	mg/kg			
Calcium	7440-70-2	1390	7.13	3.57	mg/kg		J	Q
Chromium	7440-47-3	14.9	0.178	0.0856	mg/kg			
Cobalt	7440-48-4	3.33	0.178	0.0856	mg/kg			
Copper	7440-50-8	14.3	0.178	0.0856	mg/kg			
Iron	7439-89-6	13300	1.43	0.713	mg/kg	B		
Magnesium	7439-95-4	1430	17.8	8.56	mg/kg		J+	Q
Manganese	7439-96-5	251	0.357	0.0713	mg/kg		J-	Q
Potassium	7440-09-7	409	35.7	17.8	mg/kg		J+	Q
Silver	7440-22-4	0.178	0.357	0.178	mg/kg	U		
Sodium	7440-23-5	18.9	17.8	3.57	mg/kg			
Vanadium	7440-62-2	9.03	0.357	0.178	mg/kg			
Zinc	7440-66-6	49.4	0.713	0.357	mg/kg			

Analysis Method 6010B

Sample Name LL3SS-290M-2000-SO **AnalysisType:** RES

Lab Sample Name: L09100553-26 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	7980	14.1	7.04	mg/kg		J	Q
Barium	7440-39-3	55.7	0.352	0.0704	mg/kg		J+	Q
Beryllium	7440-41-7	0.454	0.0176	0.00845	mg/kg			
Cadmium	7440-43-9	0.817	0.0704	0.0352	mg/kg			
Calcium	7440-70-2	18000	70.4	35.2	mg/kg		J	Q
Chromium	7440-47-3	15.8	0.176	0.0845	mg/kg			
Cobalt	7440-48-4	4.46	0.176	0.0845	mg/kg			
Copper	7440-50-8	17.7	0.176	0.0845	mg/kg			
Iron	7439-89-6	16200	1.41	0.704	mg/kg	B		
Magnesium	7439-95-4	2950	17.6	8.45	mg/kg		J+	Q
Manganese	7439-96-5	520	0.352	0.0704	mg/kg		J-	Q
Potassium	7440-09-7	975	35.2	17.6	mg/kg		J+	Q
Silver	7440-22-4	0.281	0.352	0.176	mg/kg	J	J	
Sodium	7440-23-5	102	17.6	3.52	mg/kg			
Vanadium	7440-62-2	14.4	0.352	0.176	mg/kg			
Zinc	7440-66-6	68.6	0.704	0.352	mg/kg			

Analysis Method 6010B

Sample Name LL3SS-291M-2001-SO **AnalysisType:** RES

Lab Sample Name: L09100553-27 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	9450	15.5	7.73	mg/kg		J	Q
Barium	7440-39-3	61.9	0.387	0.0773	mg/kg		J+	Q
Beryllium	7440-41-7	0.464	0.0193	0.00928	mg/kg			
Cadmium	7440-43-9	0.773	0.0773	0.0387	mg/kg			
Calcium	7440-70-2	9270	7.73	3.87	mg/kg		J	Q
Chromium	7440-47-3	15.2	0.193	0.0928	mg/kg			
Cobalt	7440-48-4	4.74	0.193	0.0928	mg/kg			
Copper	7440-50-8	14	0.193	0.0928	mg/kg			
Iron	7439-89-6	16800	1.55	0.773	mg/kg	B		
Magnesium	7439-95-4	2450	19.3	9.28	mg/kg		J+	Q
Manganese	7439-96-5	474	0.387	0.0773	mg/kg		J-	Q
Potassium	7440-09-7	930	38.7	19.3	mg/kg		J+	Q
Silver	7440-22-4	0.193	0.387	0.193	mg/kg	U		
Sodium	7440-23-5	103	19.3	3.87	mg/kg			
Vanadium	7440-62-2	17.5	0.387	0.193	mg/kg			
Zinc	7440-66-6	54.1	0.773	0.387	mg/kg			

Analysis Method 6010B

Sample Name LL4SS-280M-2000-SO **AnalysisType:** RES

Lab Sample Name: L09100553-28 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	10200	15.2	7.6	mg/kg			
Barium	7440-39-3	46.4	0.38	0.076	mg/kg		J+	Q
Beryllium	7440-41-7	0.448	0.019	0.00912	mg/kg			
Cadmium	7440-43-9	1.09	0.076	0.038	mg/kg			
Calcium	7440-70-2	4130	7.6	3.8	mg/kg		J	E
Chromium	7440-47-3	20.5	0.19	0.0912	mg/kg		J-	A
Cobalt	7440-48-4	5.41	0.19	0.0912	mg/kg		J-	A
Copper	7440-50-8	22.3	0.19	0.0912	mg/kg			
Iron	7439-89-6	21600	1.52	0.76	mg/kg	B	J-	A
Magnesium	7439-95-4	3250	19	9.12	mg/kg			
Manganese	7439-96-5	363	0.38	0.076	mg/kg		J-	A
Potassium	7440-09-7	1280	38	19	mg/kg		J+	Q
Silver	7440-22-4	0.19	0.38	0.19	mg/kg	U	R	C
Sodium	7440-23-5	64.8	19	3.8	mg/kg			
Vanadium	7440-62-2	18.9	0.38	0.19	mg/kg			
Zinc	7440-66-6	79.9	0.76	0.38	mg/kg			

Analysis Method 6010B

Sample Name LL4SS-280M-2002-SO **AnalysisType:** RES

Lab Sample Name: L09100553-29 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	10400	15	7.5	mg/kg			
Barium	7440-39-3	49.6	0.375	0.075	mg/kg		J+	Q
Beryllium	7440-41-7	0.471	0.0187	0.00899	mg/kg			
Cadmium	7440-43-9	1.06	0.075	0.0375	mg/kg			
Calcium	7440-70-2	5700	7.5	3.75	mg/kg		J	E
Chromium	7440-47-3	20.9	0.187	0.0899	mg/kg		J-	A
Cobalt	7440-48-4	5.27	0.187	0.0899	mg/kg		J-	A
Copper	7440-50-8	21	0.187	0.0899	mg/kg			
Iron	7439-89-6	21600	1.5	0.75	mg/kg	B	J-	A
Magnesium	7439-95-4	3220	18.7	8.99	mg/kg			
Manganese	7439-96-5	387	0.375	0.075	mg/kg		J-	A
Potassium	7440-09-7	1250	37.5	18.7	mg/kg		J+	Q
Silver	7440-22-4	0.187	0.375	0.187	mg/kg	U	R	C
Sodium	7440-23-5	74	18.7	3.75	mg/kg			
Vanadium	7440-62-2	18.7	0.375	0.187	mg/kg			
Zinc	7440-66-6	76	0.75	0.375	mg/kg			

Analysis Method 6010B

Sample Name LL4SS-280M-2003-SO **AnalysisType:** RES

Lab Sample Name: L09100553-30 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	9150	14.2	7.11	mg/kg			
Barium	7440-39-3	44.8	0.355	0.0711	mg/kg		J+	Q
Beryllium	7440-41-7	0.436	0.0178	0.00853	mg/kg			
Cadmium	7440-43-9	1.07	0.0711	0.0355	mg/kg			
Calcium	7440-70-2	4300	7.11	3.55	mg/kg		J	E
Chromium	7440-47-3	22.1	0.178	0.0853	mg/kg		J-	A
Cobalt	7440-48-4	5.67	0.178	0.0853	mg/kg		J-	A
Copper	7440-50-8	22.9	0.178	0.0853	mg/kg			
Iron	7439-89-6	21300	1.42	0.711	mg/kg	B	J-	A
Magnesium	7439-95-4	3100	17.8	8.53	mg/kg			
Manganese	7439-96-5	420	0.355	0.0711	mg/kg		J-	A
Potassium	7440-09-7	1090	35.5	17.8	mg/kg		J+	Q
Silver	7440-22-4	0.178	0.355	0.178	mg/kg	U	R	C
Sodium	7440-23-5	60	17.8	3.55	mg/kg			
Vanadium	7440-62-2	17.2	0.355	0.178	mg/kg			
Zinc	7440-66-6	82.3	0.711	0.355	mg/kg			

Analysis Method 6010B

Sample Name LL4SS-281M-2004-SO **AnalysisType:** RES

Lab Sample Name: L09100553-31 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	8950	14.2	7.09	mg/kg		J	Q
Barium	7440-39-3	45.6	0.354	0.0709	mg/kg		J+	Q
Beryllium	7440-41-7	0.444	0.0177	0.0085	mg/kg			
Cadmium	7440-43-9	1.1	0.0709	0.0354	mg/kg			
Calcium	7440-70-2	6860	7.09	3.54	mg/kg		J	Q
Chromium	7440-47-3	18.8	0.177	0.085	mg/kg			
Cobalt	7440-48-4	5.06	0.177	0.085	mg/kg			
Copper	7440-50-8	23.5	0.177	0.085	mg/kg			
Iron	7439-89-6	21200	1.42	0.709	mg/kg	B		
Magnesium	7439-95-4	3200	17.7	8.5	mg/kg		J+	Q
Manganese	7439-96-5	416	0.354	0.0709	mg/kg		J-	Q
Potassium	7440-09-7	1170	35.4	17.7	mg/kg		J+	Q
Silver	7440-22-4	0.177	0.354	0.177	mg/kg	U		
Sodium	7440-23-5	58.1	17.7	3.54	mg/kg			
Vanadium	7440-62-2	16.9	0.354	0.177	mg/kg			
Zinc	7440-66-6	84.9	0.709	0.354	mg/kg			

Analysis Method 6010B

Sample Name LL4SS-282M-2005-SO **AnalysisType:** RES

Lab Sample Name: L09100553-32 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	9410	14.3	7.16	mg/kg		J	Q
Barium	7440-39-3	45.4	0.358	0.0716	mg/kg		J+	Q
Beryllium	7440-41-7	0.423	0.0179	0.00859	mg/kg			
Cadmium	7440-43-9	1.07	0.0716	0.0358	mg/kg			
Calcium	7440-70-2	8100	7.16	3.58	mg/kg		J	Q
Chromium	7440-47-3	17.3	0.179	0.0859	mg/kg			
Cobalt	7440-48-4	4.52	0.179	0.0859	mg/kg			
Copper	7440-50-8	22.2	0.179	0.0859	mg/kg			
Iron	7439-89-6	20600	1.43	0.716	mg/kg	B		
Magnesium	7439-95-4	3620	17.9	8.59	mg/kg		J+	Q
Manganese	7439-96-5	389	0.358	0.0716	mg/kg		J-	Q
Potassium	7440-09-7	1110	35.8	17.9	mg/kg		J+	Q
Silver	7440-22-4	0.179	0.358	0.179	mg/kg	U		
Sodium	7440-23-5	54	17.9	3.58	mg/kg			
Vanadium	7440-62-2	18.1	0.358	0.179	mg/kg			
Zinc	7440-66-6	84.2	0.716	0.358	mg/kg			

Analysis Method 6020

Sample Name LL1SS-500M-3000-SO **AnalysisType:** RE

Lab Sample Name: L09100553-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.669	0.0999	0.0499	mg/kg			
Arsenic	7440-38-2	8.72	0.295	0.0737	mg/kg			
Lead	7439-92-1	116	1.97	0.983	mg/kg			
Nickel	7440-02-0	36.2	0.786	0.197	mg/kg			
Selenium	7782-49-2	0.317	0.197	0.0983	mg/kg		J-	Q
Thallium	7440-28-0	0.114	0.0197	0.00983	mg/kg		J	E

Sample Name LL1SS-501M-3001-SO **AnalysisType:** RE

Lab Sample Name: L09100553-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.449	0.1	0.0502	mg/kg			
Arsenic	7440-38-2	8.67	0.301	0.0752	mg/kg			
Lead	7439-92-1	45.2	2	1	mg/kg			
Nickel	7440-02-0	23.8	0.802	0.2	mg/kg			
Selenium	7782-49-2	0.389	0.2	0.1	mg/kg		J-	Q
Thallium	7440-28-0	0.115	0.02	0.01	mg/kg		J	E

Sample Name LL1SS-502M-3002-SO **AnalysisType:** RE

Lab Sample Name: L09100553-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.229	0.0956	0.0478	mg/kg			
Arsenic	7440-38-2	7.48	0.298	0.0746	mg/kg			
Lead	7439-92-1	16.7	0.199	0.0994	mg/kg			
Nickel	7440-02-0	51.7	7.95	1.99	mg/kg			
Selenium	7782-49-2	0.343	0.199	0.0994	mg/kg		J-	Q
Thallium	7440-28-0	0.129	0.0199	0.00994	mg/kg		J	E

Analysis Method 6020

Sample Name LL1SS-503M-3003-SO **AnalysisType:** RE

Lab Sample Name: L09100553-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.313	0.0953	0.0476	mg/kg			
Arsenic	7440-38-2	10.8	0.288	0.072	mg/kg			
Lead	7439-92-1	17.7	0.192	0.096	mg/kg			
Nickel	7440-02-0	20	0.768	0.192	mg/kg			
Selenium	7782-49-2	0.24	0.192	0.096	mg/kg		J-	Q
Thallium	7440-28-0	0.11	0.0192	0.0096	mg/kg		J	E

Sample Name LL1SS-504M-3004-SO **AnalysisType:** RE

Lab Sample Name: L09100553-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	2.74	0.0946	0.0473	mg/kg			
Arsenic	7440-38-2	12.7	0.296	0.0741	mg/kg			
Lead	7439-92-1	49	1.97	0.987	mg/kg			
Nickel	7440-02-0	20.7	0.79	0.197	mg/kg			
Selenium	7782-49-2	0.281	0.197	0.0987	mg/kg		J-	Q
Thallium	7440-28-0	0.126	0.0197	0.00987	mg/kg		J	E

Sample Name LL1SS-505M-3005-SO **AnalysisType:** RE

Lab Sample Name: L09100553-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.308	0.0951	0.0476	mg/kg			
Arsenic	7440-38-2	11.5	0.287	0.0717	mg/kg			
Lead	7439-92-1	12.2	0.191	0.0957	mg/kg			
Nickel	7440-02-0	19.6	0.765	0.191	mg/kg			
Selenium	7782-49-2	0.197	0.191	0.0957	mg/kg		J-	Q
Thallium	7440-28-0	0.104	0.0191	0.00957	mg/kg		J	E

Analysis Method 6020

Sample Name LL1SS-506M-3006-SO **AnalysisType:** RE

Lab Sample Name: L09100553-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.284	0.0916	0.0458	mg/kg			
Arsenic	7440-38-2	9.02	0.293	0.0733	mg/kg			
Lead	7439-92-1	17	0.195	0.0977	mg/kg			
Nickel	7440-02-0	14.7	0.781	0.195	mg/kg			
Selenium	7782-49-2	0.212	0.195	0.0977	mg/kg		J-	Q
Thallium	7440-28-0	0.101	0.0195	0.00977	mg/kg		J	E

Sample Name LL1SS-507M-3008-SO **AnalysisType:** RE

Lab Sample Name: L09100553-09 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.234	0.0993	0.0497	mg/kg			
Arsenic	7440-38-2	7.78	0.297	0.0744	mg/kg			
Lead	7439-92-1	34.6	0.198	0.0991	mg/kg			
Nickel	7440-02-0	16	0.793	0.198	mg/kg			
Selenium	7782-49-2	0.137	0.198	0.0991	mg/kg	J	J	Q
Thallium	7440-28-0	0.0891	0.0198	0.00991	mg/kg		J	E

Sample Name LL1SS-508M-3009-SO **AnalysisType:** RE

Lab Sample Name: L09100553-10 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.26	0.0935	0.0467	mg/kg			
Arsenic	7440-38-2	9.38	0.29	0.0725	mg/kg			
Lead	7439-92-1	36.8	0.193	0.0967	mg/kg			
Nickel	7440-02-0	15.3	0.774	0.193	mg/kg			
Selenium	7782-49-2	0.274	0.193	0.0967	mg/kg		J-	Q
Thallium	7440-28-0	0.078	0.0193	0.00967	mg/kg		J	E

Analysis Method 6020

Sample Name LL1SS-509M-3010-SO **AnalysisType:** RE

Lab Sample Name: L09100553-11 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.297	0.0988	0.0494	mg/kg			
Arsenic	7440-38-2	9.45	0.282	0.0706	mg/kg			
Lead	7439-92-1	18.1	0.188	0.0941	mg/kg			
Nickel	7440-02-0	15.4	0.753	0.188	mg/kg			
Selenium	7782-49-2	0.213	0.188	0.0941	mg/kg		J-	Q
Thallium	7440-28-0	0.0858	0.0188	0.00941	mg/kg		J	E

Sample Name LL1SS-511M-3012-SO **AnalysisType:** RE

Lab Sample Name: L09100553-12 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.27	0.0968	0.0484	mg/kg			
Arsenic	7440-38-2	9.31	0.296	0.0741	mg/kg			
Lead	7439-92-1	14.1	0.197	0.0987	mg/kg			
Nickel	7440-02-0	18.8	0.79	0.197	mg/kg			
Selenium	7782-49-2	0.143	0.197	0.0987	mg/kg	J	J	Q
Thallium	7440-28-0	0.1	0.0197	0.00987	mg/kg		J	E

Sample Name LL1SS-512M-3013-SO **AnalysisType:** RE

Lab Sample Name: L09100553-13 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.523	0.0992	0.0496	mg/kg			
Arsenic	7440-38-2	9.68	0.278	0.0695	mg/kg			
Lead	7439-92-1	23.2	0.185	0.0926	mg/kg			
Nickel	7440-02-0	19	0.741	0.185	mg/kg			
Selenium	7782-49-2	0.358	0.185	0.0926	mg/kg		J-	Q
Thallium	7440-28-0	0.125	0.0185	0.00926	mg/kg		J	E

Analysis Method 6020

Sample Name LL1SS-513M-3014-SO **AnalysisType:** RE

Lab Sample Name: L09100553-14 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.301	0.0994	0.0497	mg/kg			
Arsenic	7440-38-2	10.6	0.284	0.0711	mg/kg			
Lead	7439-92-1	23.8	0.19	0.0948	mg/kg			
Nickel	7440-02-0	21.2	0.758	0.19	mg/kg			
Selenium	7782-49-2	0.352	0.19	0.0948	mg/kg		J-	Q
Thallium	7440-28-0	0.13	0.019	0.00948	mg/kg		J	E

Sample Name LL1SS-514M-3015-SO **AnalysisType:** RE

Lab Sample Name: L09100553-15 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.269	0.0915	0.0458	mg/kg			
Arsenic	7440-38-2	10.4	0.292	0.073	mg/kg			
Lead	7439-92-1	33.6	0.195	0.0974	mg/kg			
Nickel	7440-02-0	21.9	0.779	0.195	mg/kg			
Selenium	7782-49-2	0.282	0.195	0.0974	mg/kg		J-	Q
Thallium	7440-28-0	0.122	0.0195	0.00974	mg/kg		J	E

Sample Name LL1SS-515M-3016-SO **AnalysisType:** RE

Lab Sample Name: L09100553-16 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.375	0.0973	0.0486	mg/kg			
Arsenic	7440-38-2	8.96	0.3	0.0751	mg/kg			
Lead	7439-92-1	23	0.2	0.1	mg/kg			
Nickel	7440-02-0	17.5	0.801	0.2	mg/kg			
Selenium	7782-49-2	0.314	0.2	0.1	mg/kg		J-	Q
Thallium	7440-28-0	0.109	0.02	0.01	mg/kg		J	E

Analysis Method 6020

Sample Name LL1SS-516M-3017-SO **AnalysisType:** RE

Lab Sample Name: L09100553-19 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.355	0.1	0.05	mg/kg			
Arsenic	7440-38-2	9.07	0.295	0.0737	mg/kg			
Lead	7439-92-1	34.3	0.196	0.0982	mg/kg			
Nickel	7440-02-0	18.8	0.786	0.196	mg/kg			
Selenium	7782-49-2	0.344	0.196	0.0982	mg/kg		J-	Q
Thallium	7440-28-0	0.131	0.0196	0.00982	mg/kg		J	E

Sample Name LL1SS-517M-3018-SO **AnalysisType:** RE

Lab Sample Name: L09100553-21 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.363	0.101	0.0503	mg/kg			
Arsenic	7440-38-2	9.51	0.299	0.0747	mg/kg		J-	Q
Lead	7439-92-1	15.6	0.199	0.0996	mg/kg		J	Q, A
Nickel	7440-02-0	14.7	0.797	0.199	mg/kg			
Selenium	7782-49-2	0.25	0.398	0.199	mg/kg	J	J-	Q
Thallium	7440-28-0	0.164	0.0199	0.00996	mg/kg			

Sample Name LL1SS-517M-3020-SO **AnalysisType:** RE

Lab Sample Name: L09100553-22 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.284	0.1	0.0502	mg/kg			
Arsenic	7440-38-2	12.9	0.3	0.075	mg/kg		J-	Q
Lead	7439-92-1	16.6	0.2	0.1	mg/kg		J	Q, A
Nickel	7440-02-0	15.4	0.8	0.2	mg/kg			
Selenium	7782-49-2	0.223	0.2	0.1	mg/kg		J-	Q
Thallium	7440-28-0	0.123	0.02	0.01	mg/kg			

Analysis Method 6020

Sample Name LL1SS-517M-3021-SO **AnalysisType:** RE

Lab Sample Name: L09100553-23 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.281	0.0994	0.0497	mg/kg			
Arsenic	7440-38-2	10.5	0.299	0.0747	mg/kg		J-	Q
Lead	7439-92-1	17.2	0.199	0.0996	mg/kg		J	Q, A
Nickel	7440-02-0	13.8	0.797	0.199	mg/kg			
Selenium	7782-49-2	0.252	0.199	0.0996	mg/kg		J-	Q
Thallium	7440-28-0	0.122	0.0199	0.00996	mg/kg			

Sample Name LL1SS-518M-3022-SO **AnalysisType:** RE

Lab Sample Name: L09100553-24 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.45	0.0986	0.0493	mg/kg			
Arsenic	7440-38-2	6.56	0.292	0.073	mg/kg		J-	Q
Lead	7439-92-1	140	1.95	0.973	mg/kg		J+	Q
Nickel	7440-02-0	21.3	0.778	0.195	mg/kg			
Selenium	7782-49-2	0.256	0.195	0.0973	mg/kg		J-	Q
Thallium	7440-28-0	0.0864	0.0195	0.00973	mg/kg			

Sample Name LL1SS-519M-3023-SO **AnalysisType:** RE

Lab Sample Name: L09100553-25 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.24	0.0976	0.0488	mg/kg			
Arsenic	7440-38-2	8.08	0.292	0.0729	mg/kg		J-	Q
Lead	7439-92-1	9.88	0.194	0.0972	mg/kg		J+	Q
Nickel	7440-02-0	15.9	0.778	0.194	mg/kg			
Selenium	7782-49-2	0.142	0.194	0.0972	mg/kg	J	J	Q
Thallium	7440-28-0	0.0982	0.0194	0.00972	mg/kg			

Analysis Method 6020

Sample Name LL3SS-290M-2000-SO **AnalysisType:** RE

Lab Sample Name: L09100553-26 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.818	0.1	0.0501	mg/kg			
Arsenic	7440-38-2	10.9	0.302	0.0754	mg/kg		J-	Q
Lead	7439-92-1	15.7	0.201	0.101	mg/kg		J+	Q
Nickel	7440-02-0	23.8	0.804	0.201	mg/kg			
Selenium	7782-49-2	0.204	0.201	0.101	mg/kg		J-	Q
Thallium	7440-28-0	0.117	0.0201	0.0101	mg/kg			

Sample Name LL3SS-291M-2001-SO **AnalysisType:** RE

Lab Sample Name: L09100553-27 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.673	0.1	0.0502	mg/kg			
Arsenic	7440-38-2	8.12	0.298	0.0746	mg/kg		J-	Q
Lead	7439-92-1	14.3	0.199	0.0994	mg/kg		J+	Q
Nickel	7440-02-0	13.1	0.795	0.199	mg/kg			
Selenium	7782-49-2	0.322	0.199	0.0994	mg/kg		J-	Q
Thallium	7440-28-0	0.108	0.0199	0.00994	mg/kg			

Sample Name LL4SS-280M-2000-SO **AnalysisType:** RE

Lab Sample Name: L09100553-28 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.321	0.0967	0.0484	mg/kg			
Arsenic	7440-38-2	14.4	0.302	0.0756	mg/kg		J-	Q, C
Lead	7439-92-1	23.4	0.202	0.101	mg/kg		J	Q, A
Nickel	7440-02-0	21.5	0.806	0.202	mg/kg		J-	C
Selenium	7782-49-2	0.295	0.202	0.101	mg/kg		J-	Q
Thallium	7440-28-0	0.146	0.0202	0.0101	mg/kg			

Analysis Method 6020

Sample Name LL4SS-280M-2002-SO **AnalysisType:** RE

Lab Sample Name: L09100553-29 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.323	0.0943	0.0471	mg/kg			
Arsenic	7440-38-2	12.9	0.296	0.0741	mg/kg		J-	Q
Lead	7439-92-1	19.5	0.197	0.0987	mg/kg		J	Q, A
Nickel	7440-02-0	24.2	0.79	0.197	mg/kg			
Selenium	7782-49-2	0.288	0.197	0.0987	mg/kg		J-	Q
Thallium	7440-28-0	0.154	0.0197	0.00987	mg/kg			

Sample Name LL4SS-280M-2003-SO **AnalysisType:** RE

Lab Sample Name: L09100553-30 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.307	0.0999	0.05	mg/kg			
Arsenic	7440-38-2	11.5	0.295	0.0738	mg/kg		J-	Q
Lead	7439-92-1	19.7	0.197	0.0984	mg/kg		J	Q, A
Nickel	7440-02-0	18.1	0.787	0.197	mg/kg			
Selenium	7782-49-2	0.21	0.197	0.0984	mg/kg		J-	Q
Thallium	7440-28-0	0.128	0.0197	0.00984	mg/kg			

Sample Name LL4SS-281M-2004-SO **AnalysisType:** RE

Lab Sample Name: L09100553-31 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.374	0.1	0.0502	mg/kg			
Arsenic	7440-38-2	15.5	0.298	0.0744	mg/kg		J-	Q
Lead	7439-92-1	27	0.198	0.0992	mg/kg		J+	Q
Nickel	7440-02-0	20.7	0.793	0.198	mg/kg			
Selenium	7782-49-2	0.289	0.198	0.0992	mg/kg		J-	Q
Thallium	7440-28-0	0.15	0.0198	0.00992	mg/kg			

Analysis Method 6020

Sample Name LL4SS-282M-2005-SO **AnalysisType:** RE

Lab Sample Name: L09100553-32 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.472	0.101	0.0504	mg/kg			
Arsenic	7440-38-2	13.9	0.301	0.0752	mg/kg		J-	Q
Lead	7439-92-1	22.7	0.201	0.1	mg/kg		J+	Q
Nickel	7440-02-0	26.6	0.802	0.201	mg/kg			
Selenium	7782-49-2	0.305	0.201	0.1	mg/kg		J-	Q
Thallium	7440-28-0	0.155	0.0201	0.01	mg/kg			

Analysis Method 7471A

Sample Name LL1SS-500M-3000-SO **AnalysisType:** RES

Lab Sample Name: L09100553-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.118	0.0973	0.00973	mg/kg			

Sample Name LL1SS-501M-3001-SO **AnalysisType:** RES

Lab Sample Name: L09100553-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0182	0.0994	0.00994	mg/kg	J	J	

Sample Name LL1SS-502M-3002-SO **AnalysisType:** RES

Lab Sample Name: L09100553-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0246	0.0985	0.00985	mg/kg	J	J	

Sample Name LL1SS-503M-3003-SO **AnalysisType:** RES

Lab Sample Name: L09100553-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0165	0.0999	0.00999	mg/kg	J	J	

Sample Name LL1SS-504M-3004-SO **AnalysisType:** RES

Lab Sample Name: L09100553-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0181	0.1	0.01	mg/kg	J	J	

Analysis Method 7471A

Sample Name LL1SS-505M-3005-SO **AnalysisType:** RES

Lab Sample Name: L09100553-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0157	0.0993	0.00993	mg/kg	J	J	

Sample Name LL1SS-506M-3006-SO **AnalysisType:** RES

Lab Sample Name: L09100553-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	######	0.0971	0.00971	mg/kg	U		

Sample Name LL1SS-507M-3008-SO **AnalysisType:** RES

Lab Sample Name: L09100553-09 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	######	0.0991	0.00991	mg/kg	U		

Sample Name LL1SS-508M-3009-SO **AnalysisType:** RES

Lab Sample Name: L09100553-10 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0126	0.0981	0.00981	mg/kg	J	J	

Sample Name LL1SS-509M-3010-SO **AnalysisType:** RES

Lab Sample Name: L09100553-11 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0116	0.0941	0.00941	mg/kg	J	J	

Analysis Method 7471A

Sample Name LL1SS-511M-3012-SO **AnalysisType:** RES

Lab Sample Name: L09100553-12 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	#######	0.0963	0.00963	mg/kg	U		

Sample Name LL1SS-512M-3013-SO **AnalysisType:** RES

Lab Sample Name: L09100553-13 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0667	0.0944	0.00944	mg/kg	J	J	

Sample Name LL1SS-513M-3014-SO **AnalysisType:** RES

Lab Sample Name: L09100553-14 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0182	0.0998	0.00998	mg/kg	J	J	

Sample Name LL1SS-514M-3015-SO **AnalysisType:** RES

Lab Sample Name: L09100553-15 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0167	0.0998	0.00998	mg/kg	J	J	

Sample Name LL1SS-515M-3016-SO **AnalysisType:** RES

Lab Sample Name: L09100553-16 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0186	0.0997	0.00997	mg/kg	J	J	

Analysis Method 7471A

Sample Name LL1SS-516M-3017-SO **AnalysisType:** RES

Lab Sample Name: L09100553-19 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0242	0.0975	0.00975	mg/kg	J	J	

Sample Name LL1SS-517M-3018-SO **AnalysisType:** RES

Lab Sample Name: L09100553-21 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0162	0.0996	0.00996	mg/kg	J	J	

Sample Name LL1SS-517M-3020-SO **AnalysisType:** RES

Lab Sample Name: L09100553-22 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0131	0.1	0.01	mg/kg	J	J	

Sample Name LL1SS-517M-3021-SO **AnalysisType:** RES

Lab Sample Name: L09100553-23 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0203	0.0946	0.00946	mg/kg	J	J	

Sample Name LL1SS-518M-3022-SO **AnalysisType:** RES

Lab Sample Name: L09100553-24 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0378	0.0977	0.00977	mg/kg	J	J	

Analysis Method 7471A

Sample Name LL1SS-519M-3023-SO **AnalysisType:** RES

Lab Sample Name: L09100553-25 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	#######	0.0945	0.00945	mg/kg	U		

Sample Name LL3SS-290M-2000-SO **AnalysisType:** RES

Lab Sample Name: L09100553-26 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0111	0.097	0.0097	mg/kg	J	J	

Sample Name LL3SS-291M-2001-SO **AnalysisType:** RES

Lab Sample Name: L09100553-27 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0185	0.0962	0.00962	mg/kg	J	J	

Sample Name LL4SS-280M-2000-SO **AnalysisType:** RES

Lab Sample Name: L09100553-28 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0234	0.0937	0.00937	mg/kg	J	J	

Sample Name LL4SS-280M-2002-SO **AnalysisType:** RES

Lab Sample Name: L09100553-29 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0378	0.0981	0.00981	mg/kg	J	J	

Analysis Method 7471A

Sample Name LL4SS-280M-2003-SO **AnalysisType:** RES

Lab Sample Name: L09100553-30 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0222	0.097	0.0097	mg/kg	J	J	

Sample Name LL4SS-281M-2004-SO **AnalysisType:** RES

Lab Sample Name: L09100553-31 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0183	0.0989	0.00989	mg/kg	J	J	

Sample Name LL4SS-282M-2005-SO **AnalysisType:** RES

Lab Sample Name: L09100553-32 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.024	0.094	0.0094	mg/kg	J	J	

Analysis Method 8081A

Sample Name LL1SS-506M-3006-SO **AnalysisType:** RES

Lab Sample Name: L09100553-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-xylene	877-09-8	10.3	0	0	ug/kg			
4,4'-DDD	72-54-8	0.324	1.62	0.324	ug/kg	U		
4,4'-DDE	72-55-9	0.324	1.62	0.324	ug/kg	U		
4,4'-DDT	50-29-3	0.324	1.62	0.324	ug/kg	U		
Aldrin	309-00-2	0.324	1.62	0.324	ug/kg	U		
alpha Chlordane	5103-71-9	0.324	1.62	0.324	ug/kg	U		
alpha-BHC	319-84-6	0.324	1.62	0.324	ug/kg	U		
beta-BHC	319-85-7	0.324	1.62	0.324	ug/kg	U		
Decachlorobiphenyl	2051-24-3	12.2	0	0	ug/kg			
delta-BHC	319-86-8	0.324	1.62	0.324	ug/kg	U		
Dieldrin	60-57-1	0.324	1.62	0.324	ug/kg	U		
Endosulfan I	959-98-8	0.324	1.62	0.324	ug/kg	U		
Endosulfan II	33213-65-9	0.324	1.62	0.324	ug/kg	U		
Endosulfan sulfate	1031-07-8	0.324	1.62	0.324	ug/kg	U		
Endrin	72-20-8	0.324	1.62	0.324	ug/kg	U		
Endrin aldehyde	7421-93-4	0.324	1.62	0.324	ug/kg	U		
Endrin ketone	53494-70-5	0.324	1.62	0.324	ug/kg	U		
gamma Chlordane	5103-74-2	0.324	1.62	0.324	ug/kg	U		
gamma-BHC (Lindane)	58-89-9	0.324	1.62	0.324	ug/kg	U		
Heptachlor	76-44-8	0.324	1.62	0.324	ug/kg	U		
Heptachlor epoxide	1024-57-3	0.324	1.62	0.324	ug/kg	U		
Methoxychlor	72-43-5	0.324	1.62	0.324	ug/kg	U		
Toxaphene	8001-35-2	16.4	32.4	16.4	ug/kg	U	UJ	C

Analysis Method 8082

Sample Name LL1SS-506M-3006-SO **AnalysisType:** RES

Lab Sample Name: L09100553-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	12.9	0	0	ug/kg			
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	13.1	0	0	ug/kg			
Aroclor-1016	12674-11-2	8.09	16.2	8.09	ug/kg	U		
Aroclor-1016	12674-11-2	8.09	16.2	8.09	ug/kg	U		
Aroclor-1221	11104-28-2	8.09	16.2	8.09	ug/kg	U		
Aroclor-1221	11104-28-2	8.09	16.2	8.09	ug/kg	U		
Aroclor-1232	11141-16-5	8.09	16.2	8.09	ug/kg	U		
Aroclor-1232	11141-16-5	8.09	16.2	8.09	ug/kg	U		
Aroclor-1242	53469-21-9	8.09	16.2	8.09	ug/kg	U		
Aroclor-1242	53469-21-9	8.09	16.2	8.09	ug/kg	U		
Aroclor-1248	12672-29-6	8.09	16.2	8.09	ug/kg	U		
Aroclor-1248	12672-29-6	8.09	16.2	8.09	ug/kg	U		
Aroclor-1254	11097-69-1	262	16.2	8.09	ug/kg			
Aroclor-1254	11097-69-1	251	16.2	8.09	ug/kg			
Aroclor-1260	11096-82-5	8.09	16.2	8.09	ug/kg	U		
Aroclor-1260	11096-82-5	8.09	16.2	8.09	ug/kg	U		
Decachlorobiphenyl	2051-24-3	13.6	0	0	ug/kg			
Decachlorobiphenyl	2051-24-3	14.2	0	0	ug/kg			

Analysis Method 8260B

Sample Name LL1SS-506D-3007-SO **AnalysisType:** RES

Lab Sample Name: L09100553-08 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	0.42	4.2	0.42	ug/kg	U		
1,1,2,2-Tetrachloroethane	79-34-5	0.42	4.2	0.42	ug/kg	U		
1,1,2-Trichloroethane	79-00-5	0.42	4.2	0.42	ug/kg	U		
1,1-Dichloroethane	75-34-3	0.84	4.2	0.84	ug/kg	U		
1,1-Dichloroethene	75-35-4	0.42	4.2	0.42	ug/kg	U		
1,2-Dibromoethane	106-93-4	0.42	4.2	0.42	ug/kg	U		
1,2-Dichloroethane	107-06-2	0.42	4.2	0.42	ug/kg	U		
1,2-Dichloroethane-d4	17060-07-0	56.6	0	0	ug/kg			
1,2-Dichloroethene (total)	540-59-0	0.42	4.2	0.42	ug/kg	U		
1,2-Dichloropropane	78-87-5	0.42	4.2	0.42	ug/kg	U		
2-Butanone	78-93-3	2.1	4.2	2.1	ug/kg	U		
2-Hexanone	591-78-6	2.1	4.2	2.1	ug/kg	U		
4-Methyl-2-pentanone	108-10-1	2.1	4.2	2.1	ug/kg	U		
Acetone	67-64-1	4.2	8.4	4.2	ug/kg	U		
Benzene	71-43-2	0.42	4.2	0.42	ug/kg	U		
Bromochloromethane	74-97-5	0.42	4.2	0.42	ug/kg	U		
Bromodichloromethane	75-27-4	0.42	4.2	0.42	ug/kg	U		
Bromoform	75-25-2	0.42	4.2	0.42	ug/kg	U		
Bromomethane	74-83-9	0.84	4.2	0.84	ug/kg	U		
Carbon disulfide	75-15-0	0.42	4.2	0.42	ug/kg	U		
Carbon tetrachloride	56-23-5	0.42	4.2	0.42	ug/kg	U		
Chlorobenzene	108-90-7	0.42	4.2	0.42	ug/kg	U		
Chloroethane	75-00-3	0.84	4.2	0.84	ug/kg	U		
Chloroform	67-66-3	0.42	4.2	0.42	ug/kg	U		
Chloromethane	74-87-3	1.68	4.2	1.68	ug/kg	U		
cis-1,3-Dichloropropene	10061-01-5	0.42	4.2	0.42	ug/kg	U		
Dibromochloromethane	124-48-1	0.42	4.2	0.42	ug/kg	U		
Dibromofluoromethane	1868-53-7	58.1	0	0	ug/kg			

Analysis Method 8260B

Ethyl benzene	100-41-4	0.42	4.2	0.42	ug/kg	U
Methylene chloride	75-09-2	0.84	4.2	0.84	ug/kg	U
p-Bromofluorobenzene	460-00-4	61.8	0	0	ug/kg	
Styrene	100-42-5	0.42	4.2	0.42	ug/kg	U
Tetrachloroethene	127-18-4	0.42	4.2	0.42	ug/kg	U
Toluene	108-88-3	0.42	4.2	0.42	ug/kg	U
Toluene-d8	2037-26-5	59.5	0	0	ug/kg	
trans-1,3-Dichloropropene	10061-02-6	0.42	4.2	0.42	ug/kg	U
Trichloroethene	79-01-6	0.42	4.2	0.42	ug/kg	U
Vinyl chloride	75-01-4	0.84	4.2	0.84	ug/kg	U
Xylenes, Total	1330-20-7	0.42	4.2	0.42	ug/kg	U

Analysis Method 8260B

Sample Name TRIP BLANK 1 **AnalysisType:** RES

Lab Sample Name: L09100553-20 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	0.25	1	0.25	ug/L	U		
1,1,2,2-Tetrachloroethane	79-34-5	0.125	1	0.125	ug/L	U		
1,1,2-Trichloroethane	79-00-5	0.25	1	0.25	ug/L	U		
1,1-Dichloroethane	75-34-3	0.125	1	0.125	ug/L	U		
1,1-Dichloroethene	75-35-4	0.5	1	0.5	ug/L	U		
1,2-Dibromoethane	106-93-4	0.25	1	0.25	ug/L	U		
1,2-Dichloroethane	107-06-2	0.25	1	0.25	ug/L	U		
1,2-Dichloroethane-d4	17060-07-0	24.5	0	0	ug/L			
1,2-Dichloroethene (total)	540-59-0	0.25	1	0.25	ug/L	U		
1,2-Dichloropropane	78-87-5	0.2	1	0.2	ug/L	U		
2-Butanone	78-93-3	2.5	10	2.5	ug/L	U		
2-Hexanone	591-78-6	2.5	10	2.5	ug/L	U		
4-Methyl-2-pentanone	108-10-1	2.5	10	2.5	ug/L	U		
Acetone	67-64-1	2.5	10	2.5	ug/L	U		
Benzene	71-43-2	0.125	1	0.125	ug/L	U		
Bromochloromethane	74-97-5	0.2	1	0.2	ug/L	U		
Bromodichloromethane	75-27-4	0.25	1	0.25	ug/L	U		
Bromoform	75-25-2	0.5	1	0.5	ug/L	U		
Bromomethane	74-83-9	0.5	1	0.5	ug/L	U		
Carbon disulfide	75-15-0	0.5	1	0.5	ug/L	U		
Carbon tetrachloride	56-23-5	0.25	1	0.25	ug/L	U		
Chlorobenzene	108-90-7	0.125	1	0.125	ug/L	U		
Chloroethane	75-00-3	0.5	1	0.5	ug/L	U		
Chloroform	67-66-3	0.125	1	0.125	ug/L	U		
Chloromethane	74-87-3	0.25	1	0.25	ug/L	U		
cis-1,3-Dichloropropene	10061-01-5	0.25	1	0.25	ug/L	U		
Dibromochloromethane	124-48-1	0.25	1	0.25	ug/L	U		
Dibromofluoromethane	1868-53-7	26	0	0	ug/L			

Analysis Method 8260B

Ethyl benzene	100-41-4	0.25	1	0.25	ug/L	U	
Methylene chloride	75-09-2	0.265	1	0.25	ug/L	J	J
p-Bromofluorobenzene	460-00-4	25.7	0	0	ug/L		
Styrene	100-42-5	0.125	1	0.125	ug/L	U	
Tetrachloroethene	127-18-4	0.25	1	0.25	ug/L	U	
Toluene	108-88-3	0.25	1	0.25	ug/L	U	
Toluene-d8	2037-26-5	25.7	0	0	ug/L		
trans-1,3-Dichloropropene	10061-02-6	0.5	1	0.5	ug/L	U	
Trichloroethene	79-01-6	0.25	1	0.25	ug/L	U	
Vinyl chloride	75-01-4	0.25	1	0.25	ug/L	U	
Xylenes, Total	1330-20-7	0.5	2	0.5	ug/L	U	

Analysis Method 8270C

Sample Name LL1SS-503M-3003-SO **AnalysisType:** RES

Lab Sample Name: L09100553-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	88.4	177	88.4	ug/kg	U	UJ	S
1,2-Dichlorobenzene	95-50-1	88.4	177	88.4	ug/kg	U	UJ	S
1,3-Dichlorobenzene	541-73-1	88.4	177	88.4	ug/kg	U	UJ	S
1,4-Dichlorobenzene	106-46-7	88.4	177	88.4	ug/kg	U	UJ	S
2,4,5-Trichlorophenol	95-95-4	88.4	177	88.4	ug/kg	U	UJ	S
2,4,6-Tribromophenol	118-79-6	36500	0	0	ug/kg	*	J-	S
2,4,6-Trichlorophenol	88-06-2	88.4	177	88.4	ug/kg	U	UJ	S
2,4-Dichlorophenol	120-83-2	88.4	177	88.4	ug/kg	U	UJ	S
2,4-Dimethylphenol	105-67-9	88.4	177	88.4	ug/kg	U	UJ	S
2,4-Dinitrophenol	51-28-5	441	884	441	ug/kg	U	UJ	S
2,4-Dinitrotoluene	121-14-2	88.4	177	88.4	ug/kg	U	UJ	S
2,6-Dinitrotoluene	606-20-2	88.4	177	88.4	ug/kg	U	UJ	S
2-Chloronaphthalene	91-58-7	88.4	177	88.4	ug/kg	U	UJ	S
2-Chlorophenol	95-57-8	88.4	177	88.4	ug/kg	U	UJ	S
2-Fluorobiphenyl	321-60-8	11900	0	0	ug/kg	*	J-	S
2-Fluorophenol	367-12-4	36000	0	0	ug/kg	*	J-	S
2-Methylnaphthalene	91-57-6	88.4	177	88.4	ug/kg	U	UJ	S
2-Methylphenol	95-48-7	88.4	177	88.4	ug/kg	U	UJ	S
2-Nitroaniline	88-74-4	441	884	441	ug/kg	U	UJ	S
2-Nitrophenol	88-75-5	88.4	177	88.4	ug/kg	U	UJ	S
3,3'-Dichlorobenzidine	91-94-1	177	353	177	ug/kg	U	UJ	S
3-,4-Methylphenol	106-44-5	88.4	177	88.4	ug/kg	U	UJ	S
3-Nitroaniline	99-09-2	441	884	441	ug/kg	U	UJ	S
4,6-Dinitro-2-methylphenol	534-52-1	441	884	441	ug/kg	U	UJ	S
4-Bromophenyl-phenylether	101-55-3	88.4	177	88.4	ug/kg	U	UJ	S
4-Chloro-3-methylphenol	59-50-7	88.4	177	88.4	ug/kg	U	UJ	S
4-Chloroaniline	106-47-8	88.4	177	88.4	ug/kg	U	UJ	S
4-Chlorophenyl-phenyl ether	7005-72-3	88.4	177	88.4	ug/kg	U	UJ	S

Analysis Method 8270C

4-Nitroaniline	100-01-6	441	884	441	ug/kg	U	UJ	S
4-Nitrophenol	100-02-7	441	884	441	ug/kg	U	UJ	S
Acenaphthene	83-32-9	88.4	177	88.4	ug/kg	U	UJ	S
Acenaphthylene	208-96-8	88.4	177	88.4	ug/kg	U	UJ	S
Anthracene	120-12-7	88.4	177	88.4	ug/kg	U	UJ	S
Benzo(a)anthracene	56-55-3	99.1	177	88.4	ug/kg	J	J	S
Benzo(a)pyrene	50-32-8	88.4	177	88.4	ug/kg	U	UJ	S
Benzo(b)fluoranthene	205-99-2	88.4	177	88.4	ug/kg	U	UJ	S
Benzo(g,h,i)Perylene	191-24-2	88.4	177	88.4	ug/kg	U	UJ	S
Benzo(k)fluoranthene	207-08-9	98.2	177	88.4	ug/kg	J	J	S
Benzoic acid	65-85-0	353	5360	353	ug/kg	U	UJ	S
Benzyl alcohol	100-51-6	88.4	177	88.4	ug/kg	U	UJ	S
Bis(2-Chloroethoxy)Methane	111-91-1	88.4	177	88.4	ug/kg	U	UJ	S
Bis(2-Chloroethyl)ether	111-44-4	88.4	177	88.4	ug/kg	U	UJ	S
bis(2-Chloroisopropyl)ether	39638-32-9	88.4	177	88.4	ug/kg	U	UJ	S
bis(2-Ethylhexyl)phthalate	117-81-7	88.4	177	88.4	ug/kg	U	UJ	S
Butylbenzylphthalate	85-68-7	88.4	177	88.4	ug/kg	U	UJ	S
Carbazole	86-74-8	88.4	177	88.4	ug/kg	U	UJ	S
Chrysene	218-01-9	103	177	88.4	ug/kg	J	J	S
Dibenzo(a,h)Anthracene	53-70-3	88.4	177	88.4	ug/kg	U	UJ	S
Dibenzofuran	132-64-9	88.4	177	88.4	ug/kg	U	UJ	S
Diethylphthalate	84-66-2	88.4	177	88.4	ug/kg	U	UJ	S
Dimethylphthalate	131-11-3	88.4	177	88.4	ug/kg	U	UJ	S
Di-N-Butylphthalate	84-74-2	88.4	177	88.4	ug/kg	U	UJ	S
Di-n-octylphthalate	117-84-0	88.4	177	88.4	ug/kg	U	UJ	S
Fluoranthene	206-44-0	221	177	88.4	ug/kg		J-	S
Fluorene	86-73-7	88.4	177	88.4	ug/kg	U	UJ	S
Hexachlorobenzene	118-74-1	88.4	177	88.4	ug/kg	U	UJ	S
Hexachlorobutadiene	87-68-3	88.4	177	88.4	ug/kg	U	UJ	S
Hexachlorocyclopentadiene	77-47-4	88.4	177	88.4	ug/kg	U	UJ	S
Hexachloroethane	67-72-1	88.4	177	88.4	ug/kg	U	UJ	S
Indeno(1,2,3-cd)pyrene	193-39-5	88.4	177	88.4	ug/kg	U	UJ	S

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Isophorone	78-59-1	88.4	177	88.4	ug/kg	U	UJ	S
Naphthalene	91-20-3	88.4	177	88.4	ug/kg	U	UJ	S
Nitrobenzene	98-95-3	88.4	177	88.4	ug/kg	U	UJ	S
Nitrobenzene-d5	4165-60-0	14200	0	0	ug/kg	*	J-	S
N-Nitrosodiphenylamine	86-30-6	88.4	177	88.4	ug/kg	U	UJ	S
N-Nitrosodipropylamine	621-64-7	88.4	177	88.4	ug/kg	U	UJ	S
Pentachlorophenol	87-86-5	441	884	441	ug/kg	U	UJ	S
Phenanthrene	85-01-8	106	177	88.4	ug/kg	J	J	S
Phenol	108-95-2	88.4	177	88.4	ug/kg	U	UJ	S
Phenol-d5	4165-62-2	35800	0	0	ug/kg	*	J-	S
p-Terphenyl-d14	1718-51-0	25100	0	0	ug/kg			
Pyrene	129-00-0	165	177	88.4	ug/kg	J	J	S

Analysis Method 8270C

Sample Name LL1SS-504M-3004-SO **AnalysisType:** RES

Lab Sample Name: L09100553-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	87.8	176	87.8	ug/kg	U	UJ	S
1,2-Dichlorobenzene	95-50-1	87.8	176	87.8	ug/kg	U	UJ	S
1,3-Dichlorobenzene	541-73-1	87.8	176	87.8	ug/kg	U	UJ	S
1,4-Dichlorobenzene	106-46-7	87.8	176	87.8	ug/kg	U	UJ	S
2,4,5-Trichlorophenol	95-95-4	87.8	176	87.8	ug/kg	U	UJ	S
2,4,6-Tribromophenol	118-79-6	49000	0	0	ug/kg	*	J-	S
2,4,6-Trichlorophenol	88-06-2	87.8	176	87.8	ug/kg	U	UJ	S
2,4-Dichlorophenol	120-83-2	87.8	176	87.8	ug/kg	U	UJ	S
2,4-Dimethylphenol	105-67-9	87.8	176	87.8	ug/kg	U	UJ	S
2,4-Dinitrophenol	51-28-5	438	878	438	ug/kg	U	UJ	S
2,4-Dinitrotoluene	121-14-2	361	176	87.8	ug/kg		J-	S
2,6-Dinitrotoluene	606-20-2	159	176	87.8	ug/kg	J	J	S
2-Chloronaphthalene	91-58-7	87.8	176	87.8	ug/kg	U	UJ	S
2-Chlorophenol	95-57-8	87.8	176	87.8	ug/kg	U	UJ	S
2-Fluorobiphenyl	321-60-8	14100	0	0	ug/kg	*	J-	S
2-Fluorophenol	367-12-4	37400	0	0	ug/kg	*	J-	S
2-Methylnaphthalene	91-57-6	87.8	176	87.8	ug/kg	U	UJ	S
2-Methylphenol	95-48-7	87.8	176	87.8	ug/kg	U	UJ	S
2-Nitroaniline	88-74-4	438	878	438	ug/kg	U	UJ	S
2-Nitrophenol	88-75-5	87.8	176	87.8	ug/kg	U	UJ	S
3,3'-Dichlorobenzidine	91-94-1	176	351	176	ug/kg	U	UJ	S
3-,4-Methylphenol	106-44-5	87.8	176	87.8	ug/kg	U	UJ	S
3-Nitroaniline	99-09-2	438	878	438	ug/kg	U	UJ	S
4,6-Dinitro-2-methylphenol	534-52-1	438	878	438	ug/kg	U	UJ	S
4-Bromophenyl-phenylether	101-55-3	87.8	176	87.8	ug/kg	U	UJ	S
4-Chloro-3-methylphenol	59-50-7	87.8	176	87.8	ug/kg	U	UJ	S
4-Chloroaniline	106-47-8	87.8	176	87.8	ug/kg	U	UJ	S
4-Chlorophenyl-phenyl ether	7005-72-3	87.8	176	87.8	ug/kg	U	UJ	S

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4-Nitroaniline	100-01-6	438	878	438	ug/kg	U	UJ	S
4-Nitrophenol	100-02-7	438	878	438	ug/kg	U	UJ	S
Acenaphthene	83-32-9	87.8	176	87.8	ug/kg	U	UJ	S
Acenaphthylene	208-96-8	87.8	176	87.8	ug/kg	U	UJ	S
Anthracene	120-12-7	87.8	176	87.8	ug/kg	U	UJ	S
Benzo(a)anthracene	56-55-3	100	176	87.8	ug/kg	J	J	S
Benzo(a)pyrene	50-32-8	98.4	176	87.8	ug/kg	J	J	S
Benzo(b)fluoranthene	205-99-2	97.4	176	87.8	ug/kg	J	J	S
Benzo(g,h,i)Perylene	191-24-2	87.8	176	87.8	ug/kg	U	UJ	S
Benzo(k)fluoranthene	207-08-9	109	176	87.8	ug/kg	J	J	S
Benzoic acid	65-85-0	351	5320	351	ug/kg	U	UJ	S
Benzyl alcohol	100-51-6	87.8	176	87.8	ug/kg	U	UJ	S
Bis(2-Chloroethoxy)Methane	111-91-1	87.8	176	87.8	ug/kg	U	UJ	S
Bis(2-Chloroethyl)ether	111-44-4	87.8	176	87.8	ug/kg	U	UJ	S
bis(2-Chloroisopropyl)ether	39638-32-9	87.8	176	87.8	ug/kg	U	UJ	S
bis(2-Ethylhexyl)phthalate	117-81-7	87.8	176	87.8	ug/kg	U	UJ	S
Butylbenzylphthalate	85-68-7	87.8	176	87.8	ug/kg	U	UJ	S
Carbazole	86-74-8	87.8	176	87.8	ug/kg	U	UJ	S
Chrysene	218-01-9	122	176	87.8	ug/kg	J	J	S
Dibenzo(a,h)Anthracene	53-70-3	87.8	176	87.8	ug/kg	U	UJ	S
Dibenzofuran	132-64-9	87.8	176	87.8	ug/kg	U	UJ	S
Diethylphthalate	84-66-2	87.8	176	87.8	ug/kg	U	UJ	S
Dimethylphthalate	131-11-3	87.8	176	87.8	ug/kg	U	UJ	S
Di-N-Butylphthalate	84-74-2	87.8	176	87.8	ug/kg	U	UJ	S
Di-n-octylphthalate	117-84-0	87.8	176	87.8	ug/kg	U	UJ	S
Fluoranthene	206-44-0	221	176	87.8	ug/kg		J-	S
Fluorene	86-73-7	87.8	176	87.8	ug/kg	U	UJ	S
Hexachlorobenzene	118-74-1	87.8	176	87.8	ug/kg	U	UJ	S
Hexachlorobutadiene	87-68-3	87.8	176	87.8	ug/kg	U	UJ	S
Hexachlorocyclopentadiene	77-47-4	87.8	176	87.8	ug/kg	U	UJ	S
Hexachloroethane	67-72-1	87.8	176	87.8	ug/kg	U	UJ	S
Indeno(1,2,3-cd)pyrene	193-39-5	87.8	176	87.8	ug/kg	U	UJ	S

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Isophorone	78-59-1	87.8	176	87.8	ug/kg	U	UJ	S
Naphthalene	91-20-3	87.8	176	87.8	ug/kg	U	UJ	S
Nitrobenzene	98-95-3	87.8	176	87.8	ug/kg	U	UJ	S
Nitrobenzene-d5	4165-60-0	16100	0	0	ug/kg	*	J-	S
N-Nitrosodiphenylamine	86-30-6	87.8	176	87.8	ug/kg	U	UJ	S
N-Nitrosodipropylamine	621-64-7	87.8	176	87.8	ug/kg	U	UJ	S
Pentachlorophenol	87-86-5	438	878	438	ug/kg	U	UJ	S
Phenanthrene	85-01-8	87.8	176	87.8	ug/kg	U	UJ	S
Phenol	108-95-2	87.8	176	87.8	ug/kg	U	UJ	S
Phenol-d5	4165-62-2	36300	0	0	ug/kg	*	J-	S
p-Terphenyl-d14	1718-51-0	31600	0	0	ug/kg			
Pyrene	129-00-0	163	176	87.8	ug/kg	J	J	S

Analysis Method 8270C

Sample Name LL1SS-506M-3006-SO **AnalysisType:** RES

Lab Sample Name: L09100553-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	95.2	190	95.2	ug/kg	U	UJ	S
1,2-Dichlorobenzene	95-50-1	95.2	190	95.2	ug/kg	U	UJ	S
1,3-Dichlorobenzene	541-73-1	95.2	190	95.2	ug/kg	U	UJ	S
1,4-Dichlorobenzene	106-46-7	95.2	190	95.2	ug/kg	U	UJ	S
2,4,5-Trichlorophenol	95-95-4	95.2	190	95.2	ug/kg	U	UJ	S
2,4,6-Tribromophenol	118-79-6	55300	0	0	ug/kg			
2,4,6-Trichlorophenol	88-06-2	95.2	190	95.2	ug/kg	U	UJ	S
2,4-Dichlorophenol	120-83-2	95.2	190	95.2	ug/kg	U	UJ	S
2,4-Dimethylphenol	105-67-9	95.2	190	95.2	ug/kg	U	UJ	S
2,4-Dinitrophenol	51-28-5	475	952	475	ug/kg	U	UJ	S
2,4-Dinitrotoluene	121-14-2	95.2	190	95.2	ug/kg	U	UJ	S
2,6-Dinitrotoluene	606-20-2	95.2	190	95.2	ug/kg	U	UJ	S
2-Chloronaphthalene	91-58-7	95.2	190	95.2	ug/kg	U	UJ	S
2-Chlorophenol	95-57-8	95.2	190	95.2	ug/kg	U	UJ	S
2-Fluorobiphenyl	321-60-8	20400	0	0	ug/kg	*	J-	S
2-Fluorophenol	367-12-4	49100	0	0	ug/kg	*	J-	S
2-Methylnaphthalene	91-57-6	95.2	190	95.2	ug/kg	U	UJ	S
2-Methylphenol	95-48-7	95.2	190	95.2	ug/kg	U	UJ	S
2-Nitroaniline	88-74-4	475	952	475	ug/kg	U	UJ	S
2-Nitrophenol	88-75-5	95.2	190	95.2	ug/kg	U	UJ	S
3,3'-Dichlorobenzidine	91-94-1	190	381	190	ug/kg	U	UJ	S
3-,4-Methylphenol	106-44-5	95.2	190	95.2	ug/kg	U	UJ	S
3-Nitroaniline	99-09-2	475	952	475	ug/kg	U	UJ	S
4,6-Dinitro-2-methylphenol	534-52-1	475	952	475	ug/kg	U	UJ	S
4-Bromophenyl-phenylether	101-55-3	95.2	190	95.2	ug/kg	U	UJ	S
4-Chloro-3-methylphenol	59-50-7	95.2	190	95.2	ug/kg	U	UJ	S
4-Chloroaniline	106-47-8	95.2	190	95.2	ug/kg	U	UJ	S
4-Chlorophenyl-phenyl ether	7005-72-3	95.2	190	95.2	ug/kg	U	UJ	S

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4-Nitroaniline	100-01-6	475	952	475	ug/kg	U	UJ	S
4-Nitrophenol	100-02-7	475	952	475	ug/kg	U	UJ	S
Acenaphthene	83-32-9	95.2	190	95.2	ug/kg	U	UJ	S
Acenaphthylene	208-96-8	95.2	190	95.2	ug/kg	U	UJ	S
Anthracene	120-12-7	95.2	190	95.2	ug/kg	U	UJ	S
Benzo(a)anthracene	56-55-3	95.2	190	95.2	ug/kg	U	UJ	S
Benzo(a)pyrene	50-32-8	95.2	190	95.2	ug/kg	U	UJ	S
Benzo(b)fluoranthene	205-99-2	95.2	190	95.2	ug/kg	U	UJ	S
Benzo(g,h,i)Perylene	191-24-2	95.2	190	95.2	ug/kg	U	UJ	S
Benzo(k)fluoranthene	207-08-9	95.2	190	95.2	ug/kg	U	UJ	S
Benzoic acid	65-85-0	381	5770	381	ug/kg	U	UJ	S
Benzyl alcohol	100-51-6	95.2	190	95.2	ug/kg	U	UJ	S
Bis(2-Chloroethoxy)Methane	111-91-1	95.2	190	95.2	ug/kg	U	UJ	S
Bis(2-Chloroethyl)ether	111-44-4	95.2	190	95.2	ug/kg	U	UJ	S
bis(2-Chloroisopropyl)ether	39638-32-9	95.2	190	95.2	ug/kg	U	UJ	S
bis(2-Ethylhexyl)phthalate	117-81-7	95.2	190	95.2	ug/kg	U	UJ	S
Butylbenzylphthalate	85-68-7	95.2	190	95.2	ug/kg	U	UJ	S
Carbazole	86-74-8	95.2	190	95.2	ug/kg	U	UJ	S
Chrysene	218-01-9	95.2	190	95.2	ug/kg	U	UJ	S
Dibenzo(a,h)Anthracene	53-70-3	95.2	190	95.2	ug/kg	U	UJ	S
Dibenzofuran	132-64-9	95.2	190	95.2	ug/kg	U	UJ	S
Diethylphthalate	84-66-2	95.2	190	95.2	ug/kg	U	UJ	S
Dimethylphthalate	131-11-3	95.2	190	95.2	ug/kg	U	UJ	S
Di-N-Butylphthalate	84-74-2	95.2	190	95.2	ug/kg	U	UJ	S
Di-n-octylphthalate	117-84-0	95.2	190	95.2	ug/kg	U	UJ	S
Fluoranthene	206-44-0	95.2	190	95.2	ug/kg	U	UJ	S
Fluorene	86-73-7	95.2	190	95.2	ug/kg	U	UJ	S
Hexachlorobenzene	118-74-1	95.2	190	95.2	ug/kg	U	UJ	S
Hexachlorobutadiene	87-68-3	95.2	190	95.2	ug/kg	U	UJ	S
Hexachlorocyclopentadiene	77-47-4	95.2	190	95.2	ug/kg	U	UJ	S
Hexachloroethane	67-72-1	95.2	190	95.2	ug/kg	U	UJ	S
Indeno(1,2,3-cd)pyrene	193-39-5	95.2	190	95.2	ug/kg	U	UJ	S

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Isophorone	78-59-1	95.2	190	95.2	ug/kg	U	UJ	S
Naphthalene	91-20-3	95.2	190	95.2	ug/kg	U	UJ	S
Nitrobenzene	98-95-3	95.2	190	95.2	ug/kg	U	UJ	S
Nitrobenzene-d5	4165-60-0	22600	0	0	ug/kg	*	J-	S
N-Nitrosodiphenylamine	86-30-6	95.2	190	95.2	ug/kg	U	UJ	S
N-Nitrosodipropylamine	621-64-7	95.2	190	95.2	ug/kg	U	UJ	S
Pentachlorophenol	87-86-5	475	952	475	ug/kg	U	UJ	S
Phenanthrene	85-01-8	95.2	190	95.2	ug/kg	U	UJ	S
Phenol	108-95-2	95.2	190	95.2	ug/kg	U	UJ	S
Phenol-d5	4165-62-2	47400	0	0	ug/kg	*	J-	S
p-Terphenyl-d14	1718-51-0	60600	0	0	ug/kg			
Pyrene	129-00-0	95.2	190	95.2	ug/kg	U	UJ	S

Analysis Method 8330

Sample Name LL1SS-500M-3000-SO **AnalysisType:** RES

Lab Sample Name: L09100553-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0986	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0986	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0969	0.242	0.0969	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0969	0.242	0.0969	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0969	0.242	0.0969	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0969	0.242	0.0969	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0969	0.242	0.0969	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0969	0.242	0.0969	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0969	0.242	0.0969	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0969	0.242	0.0969	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0969	0.242	0.0969	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0969	0.242	0.0969	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0969	0.242	0.0969	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0969	0.242	0.0969	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0969	0.242	0.0969	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0969	0.242	0.0969	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0969	0.242	0.0969	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0969	0.242	0.0969	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0969	0.242	0.0969	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0969	0.242	0.0969	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0969	0.242	0.0969	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0969	0.242	0.0969	mg/kg	U		
HMX	2691-41-0	0.0969	0.242	0.0969	mg/kg	U		
HMX	2691-41-0	0.0969	0.242	0.0969	mg/kg	U		
Nitrobenzene	98-95-3	0.0969	0.242	0.0969	mg/kg	U		
Nitrobenzene	98-95-3	0.0969	0.242	0.0969	mg/kg	U		
Nitroglycerin	55-63-0	0.0969	0.242	0.0969	mg/kg	U		
Nitroglycerin	55-63-0	0.0969	0.242	0.0969	mg/kg	U		

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PETN	78-11-5	0.484	1.45	0.484	mg/kg	U	R	L
PETN	78-11-5	0.484	1.45	0.484	mg/kg	U	R	L
RDX	121-82-4	0.0969	0.242	0.0969	mg/kg	U		
RDX	121-82-4	0.0969	0.242	0.0969	mg/kg	U		
Tetryl	479-45-8	0.0969	0.242	0.0969	mg/kg	U		
Tetryl	479-45-8	0.0969	0.242	0.0969	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-501M-3001-SO **AnalysisType:** RES

Lab Sample Name: L09100553-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.101	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.101	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0991	0.248	0.0991	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0991	0.248	0.0991	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0991	0.248	0.0991	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0991	0.248	0.0991	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0991	0.248	0.0991	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0991	0.248	0.0991	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0991	0.248	0.0991	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0991	0.248	0.0991	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0991	0.248	0.0991	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0991	0.248	0.0991	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0991	0.248	0.0991	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0991	0.248	0.0991	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0991	0.248	0.0991	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0991	0.248	0.0991	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0991	0.248	0.0991	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0991	0.248	0.0991	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0991	0.248	0.0991	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0991	0.248	0.0991	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0991	0.248	0.0991	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0991	0.248	0.0991	mg/kg	U		
HMX	2691-41-0	0.0991	0.248	0.0991	mg/kg	U		
HMX	2691-41-0	0.0991	0.248	0.0991	mg/kg	U		
Nitrobenzene	98-95-3	0.0991	0.248	0.0991	mg/kg	U		
Nitrobenzene	98-95-3	0.0991	0.248	0.0991	mg/kg	U		
Nitroglycerin	55-63-0	0.0991	0.248	0.0991	mg/kg	U		
Nitroglycerin	55-63-0	0.0991	0.248	0.0991	mg/kg	U		

Analysis Method 8330

PETN	78-11-5	0.496	1.49	0.496	mg/kg	U	R	L
PETN	78-11-5	0.496	1.49	0.496	mg/kg	U	R	L
RDX	121-82-4	0.0991	0.248	0.0991	mg/kg	U		
RDX	121-82-4	0.0991	0.248	0.0991	mg/kg	U		
Tetryl	479-45-8	0.0991	0.248	0.0991	mg/kg	U	R	C
Tetryl	479-45-8	0.0991	0.248	0.0991	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-502M-3002-SO **AnalysisType:** RES

Lab Sample Name: L09100553-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0932	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0932	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.1	0.25	0.1	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.1	0.25	0.1	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		

Analysis Method 8330

PETN	78-11-5	0.5	1.5	0.5	mg/kg	U	R	L
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U	R	L
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U		
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-503M-3003-SO **AnalysisType:** RES

Lab Sample Name: L09100553-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0944	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0944	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0963	0.241	0.0963	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0963	0.241	0.0963	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0963	0.241	0.0963	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0963	0.241	0.0963	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0963	0.241	0.0963	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0963	0.241	0.0963	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0963	0.241	0.0963	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0963	0.241	0.0963	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0963	0.241	0.0963	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0963	0.241	0.0963	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0963	0.241	0.0963	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0963	0.241	0.0963	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0963	0.241	0.0963	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0963	0.241	0.0963	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0963	0.241	0.0963	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0963	0.241	0.0963	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0963	0.241	0.0963	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0963	0.241	0.0963	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0963	0.241	0.0963	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0963	0.241	0.0963	mg/kg	U		
HMX	2691-41-0	0.0963	0.241	0.0963	mg/kg	U		
HMX	2691-41-0	0.0963	0.241	0.0963	mg/kg	U		
Nitrobenzene	98-95-3	0.0963	0.241	0.0963	mg/kg	U		
Nitrobenzene	98-95-3	0.0963	0.241	0.0963	mg/kg	U		
Nitroglycerin	55-63-0	0.0963	0.241	0.0963	mg/kg	U		
Nitroglycerin	55-63-0	0.0963	0.241	0.0963	mg/kg	U		

Analysis Method 8330

PETN	78-11-5	0.482	1.45	0.482	mg/kg	U	R	L
PETN	78-11-5	0.482	1.45	0.482	mg/kg	U	R	L
RDX	121-82-4	0.0963	0.241	0.0963	mg/kg	U		
RDX	121-82-4	0.0963	0.241	0.0963	mg/kg	U		
Tetryl	479-45-8	0.0963	0.241	0.0963	mg/kg	U	R	C
Tetryl	479-45-8	0.0963	0.241	0.0963	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-504M-3004-SO **AnalysisType:** RES

Lab Sample Name: L09100553-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0999	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0999	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.097	0.242	0.097	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.097	0.242	0.097	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.097	0.242	0.097	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.097	0.242	0.097	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.097	0.242	0.097	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.097	0.242	0.097	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.097	0.242	0.097	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.097	0.242	0.097	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.097	0.242	0.097	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.097	0.242	0.097	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.097	0.242	0.097	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.097	0.242	0.097	mg/kg	U		
2-Nitrotoluene	88-72-2	0.097	0.242	0.097	mg/kg	U		
2-Nitrotoluene	88-72-2	0.097	0.242	0.097	mg/kg	U		
3-Nitrotoluene	99-08-1	0.097	0.242	0.097	mg/kg	U		
3-Nitrotoluene	99-08-1	0.097	0.242	0.097	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.097	0.242	0.097	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.097	0.242	0.097	mg/kg	U		
4-Nitrotoluene	99-99-0	0.097	0.242	0.097	mg/kg	U		
4-Nitrotoluene	99-99-0	0.097	0.242	0.097	mg/kg	U		
HMX	2691-41-0	0.097	0.242	0.097	mg/kg	U		
HMX	2691-41-0	0.097	0.242	0.097	mg/kg	U		
Nitrobenzene	98-95-3	0.097	0.242	0.097	mg/kg	U		
Nitrobenzene	98-95-3	0.097	0.242	0.097	mg/kg	U		
Nitroglycerin	55-63-0	0.097	0.242	0.097	mg/kg	U		
Nitroglycerin	55-63-0	0.097	0.242	0.097	mg/kg	U		

Analysis Method 8330

PETN	78-11-5	0.485	1.45	0.485	mg/kg	U	R	L
PETN	78-11-5	0.485	1.45	0.485	mg/kg	U	R	L
RDX	121-82-4	0.097	0.242	0.097	mg/kg	U		
RDX	121-82-4	0.097	0.242	0.097	mg/kg	U		
Tetryl	479-45-8	0.097	0.242	0.097	mg/kg	U	R	C
Tetryl	479-45-8	0.097	0.242	0.097	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-505M-3005-SO **AnalysisType:** RES

Lab Sample Name: L09100553-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0942	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0942	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0988	0.247	0.0988	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0988	0.247	0.0988	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0988	0.247	0.0988	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0988	0.247	0.0988	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0988	0.247	0.0988	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0988	0.247	0.0988	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0988	0.247	0.0988	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0988	0.247	0.0988	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0988	0.247	0.0988	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0988	0.247	0.0988	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0988	0.247	0.0988	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0988	0.247	0.0988	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0988	0.247	0.0988	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0988	0.247	0.0988	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0988	0.247	0.0988	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0988	0.247	0.0988	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0988	0.247	0.0988	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0988	0.247	0.0988	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0988	0.247	0.0988	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0988	0.247	0.0988	mg/kg	U		
HMX	2691-41-0	0.0988	0.247	0.0988	mg/kg	U		
HMX	2691-41-0	0.0988	0.247	0.0988	mg/kg	U		
Nitrobenzene	98-95-3	0.0988	0.247	0.0988	mg/kg	U		
Nitrobenzene	98-95-3	0.0988	0.247	0.0988	mg/kg	U		
Nitroglycerin	55-63-0	0.0988	0.247	0.0988	mg/kg	U		
Nitroglycerin	55-63-0	0.0988	0.247	0.0988	mg/kg	U		

Analysis Method 8330

PETN	78-11-5	0.494	1.48	0.494	mg/kg	U	R	L
PETN	78-11-5	0.494	1.48	0.494	mg/kg	U	R	L
RDX	121-82-4	0.0988	0.247	0.0988	mg/kg	U		
RDX	121-82-4	0.0988	0.247	0.0988	mg/kg	U		
Tetryl	479-45-8	0.0988	0.247	0.0988	mg/kg	U	R	C
Tetryl	479-45-8	0.0988	0.247	0.0988	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-506M-3006-SO **AnalysisType:** RES

Lab Sample Name: L09100553-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0956	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0956	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0967	0.242	0.0967	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0967	0.242	0.0967	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0967	0.242	0.0967	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0967	0.242	0.0967	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0967	0.242	0.0967	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0967	0.242	0.0967	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0967	0.242	0.0967	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0967	0.242	0.0967	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0967	0.242	0.0967	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0967	0.242	0.0967	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0967	0.242	0.0967	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0967	0.242	0.0967	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0967	0.242	0.0967	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0967	0.242	0.0967	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0967	0.242	0.0967	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0967	0.242	0.0967	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0967	0.242	0.0967	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0967	0.242	0.0967	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0967	0.242	0.0967	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0967	0.242	0.0967	mg/kg	U		
HMX	2691-41-0	0.0967	0.242	0.0967	mg/kg	U		
HMX	2691-41-0	0.0967	0.242	0.0967	mg/kg	U		
Nitrobenzene	98-95-3	0.0967	0.242	0.0967	mg/kg	U		
Nitrobenzene	98-95-3	0.0967	0.242	0.0967	mg/kg	U		
Nitroglycerin	55-63-0	0.0967	0.242	0.0967	mg/kg	U		
Nitroglycerin	55-63-0	0.0967	0.242	0.0967	mg/kg	U		

Analysis Method 8330

PETN	78-11-5	0.484	1.45	0.484	mg/kg	U	R	L
PETN	78-11-5	0.484	1.45	0.484	mg/kg	U	R	L
RDX	121-82-4	0.0967	0.242	0.0967	mg/kg	U		
RDX	121-82-4	0.0967	0.242	0.0967	mg/kg	U		
Tetryl	479-45-8	0.0967	0.242	0.0967	mg/kg	U	R	C
Tetryl	479-45-8	0.0967	0.242	0.0967	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-507M-3008-SO **AnalysisType:** RES

Lab Sample Name: L09100553-09 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.099	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.099	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.207	0	0	mg/kg	*	J	S
1,3,5-Trinitrobenzene	99-35-4	0.097	0.242	0.097	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.097	0.242	0.097	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.097	0.242	0.097	mg/kg	U	UJ	H
1,3-Dinitrobenzene	99-65-0	0.097	0.242	0.097	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.097	0.242	0.097	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.097	0.242	0.097	mg/kg	U	UJ	H
2,4,6-Trinitrotoluene	118-96-7	1.74	0.242	0.097	mg/kg		J+	C
2,4,6-Trinitrotoluene	118-96-7	1.83	0.242	0.097	mg/kg		J	S
2,4,6-Trinitrotoluene	118-96-7	1.74	0.242	0.097	mg/kg			
2,4-Dinitrotoluene	121-14-2	0.097	0.242	0.097	mg/kg	U	UJ	H
2,4-Dinitrotoluene	121-14-2	0.097	0.242	0.097	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.097	0.242	0.097	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.097	0.242	0.097	mg/kg	U	UJ	H
2,6-Dinitrotoluene	606-20-2	0.097	0.242	0.097	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.097	0.242	0.097	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.097	0.242	0.097	mg/kg	U	UJ	H
2-Amino-4,6-dinitrotoluene	35572-78-2	0.097	0.242	0.097	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.097	0.242	0.097	mg/kg	U		
2-Nitrotoluene	88-72-2	0.097	0.242	0.097	mg/kg	U	UJ	H
2-Nitrotoluene	88-72-2	0.097	0.242	0.097	mg/kg	U		
2-Nitrotoluene	88-72-2	0.097	0.242	0.097	mg/kg	U		
3-Nitrotoluene	99-08-1	0.097	0.242	0.097	mg/kg	U		
3-Nitrotoluene	99-08-1	0.097	0.242	0.097	mg/kg	U		
3-Nitrotoluene	99-08-1	0.097	0.242	0.097	mg/kg	U	UJ	H
4-Amino-2,6-dinitrotoluene	19406-51-0	0.264	0.242	0.097	mg/kg			

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4-Amino-2,6-dinitrotoluene	19406-51-0	0.296	0.242	0.097	mg/kg		J	S
4-Amino-2,6-dinitrotoluene	19406-51-0	0.264	0.242	0.097	mg/kg			
4-Nitrotoluene	99-99-0	0.097	0.242	0.097	mg/kg	U	UJ	H
4-Nitrotoluene	99-99-0	0.097	0.242	0.097	mg/kg	U		
4-Nitrotoluene	99-99-0	0.097	0.242	0.097	mg/kg	U		
HMX	2691-41-0	0.298	0.242	0.097	mg/kg			
HMX	2691-41-0	0.298	0.242	0.097	mg/kg			
HMX	2691-41-0	0.351	0.242	0.097	mg/kg		J	S
Nitrobenzene	98-95-3	0.097	0.242	0.097	mg/kg	U		
Nitrobenzene	98-95-3	0.097	0.242	0.097	mg/kg	U	UJ	H
Nitrobenzene	98-95-3	0.097	0.242	0.097	mg/kg	U		
Nitroglycerin	55-63-0	0.097	0.242	0.097	mg/kg	U		
Nitroglycerin	55-63-0	0.097	0.242	0.097	mg/kg	U	UJ	H
Nitroglycerin	55-63-0	0.097	0.242	0.097	mg/kg	U		
PETN	78-11-5	0.485	1.45	0.485	mg/kg	U	R	L
PETN	78-11-5	0.485	1.45	0.485	mg/kg	U	R	L
RDX	121-82-4	2.99	0.242	0.097	mg/kg		J	S
RDX	121-82-4	2.62	0.242	0.097	mg/kg			
RDX	121-82-4	2.62	0.242	0.097	mg/kg			
Tetryl	479-45-8	0.097	0.242	0.097	mg/kg	U	R	C
Tetryl	479-45-8	0.097	0.242	0.097	mg/kg	U		
Tetryl	479-45-8	0.097	0.242	0.097	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-508M-3009-SO **AnalysisType:** RES

Lab Sample Name: L09100553-10 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0998	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0998	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0981	0.245	0.0981	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0981	0.245	0.0981	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0981	0.245	0.0981	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0981	0.245	0.0981	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0981	0.245	0.0981	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0981	0.245	0.0981	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0981	0.245	0.0981	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0981	0.245	0.0981	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0981	0.245	0.0981	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0981	0.245	0.0981	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0981	0.245	0.0981	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0981	0.245	0.0981	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0981	0.245	0.0981	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0981	0.245	0.0981	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0981	0.245	0.0981	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0981	0.245	0.0981	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0981	0.245	0.0981	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0981	0.245	0.0981	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0981	0.245	0.0981	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0981	0.245	0.0981	mg/kg	U		
HMX	2691-41-0	0.0981	0.245	0.0981	mg/kg	U		
HMX	2691-41-0	0.0981	0.245	0.0981	mg/kg	U		
Nitrobenzene	98-95-3	0.0981	0.245	0.0981	mg/kg	U		
Nitrobenzene	98-95-3	0.0981	0.245	0.0981	mg/kg	U		
Nitroglycerin	55-63-0	0.0981	0.245	0.0981	mg/kg	U		
Nitroglycerin	55-63-0	0.0981	0.245	0.0981	mg/kg	U		

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PETN	78-11-5	0.491	1.47	0.491	mg/kg	U	R	L
PETN	78-11-5	0.491	1.47	0.491	mg/kg	U	R	L
RDX	121-82-4	0.0981	0.245	0.0981	mg/kg	U		
RDX	121-82-4	0.0981	0.245	0.0981	mg/kg	U		
Tetryl	479-45-8	0.0981	0.245	0.0981	mg/kg	U		
Tetryl	479-45-8	0.0981	0.245	0.0981	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-509M-3010-SO **AnalysisType:** RES

Lab Sample Name: L09100553-11 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0918	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0918	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.098	0.245	0.098	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.098	0.245	0.098	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.098	0.245	0.098	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.098	0.245	0.098	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.098	0.245	0.098	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.098	0.245	0.098	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.098	0.245	0.098	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.098	0.245	0.098	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.098	0.245	0.098	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.098	0.245	0.098	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.098	0.245	0.098	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.098	0.245	0.098	mg/kg	U		
2-Nitrotoluene	88-72-2	0.098	0.245	0.098	mg/kg	U		
2-Nitrotoluene	88-72-2	0.098	0.245	0.098	mg/kg	U		
3-Nitrotoluene	99-08-1	0.098	0.245	0.098	mg/kg	U		
3-Nitrotoluene	99-08-1	0.098	0.245	0.098	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.098	0.245	0.098	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.098	0.245	0.098	mg/kg	U		
4-Nitrotoluene	99-99-0	0.098	0.245	0.098	mg/kg	U		
4-Nitrotoluene	99-99-0	0.098	0.245	0.098	mg/kg	U		
HMX	2691-41-0	0.098	0.245	0.098	mg/kg	U		
HMX	2691-41-0	0.098	0.245	0.098	mg/kg	U		
Nitrobenzene	98-95-3	0.098	0.245	0.098	mg/kg	U		
Nitrobenzene	98-95-3	0.098	0.245	0.098	mg/kg	U		
Nitroglycerin	55-63-0	0.098	0.245	0.098	mg/kg	U		
Nitroglycerin	55-63-0	0.098	0.245	0.098	mg/kg	U		

Analysis Method 8330

PETN	78-11-5	0.49	1.47	0.49	mg/kg	U	R	L
PETN	78-11-5	0.49	1.47	0.49	mg/kg	U	R	L
RDX	121-82-4	0.098	0.245	0.098	mg/kg	U		
RDX	121-82-4	0.098	0.245	0.098	mg/kg	U		
Tetryl	479-45-8	0.098	0.245	0.098	mg/kg	U		
Tetryl	479-45-8	0.098	0.245	0.098	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-511M-3012-SO **AnalysisType:** RES

Lab Sample Name: L09100553-12 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0992	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0992	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0995	0.249	0.0995	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0995	0.249	0.0995	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0995	0.249	0.0995	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0995	0.249	0.0995	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0995	0.249	0.0995	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0995	0.249	0.0995	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0995	0.249	0.0995	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0995	0.249	0.0995	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0995	0.249	0.0995	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0995	0.249	0.0995	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0995	0.249	0.0995	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0995	0.249	0.0995	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0995	0.249	0.0995	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0995	0.249	0.0995	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0995	0.249	0.0995	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0995	0.249	0.0995	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0995	0.249	0.0995	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0995	0.249	0.0995	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0995	0.249	0.0995	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0995	0.249	0.0995	mg/kg	U		
HMX	2691-41-0	0.0995	0.249	0.0995	mg/kg	U		
HMX	2691-41-0	0.0995	0.249	0.0995	mg/kg	U		
Nitrobenzene	98-95-3	0.0995	0.249	0.0995	mg/kg	U		
Nitrobenzene	98-95-3	0.0995	0.249	0.0995	mg/kg	U		
Nitroglycerin	55-63-0	0.0995	0.249	0.0995	mg/kg	U		
Nitroglycerin	55-63-0	0.0995	0.249	0.0995	mg/kg	U		

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PETN	78-11-5	0.498	1.49	0.498	mg/kg	U	R	L
PETN	78-11-5	0.498	1.49	0.498	mg/kg	U	R	L
RDX	121-82-4	0.0995	0.249	0.0995	mg/kg	U		
RDX	121-82-4	0.0995	0.249	0.0995	mg/kg	U		
Tetryl	479-45-8	0.0995	0.249	0.0995	mg/kg	U		
Tetryl	479-45-8	0.0995	0.249	0.0995	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-512M-3013-SO **AnalysisType:** RES

Lab Sample Name: L09100553-13 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0904	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0904	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.1	0.25	0.1	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.1	0.25	0.1	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.1	0.25	0.1	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.1	0.25	0.1	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
2-Nitrotoluene	88-72-2	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
3-Nitrotoluene	99-08-1	0.1	0.25	0.1	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.1	0.25	0.1	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
4-Nitrotoluene	99-99-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
HMX	2691-41-0	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitrobenzene	98-95-3	0.1	0.25	0.1	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		
Nitroglycerin	55-63-0	0.1	0.25	0.1	mg/kg	U		

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PETN	78-11-5	0.5	1.5	0.5	mg/kg	U	R	L
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U	R	L
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
RDX	121-82-4	0.1	0.25	0.1	mg/kg	U		
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U	R	C
Tetryl	479-45-8	0.1	0.25	0.1	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-513M-3014-SO **AnalysisType:** RES

Lab Sample Name: L09100553-14 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.11	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.11	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0987	0.247	0.0987	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0987	0.247	0.0987	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0987	0.247	0.0987	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0987	0.247	0.0987	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0987	0.247	0.0987	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0987	0.247	0.0987	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0987	0.247	0.0987	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0987	0.247	0.0987	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0987	0.247	0.0987	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0987	0.247	0.0987	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0987	0.247	0.0987	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0987	0.247	0.0987	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0987	0.247	0.0987	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0987	0.247	0.0987	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0987	0.247	0.0987	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0987	0.247	0.0987	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0987	0.247	0.0987	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0987	0.247	0.0987	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0987	0.247	0.0987	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0987	0.247	0.0987	mg/kg	U		
HMX	2691-41-0	0.0987	0.247	0.0987	mg/kg	U		
HMX	2691-41-0	0.0987	0.247	0.0987	mg/kg	U		
Nitrobenzene	98-95-3	0.0987	0.247	0.0987	mg/kg	U		
Nitrobenzene	98-95-3	0.0987	0.247	0.0987	mg/kg	U		
Nitroglycerin	55-63-0	0.0987	0.247	0.0987	mg/kg	U		
Nitroglycerin	55-63-0	0.0987	0.247	0.0987	mg/kg	U		

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PETN	78-11-5	0.494	1.48	0.494	mg/kg	U	R	L
PETN	78-11-5	0.494	1.48	0.494	mg/kg	U	R	L
RDX	121-82-4	0.0987	0.247	0.0987	mg/kg	U		
RDX	121-82-4	0.0987	0.247	0.0987	mg/kg	U		
Tetryl	479-45-8	0.0987	0.247	0.0987	mg/kg	U		
Tetryl	479-45-8	0.0987	0.247	0.0987	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-514M-3015-SO **AnalysisType:** RES

Lab Sample Name: L09100553-15 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0936	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0936	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0999	0.25	0.0999	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0999	0.25	0.0999	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0999	0.25	0.0999	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0999	0.25	0.0999	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0999	0.25	0.0999	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0999	0.25	0.0999	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0999	0.25	0.0999	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0999	0.25	0.0999	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0999	0.25	0.0999	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0999	0.25	0.0999	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0999	0.25	0.0999	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0999	0.25	0.0999	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0999	0.25	0.0999	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0999	0.25	0.0999	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0999	0.25	0.0999	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0999	0.25	0.0999	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0999	0.25	0.0999	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0999	0.25	0.0999	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0999	0.25	0.0999	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0999	0.25	0.0999	mg/kg	U		
HMX	2691-41-0	0.0999	0.25	0.0999	mg/kg	U		
HMX	2691-41-0	0.0999	0.25	0.0999	mg/kg	U		
Nitrobenzene	98-95-3	0.0999	0.25	0.0999	mg/kg	U		
Nitrobenzene	98-95-3	0.0999	0.25	0.0999	mg/kg	U		
Nitroglycerin	55-63-0	0.0999	0.25	0.0999	mg/kg	U		
Nitroglycerin	55-63-0	0.0999	0.25	0.0999	mg/kg	U		

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PETN	78-11-5	0.5	1.5	0.5	mg/kg	U	R	L
PETN	78-11-5	0.5	1.5	0.5	mg/kg	U	R	L
RDX	121-82-4	0.0999	0.25	0.0999	mg/kg	U		
RDX	121-82-4	0.0999	0.25	0.0999	mg/kg	U		
Tetryl	479-45-8	0.0999	0.25	0.0999	mg/kg	U	R	C
Tetryl	479-45-8	0.0999	0.25	0.0999	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-515M-3016-SO **AnalysisType:** CF

Lab Sample Name: L09100553-16 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.245	0	0	mg/kg	*	J	S
1,2-Dinitrobenzene	528-29-0	0.105	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.105	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0981	0.245	0.0981	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0981	0.245	0.0981	mg/kg	U	UJ	H
1,3,5-Trinitrobenzene	99-35-4	0.0981	0.245	0.0981	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0981	0.245	0.0981	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0981	0.245	0.0981	mg/kg	U	UJ	H
1,3-Dinitrobenzene	99-65-0	0.0981	0.245	0.0981	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	5.04	0.245	0.0981	mg/kg		J	*III
2,4,6-Trinitrotoluene	118-96-7	5.94	0.245	0.0981	mg/kg		J	S
2,4,6-Trinitrotoluene	118-96-7	5.04	0.245	0.0981	mg/kg		J	*III
2,4-Dinitrotoluene	121-14-2	0.0981	0.245	0.0981	mg/kg	U	UJ	H
2,4-Dinitrotoluene	121-14-2	0.0981	0.245	0.0981	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0981	0.245	0.0981	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0981	0.245	0.0981	mg/kg	U	UJ	H
2,6-Dinitrotoluene	606-20-2	0.0981	0.245	0.0981	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0981	0.245	0.0981	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.665	0.245	0.0981	mg/kg			
2-Amino-4,6-dinitrotoluene	35572-78-2	0.723	0.245	0.0981	mg/kg		J	S
2-Amino-4,6-dinitrotoluene	35572-78-2	0.665	0.245	0.0981	mg/kg			
2-Nitrotoluene	88-72-2	0.0981	0.245	0.0981	mg/kg	U	UJ	H
2-Nitrotoluene	88-72-2	0.0981	0.245	0.0981	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0981	0.245	0.0981	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0981	0.245	0.0981	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0981	0.245	0.0981	mg/kg	U	UJ	H
3-Nitrotoluene	99-08-1	0.0981	0.245	0.0981	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	1.05	0.245	0.0981	mg/kg		J	S

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4-Amino-2,6-dinitrotoluene	19406-51-0	0.903	0.245	0.0981	mg/kg			
4-Amino-2,6-dinitrotoluene	19406-51-0	0.903	0.245	0.0981	mg/kg			
4-Nitrotoluene	99-99-0	0.0981	0.245	0.0981	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0981	0.245	0.0981	mg/kg	U	UJ	H
4-Nitrotoluene	99-99-0	0.0981	0.245	0.0981	mg/kg	U		
HMX	2691-41-0	0.0981	0.245	0.0981	mg/kg	U		
HMX	2691-41-0	0.0981	0.245	0.0981	mg/kg	U		
HMX	2691-41-0	0.0981	0.245	0.0981	mg/kg	U	UJ	H
Nitrobenzene	98-95-3	0.0981	0.245	0.0981	mg/kg	U		
Nitrobenzene	98-95-3	0.0981	0.245	0.0981	mg/kg	U		
Nitrobenzene	98-95-3	0.0981	0.245	0.0981	mg/kg	U	UJ	H
Nitroglycerin	55-63-0	0.0981	0.245	0.0981	mg/kg	U		
Nitroglycerin	55-63-0	0.0981	0.245	0.0981	mg/kg	U		
Nitroglycerin	55-63-0	0.0981	0.245	0.0981	mg/kg	U	UJ	H
PETN	78-11-5	0.491	1.47	0.491	mg/kg	U	R	L
PETN	78-11-5	0.491	1.47	0.491	mg/kg	U	R	L
RDX	121-82-4	0.0981	0.245	0.0981	mg/kg	U		
RDX	121-82-4	0.0981	0.245	0.0981	mg/kg	U	UJ	H
RDX	121-82-4	0.0981	0.245	0.0981	mg/kg	U		
Tetryl	479-45-8	0.0981	0.245	0.0981	mg/kg	U	R	C
Tetryl	479-45-8	0.0981	0.245	0.0981	mg/kg	U	R	C
Tetryl	479-45-8	0.0981	0.245	0.0981	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-516M-3017-SO **AnalysisType:** RES

Lab Sample Name: L09100553-19 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.106	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.106	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.217	0	0	mg/kg	*	J	S
1,3,5-Trinitrobenzene	99-35-4	0.0987	0.247	0.0987	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0987	0.247	0.0987	mg/kg	U	UJ	H
1,3,5-Trinitrobenzene	99-35-4	0.0987	0.247	0.0987	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0987	0.247	0.0987	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0987	0.247	0.0987	mg/kg	U	UJ	H
1,3-Dinitrobenzene	99-65-0	0.0987	0.247	0.0987	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.615	0.247	0.0987	mg/kg		J	S
2,4,6-Trinitrotoluene	118-96-7	0.611	0.247	0.0987	mg/kg		J+	C
2,4,6-Trinitrotoluene	118-96-7	0.611	0.247	0.0987	mg/kg			
2,4-Dinitrotoluene	121-14-2	0.0987	0.247	0.0987	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0987	0.247	0.0987	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0987	0.247	0.0987	mg/kg	U	UJ	H
2,6-Dinitrotoluene	606-20-2	0.0987	0.247	0.0987	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0987	0.247	0.0987	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0987	0.247	0.0987	mg/kg	U	UJ	H
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0987	0.247	0.0987	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0987	0.247	0.0987	mg/kg	U	UJ	H
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0987	0.247	0.0987	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0987	0.247	0.0987	mg/kg	U	UJ	H
2-Nitrotoluene	88-72-2	0.0987	0.247	0.0987	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0987	0.247	0.0987	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0987	0.247	0.0987	mg/kg	U	UJ	H
3-Nitrotoluene	99-08-1	0.0987	0.247	0.0987	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0987	0.247	0.0987	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0987	0.247	0.0987	mg/kg	U	UJ	H

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4-Amino-2,6-dinitrotoluene	19406-51-0	0.0987	0.247	0.0987	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0987	0.247	0.0987	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0987	0.247	0.0987	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0987	0.247	0.0987	mg/kg	U	UJ	H
4-Nitrotoluene	99-99-0	0.0987	0.247	0.0987	mg/kg	U		
HMX	2691-41-0	0.0987	0.247	0.0987	mg/kg	U		
HMX	2691-41-0	0.0987	0.247	0.0987	mg/kg	U	UJ	H
HMX	2691-41-0	0.0987	0.247	0.0987	mg/kg	U		
Nitrobenzene	98-95-3	0.0987	0.247	0.0987	mg/kg	U		
Nitrobenzene	98-95-3	0.0987	0.247	0.0987	mg/kg	U		
Nitrobenzene	98-95-3	0.0987	0.247	0.0987	mg/kg	U	UJ	H
Nitroglycerin	55-63-0	0.0987	0.247	0.0987	mg/kg	U		
Nitroglycerin	55-63-0	0.0987	0.247	0.0987	mg/kg	U		
Nitroglycerin	55-63-0	0.0987	0.247	0.0987	mg/kg	U	UJ	H
PETN	78-11-5	0.494	1.48	0.494	mg/kg	U	R	L
PETN	78-11-5	0.494	1.48	0.494	mg/kg	U	R	L
RDX	121-82-4	0.0987	0.247	0.0987	mg/kg	U	UJ	H
RDX	121-82-4	0.0987	0.247	0.0987	mg/kg	U		
RDX	121-82-4	0.0987	0.247	0.0987	mg/kg	U		
Tetryl	479-45-8	0.0987	0.247	0.0987	mg/kg	U		
Tetryl	479-45-8	0.0987	0.247	0.0987	mg/kg	U	R	C
Tetryl	479-45-8	0.0987	0.247	0.0987	mg/kg	U	R	C

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Sample Name LL1SS-517M-3018-SO **AnalysisType:** RES

Lab Sample Name: L09100553-21 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.1	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.211	0	0	mg/kg	*	J	S
1,2-Dinitrobenzene	528-29-0	0.1	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0988	0.247	0.0988	mg/kg	U	R	D
1,3,5-Trinitrobenzene	99-35-4	0.0988	0.247	0.0988	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.0988	0.247	0.0988	mg/kg	U	R	D
1,3-Dinitrobenzene	99-65-0	0.0988	0.247	0.0988	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	4.71	0.247	0.0988	mg/kg			
2,4,6-Trinitrotoluene	118-96-7	5.09	0.247	0.0988	mg/kg		R	D
2,4-Dinitrotoluene	121-14-2	0.0988	0.247	0.0988	mg/kg	U	R	D
2,4-Dinitrotoluene	121-14-2	0.0988	0.247	0.0988	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.0988	0.247	0.0988	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.0988	0.247	0.0988	mg/kg	U	R	D
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0988	0.247	0.0988	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0988	0.247	0.0988	mg/kg	U	R	D
2-Nitrotoluene	88-72-2	0.0988	0.247	0.0988	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.0988	0.247	0.0988	mg/kg	U	R	D
3-Nitrotoluene	99-08-1	0.0988	0.247	0.0988	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.0988	0.247	0.0988	mg/kg	U	R	D
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0988	0.247	0.0988	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0988	0.247	0.0988	mg/kg	U	R	D
4-Nitrotoluene	99-99-0	0.0988	0.247	0.0988	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.0988	0.247	0.0988	mg/kg	U	R	D
HMX	2691-41-0	0.0988	0.247	0.0988	mg/kg	U	R	D
HMX	2691-41-0	0.0988	0.247	0.0988	mg/kg	U	U	
Nitrobenzene	98-95-3	0.0988	0.247	0.0988	mg/kg	U	R	D
Nitrobenzene	98-95-3	0.0988	0.247	0.0988	mg/kg	U	U	
Nitroglycerin	55-63-0	0.0988	0.247	0.0988	mg/kg	U	R	D

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Nitroglycerin	55-63-0	0.0988	0.247	0.0988	mg/kg	U	**U**	
PETN	78-11-5	0.494	1.48	0.494	mg/kg	U	**U**	
RDX	121-82-4	0.0988	0.247	0.0988	mg/kg	U	**U**	
RDX	121-82-4	0.0988	0.247	0.0988	mg/kg	U	**R**	**D**
Tetryl	479-45-8	0.0988	0.247	0.0988	mg/kg	U	**R**	**D**
Tetryl	479-45-8	0.0988	0.247	0.0988	mg/kg	U	**R**	**C**

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Sample Name LL1SS-517M-3020-SO **AnalysisType:** RES

Lab Sample Name: L09100553-22 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0983	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0983	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.207	0	0	mg/kg	*	J	S
1,3,5-Trinitrobenzene	99-35-4	0.0977	0.244	0.0977	mg/kg	U	R	D
1,3,5-Trinitrobenzene	99-35-4	0.0977	0.244	0.0977	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.0977	0.244	0.0977	mg/kg	U	R	D
1,3-Dinitrobenzene	99-65-0	0.0977	0.244	0.0977	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.384	0.244	0.0977	mg/kg		R	D
2,4,6-Trinitrotoluene	118-96-7	0.327	0.244	0.0977	mg/kg			
2,4-Dinitrotoluene	121-14-2	0.0977	0.244	0.0977	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.0977	0.244	0.0977	mg/kg	U	R	D
2,6-Dinitrotoluene	606-20-2	0.0977	0.244	0.0977	mg/kg	U	R	D
2,6-Dinitrotoluene	606-20-2	0.0977	0.244	0.0977	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0977	0.244	0.0977	mg/kg	U	R	D
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0977	0.244	0.0977	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.0977	0.244	0.0977	mg/kg	U	R	D
2-Nitrotoluene	88-72-2	0.0977	0.244	0.0977	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.0977	0.244	0.0977	mg/kg	U	R	D
3-Nitrotoluene	99-08-1	0.0977	0.244	0.0977	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0977	0.244	0.0977	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0977	0.244	0.0977	mg/kg	U	R	D
4-Nitrotoluene	99-99-0	0.0977	0.244	0.0977	mg/kg	U	R	D
4-Nitrotoluene	99-99-0	0.0977	0.244	0.0977	mg/kg	U	U	
HMX	2691-41-0	0.0977	0.244	0.0977	mg/kg	U	R	D
HMX	2691-41-0	0.0977	0.244	0.0977	mg/kg	U	U	
Nitrobenzene	98-95-3	0.0977	0.244	0.0977	mg/kg	U	R	D
Nitrobenzene	98-95-3	0.0977	0.244	0.0977	mg/kg	U	U	
Nitroglycerin	55-63-0	0.0977	0.244	0.0977	mg/kg	U	R	D

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Nitroglycerin	55-63-0	0.0977	0.244	0.0977	mg/kg	U	U	
PETN	78-11-5	0.488	1.46	0.488	mg/kg	U	U	
RDX	121-82-4	0.0977	0.244	0.0977	mg/kg	U	R	D
RDX	121-82-4	0.0977	0.244	0.0977	mg/kg	U	U	
Tetryl	479-45-8	0.0977	0.244	0.0977	mg/kg	U	R	D
Tetryl	479-45-8	0.0977	0.244	0.0977	mg/kg	U	R	C

Sample Name LL1SS-517M-3021-SO **AnalysisType:** RES

Lab Sample Name: L09100553-23 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.112	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.112	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0989	0.247	0.0989	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.0989	0.247	0.0989	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.0989	0.247	0.0989	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.0989	0.247	0.0989	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.0989	0.247	0.0989	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0989	0.247	0.0989	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.0989	0.247	0.0989	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.0989	0.247	0.0989	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0989	0.247	0.0989	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.0989	0.247	0.0989	mg/kg	U	U	
HMX	2691-41-0	0.0989	0.247	0.0989	mg/kg	U	U	
Nitrobenzene	98-95-3	0.0989	0.247	0.0989	mg/kg	U	U	
Nitroglycerin	55-63-0	0.0989	0.247	0.0989	mg/kg	U	U	
PETN	78-11-5	0.495	1.48	0.495	mg/kg	U	U	
RDX	121-82-4	0.0989	0.247	0.0989	mg/kg	U	U	
Tetryl	479-45-8	0.0989	0.247	0.0989	mg/kg	U	R	C

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Sample Name LL1SS-518M-3022-SO **AnalysisType:** RES

Lab Sample Name: L09100553-24 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.099	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.099	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0996	0.249	0.0996	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0996	0.249	0.0996	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0996	0.249	0.0996	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0996	0.249	0.0996	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0996	0.249	0.0996	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0996	0.249	0.0996	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0996	0.249	0.0996	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0996	0.249	0.0996	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0996	0.249	0.0996	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0996	0.249	0.0996	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0996	0.249	0.0996	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0996	0.249	0.0996	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0996	0.249	0.0996	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0996	0.249	0.0996	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0996	0.249	0.0996	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0996	0.249	0.0996	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0996	0.249	0.0996	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0996	0.249	0.0996	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0996	0.249	0.0996	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0996	0.249	0.0996	mg/kg	U		
HMX	2691-41-0	0.0996	0.249	0.0996	mg/kg	U		
HMX	2691-41-0	0.0996	0.249	0.0996	mg/kg	U		
Nitrobenzene	98-95-3	0.0996	0.249	0.0996	mg/kg	U		
Nitrobenzene	98-95-3	0.0996	0.249	0.0996	mg/kg	U		
Nitroglycerin	55-63-0	0.0996	0.249	0.0996	mg/kg	U		
Nitroglycerin	55-63-0	0.0996	0.249	0.0996	mg/kg	U		

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PETN	78-11-5	0.498	1.49	0.498	mg/kg	U	R	L
PETN	78-11-5	0.498	1.49	0.498	mg/kg	U	R	L
RDX	121-82-4	0.0996	0.249	0.0996	mg/kg	U		
RDX	121-82-4	0.0996	0.249	0.0996	mg/kg	U		
Tetryl	479-45-8	0.0996	0.249	0.0996	mg/kg	U	R	C
Tetryl	479-45-8	0.0996	0.249	0.0996	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-519M-3023-SO **AnalysisType:** RES

Lab Sample Name: L09100553-25 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.106	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.106	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0978	0.244	0.0978	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0978	0.244	0.0978	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0978	0.244	0.0978	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0978	0.244	0.0978	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0978	0.244	0.0978	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0978	0.244	0.0978	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0978	0.244	0.0978	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0978	0.244	0.0978	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0978	0.244	0.0978	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0978	0.244	0.0978	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0978	0.244	0.0978	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0978	0.244	0.0978	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0978	0.244	0.0978	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0978	0.244	0.0978	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0978	0.244	0.0978	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0978	0.244	0.0978	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0978	0.244	0.0978	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0978	0.244	0.0978	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0978	0.244	0.0978	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0978	0.244	0.0978	mg/kg	U		
HMX	2691-41-0	0.0978	0.244	0.0978	mg/kg	U		
HMX	2691-41-0	0.0978	0.244	0.0978	mg/kg	U		
Nitrobenzene	98-95-3	0.0978	0.244	0.0978	mg/kg	U		
Nitrobenzene	98-95-3	0.0978	0.244	0.0978	mg/kg	U		
Nitroglycerin	55-63-0	0.0978	0.244	0.0978	mg/kg	U		
Nitroglycerin	55-63-0	0.0978	0.244	0.0978	mg/kg	U		

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PETN	78-11-5	0.489	1.47	0.489	mg/kg	U	R	L
PETN	78-11-5	0.489	1.47	0.489	mg/kg	U	R	L
RDX	121-82-4	0.0978	0.244	0.0978	mg/kg	U		
RDX	121-82-4	0.0978	0.244	0.0978	mg/kg	U		
Tetryl	479-45-8	0.0978	0.244	0.0978	mg/kg	U		
Tetryl	479-45-8	0.0978	0.244	0.0978	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL3SS-290M-2000-SO **AnalysisType:** RES

Lab Sample Name: L09100553-26 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0984	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0984	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0976	0.244	0.0976	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0976	0.244	0.0976	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0976	0.244	0.0976	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0976	0.244	0.0976	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0976	0.244	0.0976	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0976	0.244	0.0976	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0976	0.244	0.0976	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0976	0.244	0.0976	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0976	0.244	0.0976	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0976	0.244	0.0976	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0976	0.244	0.0976	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0976	0.244	0.0976	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0976	0.244	0.0976	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0976	0.244	0.0976	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0976	0.244	0.0976	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0976	0.244	0.0976	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0976	0.244	0.0976	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0976	0.244	0.0976	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0976	0.244	0.0976	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0976	0.244	0.0976	mg/kg	U		
HMX	2691-41-0	0.0976	0.244	0.0976	mg/kg	U		
HMX	2691-41-0	0.0976	0.244	0.0976	mg/kg	U		
Nitrobenzene	98-95-3	0.0976	0.244	0.0976	mg/kg	U		
Nitrobenzene	98-95-3	0.0976	0.244	0.0976	mg/kg	U		
Nitroglycerin	55-63-0	0.0976	0.244	0.0976	mg/kg	U		
Nitroglycerin	55-63-0	0.0976	0.244	0.0976	mg/kg	U		

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PETN	78-11-5	0.488	1.46	0.488	mg/kg	U	R	L
PETN	78-11-5	0.488	1.46	0.488	mg/kg	U	R	L
RDX	121-82-4	0.0976	0.244	0.0976	mg/kg	U		
RDX	121-82-4	0.0976	0.244	0.0976	mg/kg	U		
Tetryl	479-45-8	0.0976	0.244	0.0976	mg/kg	U		
Tetryl	479-45-8	0.0976	0.244	0.0976	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL3SS-291M-2001-SO **AnalysisType:** RES

Lab Sample Name: L09100553-27 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0964	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0964	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0986	0.247	0.0986	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0986	0.247	0.0986	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0986	0.247	0.0986	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0986	0.247	0.0986	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0986	0.247	0.0986	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0986	0.247	0.0986	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0986	0.247	0.0986	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0986	0.247	0.0986	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0986	0.247	0.0986	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0986	0.247	0.0986	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0986	0.247	0.0986	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0986	0.247	0.0986	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0986	0.247	0.0986	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0986	0.247	0.0986	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0986	0.247	0.0986	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0986	0.247	0.0986	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0986	0.247	0.0986	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0986	0.247	0.0986	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0986	0.247	0.0986	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0986	0.247	0.0986	mg/kg	U		
HMX	2691-41-0	0.0986	0.247	0.0986	mg/kg	U		
HMX	2691-41-0	0.0986	0.247	0.0986	mg/kg	U		
Nitrobenzene	98-95-3	0.0986	0.247	0.0986	mg/kg	U		
Nitrobenzene	98-95-3	0.0986	0.247	0.0986	mg/kg	U		
Nitroglycerin	55-63-0	0.0986	0.247	0.0986	mg/kg	U		
Nitroglycerin	55-63-0	0.0986	0.247	0.0986	mg/kg	U		

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PETN	78-11-5	0.493	1.48	0.493	mg/kg	U	R	L
PETN	78-11-5	0.493	1.48	0.493	mg/kg	U	R	L
RDX	121-82-4	0.0986	0.247	0.0986	mg/kg	U		
RDX	121-82-4	0.0986	0.247	0.0986	mg/kg	U		
Tetryl	479-45-8	0.0986	0.247	0.0986	mg/kg	U	R	C
Tetryl	479-45-8	0.0986	0.247	0.0986	mg/kg	U		

Sample Name LL4SS-280M-2000-SO **AnalysisType:** RES

Lab Sample Name: L09100553-28 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.102	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.102	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0976	0.244	0.0976	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.0976	0.244	0.0976	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.0976	0.244	0.0976	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.0976	0.244	0.0976	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.0976	0.244	0.0976	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0976	0.244	0.0976	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.0976	0.244	0.0976	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.0976	0.244	0.0976	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0976	0.244	0.0976	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.0976	0.244	0.0976	mg/kg	U	U	
HMX	2691-41-0	0.0976	0.244	0.0976	mg/kg	U	U	
Nitrobenzene	98-95-3	0.0976	0.244	0.0976	mg/kg	U	U	
Nitroglycerin	55-63-0	0.0976	0.244	0.0976	mg/kg	U	U	
PETN	78-11-5	0.488	1.46	0.488	mg/kg	U	U	
RDX	121-82-4	0.0976	0.244	0.0976	mg/kg	U	U	
Tetryl	479-45-8	0.0976	0.244	0.0976	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL4SS-280M-2002-SO **AnalysisType:** RES

Lab Sample Name: L09100553-29 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0977	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0977	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0972	0.243	0.0972	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.0972	0.243	0.0972	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.0972	0.243	0.0972	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.0972	0.243	0.0972	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.0972	0.243	0.0972	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0972	0.243	0.0972	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.0972	0.243	0.0972	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.0972	0.243	0.0972	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0972	0.243	0.0972	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.0972	0.243	0.0972	mg/kg	U	U	
HMX	2691-41-0	0.0972	0.243	0.0972	mg/kg	U	U	
Nitrobenzene	98-95-3	0.0972	0.243	0.0972	mg/kg	U	U	
Nitroglycerin	55-63-0	0.0972	0.243	0.0972	mg/kg	U	U	
PETN	78-11-5	0.486	1.46	0.486	mg/kg	U	U	
RDX	121-82-4	0.0972	0.243	0.0972	mg/kg	U	U	
Tetryl	479-45-8	0.0972	0.243	0.0972	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL4SS-280M-2003-SO **AnalysisType:** RES

Lab Sample Name: L09100553-30 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.107	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.107	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0986	0.247	0.0986	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.0986	0.247	0.0986	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.0986	0.247	0.0986	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.0986	0.247	0.0986	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.0986	0.247	0.0986	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0986	0.247	0.0986	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.0986	0.247	0.0986	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.0986	0.247	0.0986	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0986	0.247	0.0986	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.0986	0.247	0.0986	mg/kg	U	U	
HMX	2691-41-0	0.0986	0.247	0.0986	mg/kg	U	U	
Nitrobenzene	98-95-3	0.0986	0.247	0.0986	mg/kg	U	U	
Nitroglycerin	55-63-0	0.0986	0.247	0.0986	mg/kg	U	U	
PETN	78-11-5	0.493	1.48	0.493	mg/kg	U	U	
RDX	121-82-4	0.0986	0.247	0.0986	mg/kg	U	U	
Tetryl	479-45-8	0.0986	0.247	0.0986	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL4SS-281M-2004-SO **AnalysisType:** RES

Lab Sample Name: L09100553-31 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.105	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.105	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0997	0.249	0.0997	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0997	0.249	0.0997	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0997	0.249	0.0997	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0997	0.249	0.0997	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0997	0.249	0.0997	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0997	0.249	0.0997	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0997	0.249	0.0997	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0997	0.249	0.0997	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0997	0.249	0.0997	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0997	0.249	0.0997	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0997	0.249	0.0997	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0997	0.249	0.0997	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0997	0.249	0.0997	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0997	0.249	0.0997	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0997	0.249	0.0997	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0997	0.249	0.0997	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0997	0.249	0.0997	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0997	0.249	0.0997	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0997	0.249	0.0997	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0997	0.249	0.0997	mg/kg	U		
HMX	2691-41-0	0.0997	0.249	0.0997	mg/kg	U		
HMX	2691-41-0	0.0997	0.249	0.0997	mg/kg	U		
Nitrobenzene	98-95-3	0.0997	0.249	0.0997	mg/kg	U		
Nitrobenzene	98-95-3	0.0997	0.249	0.0997	mg/kg	U		
Nitroglycerin	55-63-0	0.0997	0.249	0.0997	mg/kg	U		
Nitroglycerin	55-63-0	0.0997	0.249	0.0997	mg/kg	U		

Analysis Method 8330

PETN	78-11-5	0.499	1.5	0.499	mg/kg	U	R	L
PETN	78-11-5	0.499	1.5	0.499	mg/kg	U	R	L
RDX	121-82-4	0.0997	0.249	0.0997	mg/kg	U		
RDX	121-82-4	0.0997	0.249	0.0997	mg/kg	U		
Tetryl	479-45-8	0.0997	0.249	0.0997	mg/kg	U	R	C
Tetryl	479-45-8	0.0997	0.249	0.0997	mg/kg	U		

Analysis Method 8330

Sample Name LL4SS-282M-2005-SO **AnalysisType:** RES

Lab Sample Name: L09100553-32 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.108	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.108	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0995	0.249	0.0995	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0995	0.249	0.0995	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0995	0.249	0.0995	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0995	0.249	0.0995	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0995	0.249	0.0995	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0995	0.249	0.0995	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0995	0.249	0.0995	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0995	0.249	0.0995	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0995	0.249	0.0995	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0995	0.249	0.0995	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0995	0.249	0.0995	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0995	0.249	0.0995	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0995	0.249	0.0995	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0995	0.249	0.0995	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0995	0.249	0.0995	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0995	0.249	0.0995	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0995	0.249	0.0995	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0995	0.249	0.0995	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0995	0.249	0.0995	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0995	0.249	0.0995	mg/kg	U		
HMX	2691-41-0	0.0995	0.249	0.0995	mg/kg	U		
HMX	2691-41-0	0.0995	0.249	0.0995	mg/kg	U		
Nitrobenzene	98-95-3	0.0995	0.249	0.0995	mg/kg	U		
Nitrobenzene	98-95-3	0.0995	0.249	0.0995	mg/kg	U		
Nitroglycerin	55-63-0	0.0995	0.249	0.0995	mg/kg	U		
Nitroglycerin	55-63-0	0.0995	0.249	0.0995	mg/kg	U		

Analysis Method 8330

PETN	78-11-5	0.498	1.49	0.498	mg/kg	U	R	L
PETN	78-11-5	0.498	1.49	0.498	mg/kg	U	R	L
RDX	121-82-4	0.0995	0.249	0.0995	mg/kg	U		
RDX	121-82-4	0.0995	0.249	0.0995	mg/kg	U		
Tetryl	479-45-8	0.0995	0.249	0.0995	mg/kg	U	R	C
Tetryl	479-45-8	0.0995	0.249	0.0995	mg/kg	U		

Analysis Method 8330-NG

Sample Name LL1SS-506M-3006-SO **AnalysisType:** RES

Lab Sample Name: L09100553-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	125	250	125	ug/kg	U		

Analysis Method SM3500Cr-D 7196A

Sample Name LL1SS-500M-3000-SO **AnalysisType:** RES

Lab Sample Name: L09100553-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0497	0.0993	0.0497	mg/kg	U		

Sample Name LL1SS-501M-3001-SO **AnalysisType:** RES

Lab Sample Name: L09100553-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0504	0.101	0.0504	mg/kg	U		

Sample Name LL1SS-502M-3002-SO **AnalysisType:** RES

Lab Sample Name: L09100553-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0505	0.101	0.0505	mg/kg	U		

Sample Name LL1SS-503M-3003-SO **AnalysisType:** RES

Lab Sample Name: L09100553-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0501	0.1	0.0501	mg/kg	U		

Sample Name LL1SS-504M-3004-SO **AnalysisType:** RES

Lab Sample Name: L09100553-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0501	0.1	0.0501	mg/kg	U		

Analysis Method SM3500Cr-D 7196A

Sample Name LL1SS-505M-3005-SO **AnalysisType:** RES

Lab Sample Name: L09100553-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0499	0.0998	0.0499	mg/kg	U		

Sample Name LL1SS-506M-3006-SO **AnalysisType:** RES

Lab Sample Name: L09100553-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0491	0.0983	0.0491	mg/kg	U		

Sample Name LL1SS-507M-3008-SO **AnalysisType:** RES

Lab Sample Name: L09100553-09 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0496	0.0991	0.0496	mg/kg	U		

Sample Name LL1SS-508M-3009-SO **AnalysisType:** RES

Lab Sample Name: L09100553-10 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0502	0.1	0.0502	mg/kg	U		

Sample Name LL1SS-509M-3010-SO **AnalysisType:** RES

Lab Sample Name: L09100553-11 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0501	0.1	0.0501	mg/kg	U		

Analysis Method SM3500Cr-D 7196A

Sample Name LL1SS-511M-3012-SO **AnalysisType:** RES

Lab Sample Name: L09100553-12 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0501	0.1	0.0501	mg/kg	U		

Sample Name LL1SS-512M-3013-SO **AnalysisType:** RES

Lab Sample Name: L09100553-13 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0502	0.1	0.0502	mg/kg	U		

Sample Name LL1SS-513M-3014-SO **AnalysisType:** RES

Lab Sample Name: L09100553-14 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.05	0.1	0.05	mg/kg	U		

Sample Name LL1SS-514M-3015-SO **AnalysisType:** RES

Lab Sample Name: L09100553-15 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.05	0.1	0.05	mg/kg	U		

Sample Name LL1SS-515M-3016-SO **AnalysisType:** RES

Lab Sample Name: L09100553-16 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0502	0.1	0.0502	mg/kg	U		

Analysis Method SM3500Cr-D 7196A

Sample Name LL1SS-516M-3017-SO **AnalysisType:** RES

Lab Sample Name: L09100553-19 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0501	0.1	0.0501	mg/kg	U		

Sample Name LL1SS-517M-3018-SO **AnalysisType:** RES

Lab Sample Name: L09100553-21 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0504	0.101	0.0504	mg/kg	U	U	

Sample Name LL1SS-517M-3020-SO **AnalysisType:** RES

Lab Sample Name: L09100553-22 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.05	0.0999	0.05	mg/kg	U	U	

Sample Name LL1SS-517M-3021-SO **AnalysisType:** RES

Lab Sample Name: L09100553-23 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0498	0.0996	0.0498	mg/kg	U	U	

Sample Name LL1SS-518M-3022-SO **AnalysisType:** RES

Lab Sample Name: L09100553-24 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0506	0.101	0.0506	mg/kg	U		

Analysis Method SM3500Cr-D 7196A

Sample Name LL1SS-519M-3023-SO **AnalysisType:** RES

Lab Sample Name: L09100553-25 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.05	0.1	0.05	mg/kg	U		

Sample Name LL3SS-290M-2000-SO **AnalysisType:** RES

Lab Sample Name: L09100553-26 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0499	0.0997	0.0499	mg/kg	U		

Sample Name LL3SS-291M-2001-SO **AnalysisType:** RES

Lab Sample Name: L09100553-27 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0502	0.1	0.0502	mg/kg	U		

Sample Name LL4SS-280M-2000-SO **AnalysisType:** RES

Lab Sample Name: L09100553-28 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0504	0.101	0.0504	mg/kg	U	U	

Sample Name LL4SS-280M-2002-SO **AnalysisType:** RES

Lab Sample Name: L09100553-29 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.05	0.0999	0.05	mg/kg	U	U	

Analysis Method SM3500Cr-D 7196A

Sample Name LL4SS-280M-2003-SO **AnalysisType:** RES

Lab Sample Name: L09100553-30 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0624	0.125	0.0624	mg/kg	U	U	

Sample Name LL4SS-281M-2004-SO **AnalysisType:** RES

Lab Sample Name: L09100553-31 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0499	0.0998	0.0499	mg/kg	U		

Sample Name LL4SS-282M-2005-SO **AnalysisType:** RES

Lab Sample Name: L09100553-32 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.05	0.0999	0.05	mg/kg	U		

Analysis Method USACRREL

Sample Name LL1SS-506M-3006-SO **AnalysisType:** RES

Lab Sample Name: L09100553-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.47	4.95	2.47	mg/kg	U		

Validated Sample Result Forms: L09100563

Analysis Method 6010B

Sample Name LL155-534M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100563-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	0.0532	0.1	0.05	mg/L	J	UJ	B
Barium	7440-39-3	0.0025	0.01	0.0025	mg/L	U		
Beryllium	7440-41-7	0.0005	0.002	0.0005	mg/L	U		
Cadmium	7440-43-9	#######	0.0005	0.00025	mg/L	U		
Calcium	7440-70-2	0.1	0.2	0.1	mg/L	U		
Chromium	7440-47-3	0.0025	0.005	0.0025	mg/L	U		
Cobalt	7440-48-4	0.0025	0.005	0.0025	mg/L	U		
Copper	7440-50-8	0.0025	0.005	0.0025	mg/L	U		
Iron	7439-89-6	0.224	0.1	0.025	mg/L		U	B
Magnesium	7439-95-4	0.25	0.5	0.25	mg/L	U		
Manganese	7439-96-5	0.005	0.01	0.005	mg/L	U		
Potassium	7440-09-7	0.25	1	0.25	mg/L	U		
Silver	7440-22-4	0.002	0.004	0.002	mg/L	U		
Sodium	7440-23-5	0.25	0.5	0.25	mg/L	U		
Vanadium	7440-62-2	0.005	0.01	0.005	mg/L	U		
Zinc	7440-66-6	0.005	0.02	0.005	mg/L	U		

Analysis Method 6020

Sample Name LL155-534M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100563-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	######	0.001	0.00025	mg/L	U		
Arsenic	7440-38-2	######	0.001	0.00025	mg/L	U		
Lead	7439-92-1	######	0.001	0.00025	mg/L	U		
Nickel	7440-02-0	######	0.004	0.001	mg/L			
Selenium	7782-49-2	0.0005	0.001	0.0005	mg/L	U		
Thallium	7440-28-0	######	0.0002	0.00005	mg/L	U		

Analysis Method 7470A

Sample Name LL155-534M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100563-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0001	0.0002	0.0001	mg/L	U		

Analysis Method 8081A

Sample Name LL155-534M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100563-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-xylene	877-09-8	11	0	0	ug/L			
4,4'-DDD	72-54-8	0.01	0.05	0.01	ug/L	U	UJ	S
4,4'-DDE	72-55-9	0.01	0.05	0.01	ug/L	U	UJ	S
4,4'-DDT	50-29-3	0.01	0.05	0.01	ug/L	U	UJ	S
Aldrin	309-00-2	0.01	0.05	0.01	ug/L	U	UJ	S
alpha Chlordane	5103-71-9	0.01	0.05	0.01	ug/L	U	UJ	S
alpha-BHC	319-84-6	0.01	0.05	0.01	ug/L	U	UJ	S
beta-BHC	319-85-7	0.01	0.05	0.01	ug/L	U	UJ	S
Decachlorobiphenyl	2051-24-3	9.12	0	0	ug/L	*	J-	S
delta-BHC	319-86-8	0.01	0.05	0.01	ug/L	U	UJ	S
Dieldrin	60-57-1	0.01	0.05	0.01	ug/L	U	UJ	S
Endosulfan I	959-98-8	0.01	0.05	0.01	ug/L	U	UJ	S
Endosulfan II	33213-65-9	0.01	0.05	0.01	ug/L	U	UJ	S
Endosulfan sulfate	1031-07-8	0.01	0.05	0.01	ug/L	U	UJ	S
Endrin	72-20-8	0.01	0.05	0.01	ug/L	U	UJ	S
Endrin aldehyde	7421-93-4	0.01	0.05	0.01	ug/L	U	UJ	S
Endrin ketone	53494-70-5	0.01	0.05	0.01	ug/L	U	UJ	S
gamma Chlordane	5103-74-2	0.01	0.05	0.01	ug/L	U	UJ	S
gamma-BHC (Lindane)	58-89-9	0.01	0.05	0.01	ug/L	U	UJ	S
Heptachlor	76-44-8	0.01	0.05	0.01	ug/L	U	UJ	S
Heptachlor epoxide	1024-57-3	0.01	0.05	0.01	ug/L	U	UJ	S
Methoxychlor	72-43-5	0.01	0.05	0.01	ug/L	U	UJ	S
Toxaphene	8001-35-2	0.3	1	0.3	ug/L	U	UJ	S

Analysis Method 8082

Sample Name LL155-534M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100563-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-xylene	877-09-8	11.7	0	0	ug/L			
Aroclor-1016	12674-11-2	0.25	0.5	0.25	ug/L	U	UJ	S
Aroclor-1221	11104-28-2	0.25	0.5	0.25	ug/L	U	UJ	S
Aroclor-1232	11141-16-5	0.25	0.5	0.25	ug/L	U	UJ	S
Aroclor-1242	53469-21-9	0.25	0.5	0.25	ug/L	U	UJ	S
Aroclor-1248	12672-29-6	0.25	0.5	0.25	ug/L	U	UJ	S
Aroclor-1254	11097-69-1	0.25	0.5	0.25	ug/L	U	UJ	S
Aroclor-1260	11096-82-5	0.25	0.5	0.25	ug/L	U	UJ	S
Decachlorobiphenyl	2051-24-3	9.82	0	0	ug/L	*	J-	S

Analysis Method 8260B

Sample Name LL155-534M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100563-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	0.25	1	0.25	ug/L	U		
1,1,2,2-Tetrachloroethane	79-34-5	0.125	1	0.125	ug/L	U		
1,1,2-Trichloroethane	79-00-5	0.25	1	0.25	ug/L	U		
1,1-Dichloroethane	75-34-3	0.125	1	0.125	ug/L	U		
1,1-Dichloroethene	75-35-4	0.5	1	0.5	ug/L	U		
1,2-Dibromoethane	106-93-4	0.25	1	0.25	ug/L	U		
1,2-Dichloroethane	107-06-2	0.25	1	0.25	ug/L	U		
1,2-Dichloroethane-d4	17060-07-0	23.8	0	0	ug/L			
1,2-Dichloroethene (total)	540-59-0	0.25	1	0.25	ug/L	U		
1,2-Dichloropropane	78-87-5	0.2	1	0.2	ug/L	U		
2-Butanone	78-93-3	2.5	10	2.5	ug/L	U		
2-Hexanone	591-78-6	2.5	10	2.5	ug/L	U		
4-Methyl-2-pentanone	108-10-1	2.5	10	2.5	ug/L	U		
Acetone	67-64-1	52.1	10	2.5	ug/L			
Benzene	71-43-2	0.125	1	0.125	ug/L	U		
Bromochloromethane	74-97-5	0.2	1	0.2	ug/L	U		
Bromodichloromethane	75-27-4	0.25	1	0.25	ug/L	U		
Bromoform	75-25-2	0.5	1	0.5	ug/L	U		
Bromomethane	74-83-9	0.5	1	0.5	ug/L	U		
Carbon disulfide	75-15-0	0.5	1	0.5	ug/L	U		
Carbon tetrachloride	56-23-5	0.25	1	0.25	ug/L	U		
Chlorobenzene	108-90-7	0.125	1	0.125	ug/L	U		
Chloroethane	75-00-3	0.5	1	0.5	ug/L	U		
Chloroform	67-66-3	0.125	1	0.125	ug/L	U		
Chloromethane	74-87-3	0.25	1	0.25	ug/L	U		
cis-1,3-Dichloropropene	10061-01-5	0.25	1	0.25	ug/L	U		
Dibromochloromethane	124-48-1	0.25	1	0.25	ug/L	U		
Dibromofluoromethane	1868-53-7	25.5	0	0	ug/L			

Analysis Method 8260B

Ethyl benzene	100-41-4	0.25	1	0.25	ug/L	U
Methylene chloride	75-09-2	0.25	1	0.25	ug/L	U
p-Bromofluorobenzene	460-00-4	25.5	0	0	ug/L	
Styrene	100-42-5	0.125	1	0.125	ug/L	U
Tetrachloroethene	127-18-4	0.25	1	0.25	ug/L	U
Toluene	108-88-3	0.25	1	0.25	ug/L	U
Toluene-d8	2037-26-5	25.5	0	0	ug/L	
trans-1,3-Dichloropropene	10061-02-6	0.5	1	0.5	ug/L	U
Trichloroethene	79-01-6	0.25	1	0.25	ug/L	U
Vinyl chloride	75-01-4	0.25	1	0.25	ug/L	U
Xylenes, Total	1330-20-7	0.5	2	0.5	ug/L	U

Analysis Method 8260B

Sample Name TRIP BLANK **AnalysisType:** RES

Lab Sample Name: L09100563-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	0.25	1	0.25	ug/L	U		
1,1,2,2-Tetrachloroethane	79-34-5	0.125	1	0.125	ug/L	U		
1,1,2-Trichloroethane	79-00-5	0.25	1	0.25	ug/L	U		
1,1-Dichloroethane	75-34-3	0.125	1	0.125	ug/L	U		
1,1-Dichloroethene	75-35-4	0.5	1	0.5	ug/L	U		
1,2-Dibromoethane	106-93-4	0.25	1	0.25	ug/L	U		
1,2-Dichloroethane	107-06-2	0.25	1	0.25	ug/L	U		
1,2-Dichloroethane-d4	17060-07-0	24.4	0	0	ug/L			
1,2-Dichloroethene (total)	540-59-0	0.25	1	0.25	ug/L	U		
1,2-Dichloropropane	78-87-5	0.2	1	0.2	ug/L	U		
2-Butanone	78-93-3	2.5	10	2.5	ug/L	U		
2-Hexanone	591-78-6	2.5	10	2.5	ug/L	U		
4-Methyl-2-pentanone	108-10-1	2.5	10	2.5	ug/L	U		
Acetone	67-64-1	2.5	10	2.5	ug/L	U		
Benzene	71-43-2	0.125	1	0.125	ug/L	U		
Bromochloromethane	74-97-5	0.2	1	0.2	ug/L	U		
Bromodichloromethane	75-27-4	0.25	1	0.25	ug/L	U		
Bromoform	75-25-2	0.5	1	0.5	ug/L	U		
Bromomethane	74-83-9	0.5	1	0.5	ug/L	U		
Carbon disulfide	75-15-0	0.5	1	0.5	ug/L	U		
Carbon tetrachloride	56-23-5	0.25	1	0.25	ug/L	U		
Chlorobenzene	108-90-7	0.125	1	0.125	ug/L	U		
Chloroethane	75-00-3	0.5	1	0.5	ug/L	U		
Chloroform	67-66-3	0.125	1	0.125	ug/L	U		
Chloromethane	74-87-3	0.25	1	0.25	ug/L	U		
cis-1,3-Dichloropropene	10061-01-5	0.25	1	0.25	ug/L	U		
Dibromochloromethane	124-48-1	0.25	1	0.25	ug/L	U		
Dibromofluoromethane	1868-53-7	26.2	0	0	ug/L			

Analysis Method 8260B

Ethyl benzene	100-41-4	0.25	1	0.25	ug/L	U
Methylene chloride	75-09-2	0.25	1	0.25	ug/L	U
p-Bromofluorobenzene	460-00-4	26	0	0	ug/L	
Styrene	100-42-5	0.125	1	0.125	ug/L	U
Tetrachloroethene	127-18-4	0.25	1	0.25	ug/L	U
Toluene	108-88-3	0.25	1	0.25	ug/L	U
Toluene-d8	2037-26-5	26	0	0	ug/L	
trans-1,3-Dichloropropene	10061-02-6	0.5	1	0.5	ug/L	U
Trichloroethene	79-01-6	0.25	1	0.25	ug/L	U
Vinyl chloride	75-01-4	0.25	1	0.25	ug/L	U
Xylenes, Total	1330-20-7	0.5	2	0.5	ug/L	U

Analysis Method 8270C

Sample Name LL155-534M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100563-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	2.5	10	2.5	ug/L	U	UJ	S
1,2-Dichlorobenzene	95-50-1	2.5	10	2.5	ug/L	U	UJ	S
1,3-Dichlorobenzene	541-73-1	2.5	10	2.5	ug/L	U	R	S
1,4-Dichlorobenzene	106-46-7	2.5	10	2.5	ug/L	U	R	S
2,4,5-Trichlorophenol	95-95-4	2.5	10	2.5	ug/L	U	UJ	S
2,4,6-Tribromophenol	118-79-6	58000	0	0	ug/L			
2,4,6-Trichlorophenol	88-06-2	2.5	10	2.5	ug/L	U	UJ	S
2,4-Dichlorophenol	120-83-2	2.5	10	2.5	ug/L	U	UJ	S
2,4-Dimethylphenol	105-67-9	2.5	10	2.5	ug/L	U	UJ	S
2,4-Dinitrophenol	51-28-5	12.5	25	12.5	ug/L	U	UJ	S
2,4-Dinitrotoluene	121-14-2	2.5	10	2.5	ug/L	U	UJ	S
2,6-Dinitrotoluene	606-20-2	2.5	10	2.5	ug/L	U	UJ	S
2-Chloronaphthalene	91-58-7	2.5	10	2.5	ug/L	U	UJ	S
2-Chlorophenol	95-57-8	2.5	10	2.5	ug/L	U	UJ	S
2-Fluorobiphenyl	321-60-8	19100	0	0	ug/L	*	J-	S
2-Fluorophenol	367-12-4	45000	0	0	ug/L	*	J-	S
2-Methylnaphthalene	91-57-6	2.5	10	2.5	ug/L	U	UJ	S
2-Methylphenol	95-48-7	2.5	10	2.5	ug/L	U	UJ	S
2-Nitroaniline	88-74-4	12.5	25	12.5	ug/L	U	UJ	S
2-Nitrophenol	88-75-5	2.5	10	2.5	ug/L	U	UJ	S
3,3'-Dichlorobenzidine	91-94-1	2.5	10	2.5	ug/L	U	UJ	S
3-,4-Methylphenol	106-44-5	2.5	10	2.5	ug/L	U	UJ	S
3-Nitroaniline	99-09-2	12.5	25	12.5	ug/L	U	UJ	S
4,6-Dinitro-2-methylphenol	534-52-1	12.5	25	12.5	ug/L	U	UJ	S
4-Bromophenyl-phenylether	101-55-3	2.5	10	2.5	ug/L	U	UJ	S
4-Chloro-3-methylphenol	59-50-7	2.5	10	2.5	ug/L	U	UJ	S
4-Chloroaniline	106-47-8	2.5	10	2.5	ug/L	U	UJ	S
4-Chlorophenyl-phenyl ether	7005-72-3	2.5	10	2.5	ug/L	U	UJ	S

Analysis Method 8270C

4-Nitroaniline	100-01-6	12.5	25	12.5	ug/L	U	UJ	S
4-Nitrophenol	100-02-7	12.5	25	12.5	ug/L	U	UJ	S
Acenaphthene	83-32-9	2.5	10	2.5	ug/L	U	UJ	S
Acenaphthylene	208-96-8	2.5	10	2.5	ug/L	U	UJ	S
Anthracene	120-12-7	2.5	10	2.5	ug/L	U	UJ	S
Benzo(a)anthracene	56-55-3	2.5	10	2.5	ug/L	U	UJ	S
Benzo(a)pyrene	50-32-8	2.5	10	2.5	ug/L	U	UJ	S
Benzo(b)fluoranthene	205-99-2	2.5	10	2.5	ug/L	U	UJ	S
Benzo(g,h,i)Perylene	191-24-2	2.5	10	2.5	ug/L	U	UJ	S
Benzo(k)fluoranthene	207-08-9	2.5	10	2.5	ug/L	U	UJ	S
Benzoic acid	65-85-0	12.5	25	12.5	ug/L	U	UJ	S
Benzyl alcohol	100-51-6	2.5	10	2.5	ug/L	U	UJ	S
Bis(2-Chloroethoxy)Methane	111-91-1	2.5	10	2.5	ug/L	U	UJ	S
Bis(2-Chloroethyl)ether	111-44-4	2.5	10	2.5	ug/L	U	UJ	S
bis(2-Chloroisopropyl)ether	39638-32-9	2.5	10	2.5	ug/L	U	UJ	S
bis(2-Ethylhexyl)phthalate	117-81-7	3	10	3	ug/L	U	UJ	S
Butylbenzylphthalate	85-68-7	2.5	10	2.5	ug/L	U	UJ	S
Carbazole	86-74-8	2.5	20	2.5	ug/L	U	UJ	S
Chrysene	218-01-9	2.5	10	2.5	ug/L	U	UJ	S
Dibenzo(a,h)Anthracene	53-70-3	2.5	10	2.5	ug/L	U	UJ	S
Dibenzofuran	132-64-9	2.5	10	2.5	ug/L	U	UJ	S
Diethylphthalate	84-66-2	2.5	10	2.5	ug/L	U	UJ	S
Dimethylphthalate	131-11-3	2.5	10	2.5	ug/L	U	UJ	S
Di-N-Butylphthalate	84-74-2	2.5	10	2.5	ug/L	U	UJ	S
Di-n-octylphthalate	117-84-0	2.5	10	2.5	ug/L	U	UJ	S
Fluoranthene	206-44-0	2.5	10	2.5	ug/L	U	UJ	S
Fluorene	86-73-7	2.5	10	2.5	ug/L	U	UJ	S
Hexachlorobenzene	118-74-1	2.5	10	2.5	ug/L	U	UJ	S
Hexachlorobutadiene	87-68-3	2.5	10	2.5	ug/L	U	UJ	S
Hexachlorocyclopentadiene	77-47-4	2.5	10	2.5	ug/L	U	UJ	S
Hexachloroethane	67-72-1	2.5	10	2.5	ug/L	U	R	S
Indeno(1,2,3-cd)pyrene	193-39-5	2.5	10	2.5	ug/L	U	UJ	S

Analysis Method 8270C

Isophorone	78-59-1	2.5	10	2.5	ug/L	U	UJ	S
Naphthalene	91-20-3	2.5	10	2.5	ug/L	U	UJ	S
Nitrobenzene	98-95-3	2.5	10	2.5	ug/L	U	UJ	S
Nitrobenzene-d5	4165-60-0	20900	0	0	ug/L	*	J-	S
N-Nitroso-di-n-propylamine	621-64-7	2.5	10	2.5	ug/L	U	UJ	S
N-Nitrosodiphenylamine	86-30-6	2.5	10	2.5	ug/L	U	UJ	S
Pentachlorophenol	87-86-5	12.5	40	12.5	ug/L	U	UJ	S
Phenanthrene	85-01-8	2.5	10	2.5	ug/L	U	UJ	S
Phenol	108-95-2	2.5	10	2.5	ug/L	U	UJ	S
Phenol-d5	4165-62-2	44400	0	0	ug/L	*	J-	S
p-Terphenyl-d14	1718-51-0	43700	0	0	ug/L			
Pyrene	129-00-0	2.5	10	2.5	ug/L	U	UJ	S

Analysis Method 8330

Sample Name LL155-534M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100563-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	343	0	0	ug/L			
1,3,5-Trinitrobenzene	99-35-4	0.263	1.05	0.263	ug/L	U		
1,3-Dinitrobenzene	99-65-0	0.263	1.05	0.263	ug/L	U		
2,4,6-Trinitrotoluene	118-96-7	0.263	1.05	0.263	ug/L	U		
2,4-Dinitrotoluene	121-14-2	0.263	1.05	0.263	ug/L	U		
2,6-Dinitrotoluene	606-20-2	0.263	1.05	0.263	ug/L	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.263	1.05	0.263	ug/L	U		
2-Nitrotoluene	88-72-2	0.263	1.05	0.263	ug/L	U		
3-Nitrotoluene	99-08-1	0.263	1.05	0.263	ug/L	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.263	1.05	0.263	ug/L	U		
4-Nitrotoluene	99-99-0	0.263	1.05	0.263	ug/L	U		
HMX	2691-41-0	0.263	1.05	0.263	ug/L	U		
Nitrobenzene	98-95-3	0.263	1.05	0.263	ug/L	U		
Nitroglycerin	55-63-0	0.263	1.05	0.263	ug/L	U		
PETN	78-11-5	0.263	1.05	0.263	ug/L	U		
PETN	78-11-5	0.263	1.05	0.263	ug/L	U		
RDX	121-82-4	0.263	1.05	0.263	ug/L	U		
Tetryl	479-45-8	0.263	1.05	0.263	ug/L	U	R	C

Analysis Method 8330-NG

Sample Name LL155-534M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100563-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	25	50	25	ug/L	U	UJ	H

Analysis Method SM3500Cr-D 7196A

Sample Name LL155-534M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100563-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.005	0.01	0.005	mg/L	U		

Analysis Method USACRREL

Sample Name LL155-534M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100563-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	0.25	0.5	0.25	mg/L	U	UJ	*III

Validated Sample Result Forms: L09100645

Analysis Method 6010B

Sample Name LLISS-523M-3027-SO **AnalysisType:** RES

Lab Sample Name: L09100645-01 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	2940	14.5	7.27	mg/kg			
Barium	7440-39-3	22.7	0.364	0.0727	mg/kg			
Beryllium	7440-41-7	0.198	0.0182	0.00872	mg/kg			
Cadmium	7440-43-9	0.729	0.0727	0.0364	mg/kg			
Calcium	7440-70-2	4390	7.27	3.64	mg/kg			
Chromium	7440-47-3	17.9	0.182	0.0872	mg/kg			
Cobalt	7440-48-4	2.58	0.182	0.0872	mg/kg			
Copper	7440-50-8	11.1	0.182	0.0872	mg/kg			
Iron	7439-89-6	12900	1.45	0.727	mg/kg	B		
Magnesium	7439-95-4	1090	18.2	8.72	mg/kg			
Manganese	7439-96-5	431	0.364	0.0727	mg/kg			
Potassium	7440-09-7	424	36.4	18.2	mg/kg			
Silver	7440-22-4	0.182	0.364	0.182	mg/kg	U	R	C
Sodium	7440-23-5	25.7	18.2	3.64	mg/kg			
Vanadium	7440-62-2	8.25	0.364	0.182	mg/kg			
Zinc	7440-66-6	51.7	0.727	0.364	mg/kg			

Analysis Method 6010B

Sample Name LLISS-523M-3029-SO **AnalysisType:** RES

Lab Sample Name: L09100645-02 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	3010	14.8	7.4	mg/kg			
Barium	7440-39-3	23.9	0.37	0.074	mg/kg			
Beryllium	7440-41-7	0.198	0.0185	0.00889	mg/kg			
Cadmium	7440-43-9	0.691	0.074	0.037	mg/kg			
Calcium	7440-70-2	4950	7.4	3.7	mg/kg			
Chromium	7440-47-3	14.1	0.185	0.0889	mg/kg			
Cobalt	7440-48-4	2.57	0.185	0.0889	mg/kg			
Copper	7440-50-8	9.71	0.185	0.0889	mg/kg			
Iron	7439-89-6	12800	1.48	0.74	mg/kg	B		
Magnesium	7439-95-4	1230	18.5	8.89	mg/kg			
Manganese	7439-96-5	431	0.37	0.074	mg/kg			
Potassium	7440-09-7	420	37	18.5	mg/kg			
Silver	7440-22-4	0.185	0.37	0.185	mg/kg	U	R	C
Sodium	7440-23-5	26.9	18.5	3.7	mg/kg			
Vanadium	7440-62-2	8.04	0.37	0.185	mg/kg			
Zinc	7440-66-6	57.2	0.74	0.37	mg/kg			

Analysis Method 6010B

Sample Name LLISS-523M-3030-SO **AnalysisType:** RES

Lab Sample Name: L09100645-03 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	2770	14.1	7.06	mg/kg			
Barium	7440-39-3	21.7	0.353	0.0706	mg/kg			
Beryllium	7440-41-7	0.183	0.0176	0.00847	mg/kg			
Cadmium	7440-43-9	0.611	0.0706	0.0353	mg/kg			
Calcium	7440-70-2	4610	7.06	3.53	mg/kg			
Chromium	7440-47-3	13	0.176	0.0847	mg/kg			
Cobalt	7440-48-4	2.49	0.176	0.0847	mg/kg			
Copper	7440-50-8	9.3	0.176	0.0847	mg/kg			
Iron	7439-89-6	11300	1.41	0.706	mg/kg	B		
Magnesium	7439-95-4	1060	17.6	8.47	mg/kg			
Manganese	7439-96-5	401	0.353	0.0706	mg/kg			
Potassium	7440-09-7	418	35.3	17.6	mg/kg			
Silver	7440-22-4	0.176	0.353	0.176	mg/kg	U	R	C
Sodium	7440-23-5	27.1	17.6	3.53	mg/kg			
Vanadium	7440-62-2	7.5	0.353	0.176	mg/kg			
Zinc	7440-66-6	54.8	0.706	0.353	mg/kg			

Analysis Method 6010B

Sample Name LLISS-524M-3034-SO **AnalysisType:** RES

Lab Sample Name: L09100645-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	3530	15.1	7.53	mg/kg		J	Q
Barium	7440-39-3	27.2	0.376	0.0753	mg/kg			
Beryllium	7440-41-7	0.262	0.0188	0.00903	mg/kg			
Cadmium	7440-43-9	0.952	0.0753	0.0376	mg/kg			
Calcium	7440-70-2	5140	7.53	3.76	mg/kg		J+	Q
Chromium	7440-47-3	14	0.188	0.0903	mg/kg			
Cobalt	7440-48-4	2.58	0.188	0.0903	mg/kg			
Copper	7440-50-8	11.8	0.188	0.0903	mg/kg			
Iron	7439-89-6	15700	1.51	0.753	mg/kg	B	J-	Q
Magnesium	7439-95-4	1250	18.8	9.03	mg/kg		J+	Q
Manganese	7439-96-5	519	0.376	0.0753	mg/kg		J-	Q
Potassium	7440-09-7	473	37.6	18.8	mg/kg			
Silver	7440-22-4	0.188	0.376	0.188	mg/kg	U		
Sodium	7440-23-5	32.7	18.8	3.76	mg/kg			
Vanadium	7440-62-2	9.67	0.376	0.188	mg/kg			
Zinc	7440-66-6	76.7	0.753	0.376	mg/kg			

Analysis Method 6010B

Sample Name LLISS-525M-3036-SO **AnalysisType:** RES

Lab Sample Name: L09100645-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	2780	15.2	7.62	mg/kg		J	Q
Barium	7440-39-3	24.4	0.381	0.0762	mg/kg			
Beryllium	7440-41-7	0.211	0.019	0.00914	mg/kg			
Cadmium	7440-43-9	0.749	0.0762	0.0381	mg/kg			
Calcium	7440-70-2	3830	7.62	3.81	mg/kg		J+	Q
Chromium	7440-47-3	16.3	0.19	0.0914	mg/kg			
Cobalt	7440-48-4	2.92	0.19	0.0914	mg/kg			
Copper	7440-50-8	10.9	0.19	0.0914	mg/kg			
Iron	7439-89-6	13600	1.52	0.762	mg/kg	B	J-	Q
Magnesium	7439-95-4	1130	19	9.14	mg/kg		J+	Q
Manganese	7439-96-5	450	0.381	0.0762	mg/kg		J-	Q
Potassium	7440-09-7	361	38.1	19	mg/kg			
Silver	7440-22-4	0.19	0.381	0.19	mg/kg	U		
Sodium	7440-23-5	19.4	19	3.81	mg/kg			
Vanadium	7440-62-2	8.36	0.381	0.19	mg/kg			
Zinc	7440-66-6	51.6	0.762	0.381	mg/kg			

Analysis Method 6020

Sample Name LLISS-523M-3027-SO **AnalysisType:** RE

Lab Sample Name: L09100645-01 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.136	0.0956	0.0478	mg/kg			
Arsenic	7440-38-2	5.4	0.296	0.074	mg/kg		J	E
Lead	7439-92-1	19.7	0.197	0.0986	mg/kg		J	E
Nickel	7440-02-0	10.2	0.789	0.197	mg/kg		J	E
Selenium	7782-49-2	0.0986	0.197	0.0986	mg/kg	U	UJ	Q, E
Thallium	7440-28-0	0.106	0.0197	0.00986	mg/kg		J	E, C

Sample Name LLISS-523M-3029-SO **AnalysisType:** RE

Lab Sample Name: L09100645-02 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.151	0.1	0.0501	mg/kg			
Arsenic	7440-38-2	6.64	0.278	0.0694	mg/kg		J	E
Lead	7439-92-1	22.6	0.185	0.0926	mg/kg		J	E
Nickel	7440-02-0	11.8	0.741	0.185	mg/kg		J	E
Selenium	7782-49-2	0.0926	0.185	0.0926	mg/kg	U	UJ	Q, E
Thallium	7440-28-0	0.0704	0.0185	0.00926	mg/kg		J	E, C

Sample Name LLISS-523M-3030-SO **AnalysisType:** RE

Lab Sample Name: L09100645-03 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.164	0.0983	0.0491	mg/kg			
Arsenic	7440-38-2	6.04	0.29	0.0726	mg/kg		J	E
Lead	7439-92-1	20.4	0.194	0.0968	mg/kg		J	E
Nickel	7440-02-0	13.8	0.774	0.194	mg/kg		J	E
Selenium	7782-49-2	0.0968	0.194	0.0968	mg/kg	U	UJ	Q, E
Thallium	7440-28-0	0.0585	0.0194	0.00968	mg/kg		J	E, C

Analysis Method 6020

Sample Name LLISS-524M-3034-SO **AnalysisType:** RE

Lab Sample Name: L09100645-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.211	0.0971	0.0486	mg/kg			
Arsenic	7440-38-2	6.96	0.278	0.0696	mg/kg		J	E
Lead	7439-92-1	28.5	0.186	0.0928	mg/kg		J	E
Nickel	7440-02-0	12.5	0.743	0.186	mg/kg		J	E
Selenium	7782-49-2	0.104	0.186	0.0928	mg/kg	J	J	Q
Thallium	7440-28-0	0.0685	0.0186	0.00928	mg/kg		J	E

Sample Name LLISS-525M-3036-SO **AnalysisType:** RE

Lab Sample Name: L09100645-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.24	0.0975	0.0488	mg/kg			
Arsenic	7440-38-2	5.9	0.295	0.0737	mg/kg		J	E
Lead	7439-92-1	16.1	0.197	0.0983	mg/kg		J	E
Nickel	7440-02-0	12.2	0.786	0.197	mg/kg		J	E
Selenium	7782-49-2	0.0983	0.197	0.0983	mg/kg	U	UJ	Q
Thallium	7440-28-0	0.0604	0.0197	0.00983	mg/kg		J	E

Analysis Method 7471A

Sample Name LLISS-523M-3027-SO **AnalysisType:** RES

Lab Sample Name: L09100645-01 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.025	0.0957	0.00957	mg/kg	J	J	

Sample Name LLISS-523M-3029-SO **AnalysisType:** RES

Lab Sample Name: L09100645-02 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0179	0.0926	0.00926	mg/kg	J	J	

Sample Name LLISS-523M-3030-SO **AnalysisType:** RES

Lab Sample Name: L09100645-03 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0202	0.0973	0.00973	mg/kg	J	J	

Sample Name LLISS-524M-3034-SO **AnalysisType:** RES

Lab Sample Name: L09100645-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0163	0.0994	0.00994	mg/kg	J	J	

Sample Name LLISS-525M-3036-SO **AnalysisType:** RES

Lab Sample Name: L09100645-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	######	0.0978	0.00978	mg/kg	U		

Analysis Method 8081A

Sample Name LLISS-523M-3027-SO **AnalysisType:** RES

Lab Sample Name: L09100645-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-xylene	877-09-8	13.3	0	0	ug/kg			
4,4'-DDD	72-54-8	0.345	1.72	0.345	ug/kg	U	U	
4,4'-DDE	72-55-9	0.345	1.72	0.345	ug/kg	U	U	
4,4'-DDT	50-29-3	0.345	1.72	0.345	ug/kg	U	U	
Aldrin	309-00-2	0.345	1.72	0.345	ug/kg	U	U	
alpha Chlordane	5103-71-9	0.345	1.72	0.345	ug/kg	U	U	
alpha-BHC	319-84-6	0.345	1.72	0.345	ug/kg	U	U	
beta-BHC	319-85-7	0.345	1.72	0.345	ug/kg	U	U	
Decachlorobiphenyl	2051-24-3	15.8	0	0	ug/kg			
delta-BHC	319-86-8	0.345	1.72	0.345	ug/kg	U	U	
Dieldrin	60-57-1	0.345	1.72	0.345	ug/kg	U	NJ	$, *III, -
Endosulfan I	959-98-8	0.345	1.72	0.345	ug/kg	U	U	
Endosulfan II	33213-65-9	0.345	1.72	0.345	ug/kg	U	U	
Endosulfan sulfate	1031-07-8	0.345	1.72	0.345	ug/kg	U	U	
Endrin	72-20-8	0.345	1.72	0.345	ug/kg	U	U	
Endrin aldehyde	7421-93-4	0.345	1.72	0.345	ug/kg	U	J	$, *III, -
Endrin ketone	53494-70-5	0.345	1.72	0.345	ug/kg	U	U	
gamma Chlordane	5103-74-2	0.345	1.72	0.345	ug/kg	U	U	
gamma-BHC (Lindane)	58-89-9	0.345	1.72	0.345	ug/kg	U	U	
Heptachlor	76-44-8	0.345	1.72	0.345	ug/kg	U	U	
Heptachlor epoxide	1024-57-3	0.345	1.72	0.345	ug/kg	U	U	
Methoxychlor	72-43-5	0.345	1.72	0.345	ug/kg	U	U	
Toxaphene	8001-35-2	17.5	34.5	17.5	ug/kg	U	U	

Analysis Method 8081A

Sample Name LLISS-523M-3029-SO **AnalysisType:** RES

Lab Sample Name: L09100645-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-xylene	877-09-8	11.9	0	0	ug/kg			
4,4'-DDD	72-54-8	0.315	1.58	0.315	ug/kg	U	U	
4,4'-DDE	72-55-9	0.315	1.58	0.315	ug/kg	U	U	
4,4'-DDT	50-29-3	0.315	1.58	0.315	ug/kg	U	U	
Aldrin	309-00-2	0.315	1.58	0.315	ug/kg	U	U	
alpha Chlordane	5103-71-9	0.315	1.58	0.315	ug/kg	U	U	
alpha-BHC	319-84-6	0.315	1.58	0.315	ug/kg	U	U	
beta-BHC	319-85-7	0.315	1.58	0.315	ug/kg	U	U	
Decachlorobiphenyl	2051-24-3	14.7	0	0	ug/kg			
delta-BHC	319-86-8	0.315	1.58	0.315	ug/kg	U	U	
Dieldrin	60-57-1	0.315	1.58	0.315	ug/kg	U	U	
Endosulfan I	959-98-8	0.315	1.58	0.315	ug/kg	U	U	
Endosulfan II	33213-65-9	0.315	1.58	0.315	ug/kg	U	U	
Endosulfan sulfate	1031-07-8	0.315	1.58	0.315	ug/kg	U	U	
Endrin	72-20-8	0.315	1.58	0.315	ug/kg	U	U	
Endrin aldehyde	7421-93-4	0.315	1.58	0.315	ug/kg	U	U	
Endrin ketone	53494-70-5	0.315	1.58	0.315	ug/kg	U	U	
gamma Chlordane	5103-74-2	0.315	1.58	0.315	ug/kg	U	U	
gamma-BHC (Lindane)	58-89-9	0.315	1.58	0.315	ug/kg	U	U	
Heptachlor	76-44-8	0.315	1.58	0.315	ug/kg	U	U	
Heptachlor epoxide	1024-57-3	0.315	1.58	0.315	ug/kg	U	U	
Methoxychlor	72-43-5	0.315	1.58	0.315	ug/kg	U	U	
Toxaphene	8001-35-2	15.9	31.5	15.9	ug/kg	U	U	

Analysis Method 8081A

Sample Name LLISS-523M-3030-SO **AnalysisType:** RES

Lab Sample Name: L09100645-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-xylene	877-09-8	12.9	0	0	ug/kg			
4,4'-DDD	72-54-8	0.329	1.65	0.329	ug/kg	U	U	
4,4'-DDE	72-55-9	0.329	1.65	0.329	ug/kg	U	U	
4,4'-DDT	50-29-3	0.329	1.65	0.329	ug/kg	U	U	
Aldrin	309-00-2	0.329	1.65	0.329	ug/kg	U	U	
alpha Chlordane	5103-71-9	0.329	1.65	0.329	ug/kg	U	U	
alpha-BHC	319-84-6	0.329	1.65	0.329	ug/kg	U	U	
beta-BHC	319-85-7	0.329	1.65	0.329	ug/kg	U	U	
Decachlorobiphenyl	2051-24-3	15.5	0	0	ug/kg			
delta-BHC	319-86-8	0.329	1.65	0.329	ug/kg	U	U	
Dieldrin	60-57-1	0.329	1.65	0.329	ug/kg	U	U	
Endosulfan I	959-98-8	0.329	1.65	0.329	ug/kg	U	U	
Endosulfan II	33213-65-9	0.329	1.65	0.329	ug/kg	U	U	
Endosulfan sulfate	1031-07-8	0.329	1.65	0.329	ug/kg	U	U	
Endrin	72-20-8	0.329	1.65	0.329	ug/kg	U	U	
Endrin aldehyde	7421-93-4	0.329	1.65	0.329	ug/kg	U	U	
Endrin ketone	53494-70-5	0.329	1.65	0.329	ug/kg	U	U	
gamma Chlordane	5103-74-2	0.329	1.65	0.329	ug/kg	U	U	
gamma-BHC (Lindane)	58-89-9	0.329	1.65	0.329	ug/kg	U	U	
Heptachlor	76-44-8	0.329	1.65	0.329	ug/kg	U	U	
Heptachlor epoxide	1024-57-3	0.329	1.65	0.329	ug/kg	U	U	
Methoxychlor	72-43-5	0.329	1.65	0.329	ug/kg	U	U	
Toxaphene	8001-35-2	16.7	32.9	16.7	ug/kg	U	U	

Analysis Method 8081A

Sample Name LLISS-524M-3034-SO **AnalysisType:** RES

Lab Sample Name: L09100645-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-xylene	877-09-8	14.4	0	0	ug/kg			
4,4'-DDD	72-54-8	0.323	1.61	0.323	ug/kg	U		
4,4'-DDE	72-55-9	0.323	1.61	0.323	ug/kg	U		
4,4'-DDT	50-29-3	0.323	1.61	0.323	ug/kg	U		
Aldrin	309-00-2	0.323	1.61	0.323	ug/kg	U		
alpha Chlordane	5103-71-9	0.323	1.61	0.323	ug/kg	U		
alpha-BHC	319-84-6	0.323	1.61	0.323	ug/kg	U		
beta-BHC	319-85-7	0.323	1.61	0.323	ug/kg	U		
Decachlorobiphenyl	2051-24-3	20	0	0	ug/kg			
delta-BHC	319-86-8	0.323	1.61	0.323	ug/kg	U		
Dieldrin	60-57-1	0.323	1.61	0.323	ug/kg	U		
Endosulfan I	959-98-8	0.323	1.61	0.323	ug/kg	U		
Endosulfan II	33213-65-9	0.323	1.61	0.323	ug/kg	U		
Endosulfan sulfate	1031-07-8	0.323	1.61	0.323	ug/kg	U		
Endrin	72-20-8	0.323	1.61	0.323	ug/kg	U		
Endrin aldehyde	7421-93-4	0.323	1.61	0.323	ug/kg	U		
Endrin ketone	53494-70-5	0.323	1.61	0.323	ug/kg	U		
gamma Chlordane	5103-74-2	0.323	1.61	0.323	ug/kg	U		
gamma-BHC (Lindane)	58-89-9	0.323	1.61	0.323	ug/kg	U		
Heptachlor	76-44-8	0.323	1.61	0.323	ug/kg	U		
Heptachlor epoxide	1024-57-3	0.323	1.61	0.323	ug/kg	U		
Methoxychlor	72-43-5	0.323	1.61	0.323	ug/kg	U		
Toxaphene	8001-35-2	16.3	32.3	16.3	ug/kg	U		

Analysis Method 8081A

Sample Name LLISS-525M-3036-SO **AnalysisType:** RES

Lab Sample Name: L09100645-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-xylene	877-09-8	11.4	0	0	ug/kg			
4,4'-DDD	72-54-8	1.97	9.84	1.97	ug/kg	U	R	Q
4,4'-DDE	72-55-9	1.97	9.84	1.97	ug/kg	U	UJ	*III
4,4'-DDT	50-29-3	1.97	9.84	1.97	ug/kg	U	R	*III
Aldrin	309-00-2	1.97	9.84	1.97	ug/kg	U		
alpha Chlordane	5103-71-9	1.97	9.84	1.97	ug/kg	U		
alpha-BHC	319-84-6	1.97	9.84	1.97	ug/kg	U		
beta-BHC	319-85-7	1.97	9.84	1.97	ug/kg	U		
Decachlorobiphenyl	2051-24-3	23.2	0	0	ug/kg			
delta-BHC	319-86-8	1.97	9.84	1.97	ug/kg	U		
Dieldrin	60-57-1	1.97	9.84	1.97	ug/kg	U		
Endosulfan I	959-98-8	1.97	9.84	1.97	ug/kg	U		
Endosulfan II	33213-65-9	1.97	9.84	1.97	ug/kg	U		
Endosulfan sulfate	1031-07-8	1.97	9.84	1.97	ug/kg	U		
Endrin	72-20-8	1.97	9.84	1.97	ug/kg	U		
Endrin aldehyde	7421-93-4	1.97	9.84	1.97	ug/kg	U		
Endrin ketone	53494-70-5	1.97	9.84	1.97	ug/kg	U		
gamma Chlordane	5103-74-2	1.97	9.84	1.97	ug/kg	U		
gamma-BHC (Lindane)	58-89-9	1.97	9.84	1.97	ug/kg	U		
Heptachlor	76-44-8	1.97	9.84	1.97	ug/kg	U		
Heptachlor epoxide	1024-57-3	1.97	9.84	1.97	ug/kg	U		
Methoxychlor	72-43-5	1.97	9.84	1.97	ug/kg	U	UJ	*III
Toxaphene	8001-35-2	99.6	197	99.6	ug/kg	U		

Analysis Method 8082

Sample Name LLISS-523M-3027-SO **AnalysisType:** DL

Lab Sample Name: L09100645-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	19.6	0	0	ug/kg			
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	13.8	0	0	ug/kg			
Aroclor-1016	12674-11-2	86.2	172	86.2	ug/kg	U	R	D
Aroclor-1016	12674-11-2	8.62	17.2	8.62	ug/kg	U	U	
Aroclor-1221	11104-28-2	8.62	17.2	8.62	ug/kg	U	U	
Aroclor-1221	11104-28-2	86.2	172	86.2	ug/kg	U	R	D
Aroclor-1232	11141-16-5	86.2	172	86.2	ug/kg	U	R	D
Aroclor-1232	11141-16-5	8.62	17.2	8.62	ug/kg	U	U	
Aroclor-1242	53469-21-9	86.2	172	86.2	ug/kg	U	R	D
Aroclor-1242	53469-21-9	8.62	17.2	8.62	ug/kg	U	U	
Aroclor-1248	12672-29-6	8.62	17.2	8.62	ug/kg	U	U	
Aroclor-1248	12672-29-6	86.2	172	86.2	ug/kg	U	R	D
Aroclor-1254	11097-69-1	1220	172	86.2	ug/kg			
Aroclor-1254	11097-69-1	932	17.2	8.62	ug/kg	I	R	D
Aroclor-1260	11096-82-5	86.2	172	86.2	ug/kg	U	R	D
Aroclor-1260	11096-82-5	8.62	17.2	8.62	ug/kg	U	U	
Decachlorobiphenyl	2051-24-3	16.1	0	0	ug/kg			
Decachlorobiphenyl	2051-24-3	18.4	0	0	ug/kg			

Analysis Method 8082

Sample Name LLISS-523M-3029-SO **AnalysisType:** RES

Lab Sample Name: L09100645-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	12.1	0	0	ug/kg			
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	15.5	0	0	ug/kg			
Aroclor-1016	12674-11-2	7.88	15.8	7.88	ug/kg	U	U	
Aroclor-1016	12674-11-2	78.8	158	78.8	ug/kg	U	R	D
Aroclor-1221	11104-28-2	7.88	15.8	7.88	ug/kg	U	U	
Aroclor-1221	11104-28-2	78.8	158	78.8	ug/kg	U	R	D
Aroclor-1232	11141-16-5	7.88	15.8	7.88	ug/kg	U	U	
Aroclor-1232	11141-16-5	78.8	158	78.8	ug/kg	U	R	D
Aroclor-1242	53469-21-9	78.8	158	78.8	ug/kg	U	R	D
Aroclor-1242	53469-21-9	7.88	15.8	7.88	ug/kg	U	U	
Aroclor-1248	12672-29-6	78.8	158	78.8	ug/kg	U	R	D
Aroclor-1248	12672-29-6	7.88	15.8	7.88	ug/kg	U	U	
Aroclor-1254	11097-69-1	1280	158	78.8	ug/kg			
Aroclor-1254	11097-69-1	1060	15.8	7.88	ug/kg	I	R	D
Aroclor-1260	11096-82-5	78.8	158	78.8	ug/kg	U	R	D
Aroclor-1260	11096-82-5	7.88	15.8	7.88	ug/kg	U	U	
Decachlorobiphenyl	2051-24-3	14.1	0	0	ug/kg			
Decachlorobiphenyl	2051-24-3	16	0	0	ug/kg			

Analysis Method 8082

Sample Name LLISS-523M-3030-SO **AnalysisType:** RES

Lab Sample Name: L09100645-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	13.7	0	0	ug/kg			
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	17.6	0	0	ug/kg			
Aroclor-1016	12674-11-2	8.23	16.5	8.23	ug/kg	U	U	
Aroclor-1016	12674-11-2	82.3	165	82.3	ug/kg	U	R	D
Aroclor-1221	11104-28-2	8.23	16.5	8.23	ug/kg	U	U	
Aroclor-1221	11104-28-2	82.3	165	82.3	ug/kg	U	R	D
Aroclor-1232	11141-16-5	82.3	165	82.3	ug/kg	U	R	D
Aroclor-1232	11141-16-5	8.23	16.5	8.23	ug/kg	U	U	
Aroclor-1242	53469-21-9	8.23	16.5	8.23	ug/kg	U	U	
Aroclor-1242	53469-21-9	82.3	165	82.3	ug/kg	U	R	D
Aroclor-1248	12672-29-6	8.23	16.5	8.23	ug/kg	U	U	
Aroclor-1248	12672-29-6	82.3	165	82.3	ug/kg	U	R	D
Aroclor-1254	11097-69-1	973	16.5	8.23	ug/kg	I	R	D
Aroclor-1254	11097-69-1	1200	165	82.3	ug/kg			
Aroclor-1260	11096-82-5	82.3	165	82.3	ug/kg	U	R	D
Aroclor-1260	11096-82-5	8.23	16.5	8.23	ug/kg	U	U	
Decachlorobiphenyl	2051-24-3	18.7	0	0	ug/kg			
Decachlorobiphenyl	2051-24-3	15.4	0	0	ug/kg			

Analysis Method 8082

Sample Name LLISS-524M-3034-SO **AnalysisType:** DL

Lab Sample Name: L09100645-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	18.8	0	0	ug/kg			
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	14.5	0	0	ug/kg			
Aroclor-1016	12674-11-2	80.7	161	80.7	ug/kg	U		
Aroclor-1016	12674-11-2	8.07	16.1	8.07	ug/kg	U		
Aroclor-1221	11104-28-2	8.07	16.1	8.07	ug/kg	U		
Aroclor-1221	11104-28-2	80.7	161	80.7	ug/kg	U		
Aroclor-1232	11141-16-5	8.07	16.1	8.07	ug/kg	U		
Aroclor-1232	11141-16-5	80.7	161	80.7	ug/kg	U		
Aroclor-1242	53469-21-9	8.07	16.1	8.07	ug/kg	U		
Aroclor-1242	53469-21-9	80.7	161	80.7	ug/kg	U		
Aroclor-1248	12672-29-6	8.07	16.1	8.07	ug/kg	U		
Aroclor-1248	12672-29-6	80.7	161	80.7	ug/kg	U		
Aroclor-1254	11097-69-1	915	161	80.7	ug/kg			
Aroclor-1254	11097-69-1	697	16.1	8.07	ug/kg	I		
Aroclor-1260	11096-82-5	8.07	16.1	8.07	ug/kg	U		
Aroclor-1260	11096-82-5	80.7	161	80.7	ug/kg	U		
Decachlorobiphenyl	2051-24-3	17.9	0	0	ug/kg			
Decachlorobiphenyl	2051-24-3	22.5	0	0	ug/kg			

Analysis Method 8082

Sample Name LLISS-525M-3036-SO **AnalysisType:** RES

Lab Sample Name: L09100645-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	14.4	0	0	ug/kg			
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	15	0	0	ug/kg			
Aroclor-1016	12674-11-2	9.84	19.7	9.84	ug/kg	U		
Aroclor-1016	12674-11-2	9.84	19.7	9.84	ug/kg	U		
Aroclor-1221	11104-28-2	9.84	19.7	9.84	ug/kg	U		
Aroclor-1221	11104-28-2	9.84	19.7	9.84	ug/kg	U		
Aroclor-1232	11141-16-5	9.84	19.7	9.84	ug/kg	U		
Aroclor-1232	11141-16-5	9.84	19.7	9.84	ug/kg	U		
Aroclor-1242	53469-21-9	9.84	19.7	9.84	ug/kg	U		
Aroclor-1242	53469-21-9	9.84	19.7	9.84	ug/kg	U		
Aroclor-1248	12672-29-6	9.84	19.7	9.84	ug/kg	U		
Aroclor-1248	12672-29-6	9.84	19.7	9.84	ug/kg	U		
Aroclor-1254	11097-69-1	788	19.7	9.84	ug/kg			
Aroclor-1254	11097-69-1	866	19.7	9.84	ug/kg			
Aroclor-1260	11096-82-5	9.84	19.7	9.84	ug/kg	U		
Aroclor-1260	11096-82-5	9.84	19.7	9.84	ug/kg	U		
Decachlorobiphenyl	2051-24-3	25.6	0	0	ug/kg			
Decachlorobiphenyl	2051-24-3	19.4	0	0	ug/kg			

Analysis Method 8260B

Sample Name LLISS-523D-3031-SO **AnalysisType:** RES

Lab Sample Name: L09100645-04 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	0.442	4.42	0.442	ug/kg	U	U	
1,1,2,2-Tetrachloroethane	79-34-5	0.442	4.42	0.442	ug/kg	U	U	
1,1,2-Trichloroethane	79-00-5	0.442	4.42	0.442	ug/kg	U	U	
1,1-Dichloroethane	75-34-3	0.885	4.42	0.885	ug/kg	U	U	
1,1-Dichloroethene	75-35-4	0.442	4.42	0.442	ug/kg	U	U	
1,2-Dibromoethane	106-93-4	0.442	4.42	0.442	ug/kg	U	U	
1,2-Dichloroethane	107-06-2	0.442	4.42	0.442	ug/kg	U	U	
1,2-Dichloroethane-d4	17060-07-0	51.3	0	0	ug/kg			
1,2-Dichloroethene (total)	540-59-0	0.442	4.42	0.442	ug/kg	U	U	
1,2-Dichloropropane	78-87-5	0.442	4.42	0.442	ug/kg	U	U	
2-Butanone	78-93-3	2.21	4.42	2.21	ug/kg	U	U	
2-Hexanone	591-78-6	2.21	4.42	2.21	ug/kg	U	U	
4-Methyl-2-pentanone	108-10-1	2.21	4.42	2.21	ug/kg	U	U	
Acetone	67-64-1	4.42	8.85	4.42	ug/kg	U	U	
Benzene	71-43-2	0.442	4.42	0.442	ug/kg	U	U	
Bromochloromethane	74-97-5	0.442	4.42	0.442	ug/kg	U	U	
Bromodichloromethane	75-27-4	0.442	4.42	0.442	ug/kg	U	U	
Bromoform	75-25-2	0.442	4.42	0.442	ug/kg	U	U	
Bromomethane	74-83-9	0.885	4.42	0.885	ug/kg	U	U	
Carbon disulfide	75-15-0	0.496	4.42	0.442	ug/kg	J	J	
Carbon tetrachloride	56-23-5	0.442	4.42	0.442	ug/kg	U	U	
Chlorobenzene	108-90-7	0.442	4.42	0.442	ug/kg	U	U	
Chloroethane	75-00-3	0.885	4.42	0.885	ug/kg	U	U	
Chloroform	67-66-3	0.442	4.42	0.442	ug/kg	U	U	
Chloromethane	74-87-3	1.77	4.42	1.77	ug/kg	U	U	
cis-1,3-Dichloropropene	10061-01-5	0.442	4.42	0.442	ug/kg	U	U	
Dibromochloromethane	124-48-1	0.442	4.42	0.442	ug/kg	U	U	
Dibromofluoromethane	1868-53-7	52.5	0	0	ug/kg			

Analysis Method 8260B

Ethyl benzene	100-41-4	0.442	4.42	0.442	ug/kg	U	U
Methylene chloride	75-09-2	1.83	4.42	0.885	ug/kg	J	J
p-Bromofluorobenzene	460-00-4	55.9	0	0	ug/kg		
Styrene	100-42-5	0.442	4.42	0.442	ug/kg	U	U
Tetrachloroethene	127-18-4	0.442	4.42	0.442	ug/kg	U	U
Toluene	108-88-3	0.442	4.42	0.442	ug/kg	U	U
Toluene-d8	2037-26-5	53.8	0	0	ug/kg		
trans-1,3-Dichloropropene	10061-02-6	0.442	4.42	0.442	ug/kg	U	U
Trichloroethene	79-01-6	0.442	4.42	0.442	ug/kg	U	U
Vinyl chloride	75-01-4	0.885	4.42	0.885	ug/kg	U	U
Xylenes, Total	1330-20-7	0.442	4.42	0.442	ug/kg	U	U

Analysis Method 8260B

Sample Name LLISS-523D-3033-SO **AnalysisType:** RES

Lab Sample Name: L09100645-05 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	0.489	4.89	0.489	ug/kg	U	U	
1,1,2,2-Tetrachloroethane	79-34-5	0.489	4.89	0.489	ug/kg	U	U	
1,1,2-Trichloroethane	79-00-5	0.489	4.89	0.489	ug/kg	U	U	
1,1-Dichloroethane	75-34-3	0.979	4.89	0.979	ug/kg	U	U	
1,1-Dichloroethene	75-35-4	0.489	4.89	0.489	ug/kg	U	U	
1,2-Dibromoethane	106-93-4	0.489	4.89	0.489	ug/kg	U	U	
1,2-Dichloroethane	107-06-2	0.489	4.89	0.489	ug/kg	U	U	
1,2-Dichloroethane-d4	17060-07-0	50.8	0	0	ug/kg			
1,2-Dichloroethene (total)	540-59-0	0.489	4.89	0.489	ug/kg	U	U	
1,2-Dichloropropane	78-87-5	0.489	4.89	0.489	ug/kg	U	U	
2-Butanone	78-93-3	2.45	4.89	2.45	ug/kg	U	U	
2-Hexanone	591-78-6	2.45	4.89	2.45	ug/kg	U	U	
4-Methyl-2-pentanone	108-10-1	2.45	4.89	2.45	ug/kg	U	U	
Acetone	67-64-1	12	9.79	4.89	ug/kg		U	T
Benzene	71-43-2	0.489	4.89	0.489	ug/kg	U	U	
Bromochloromethane	74-97-5	0.489	4.89	0.489	ug/kg	U	U	
Bromodichloromethane	75-27-4	0.489	4.89	0.489	ug/kg	U	U	
Bromoform	75-25-2	0.489	4.89	0.489	ug/kg	U	U	
Bromomethane	74-83-9	0.979	4.89	0.979	ug/kg	U	U	
Carbon disulfide	75-15-0	0.907	4.89	0.489	ug/kg	J	J	
Carbon tetrachloride	56-23-5	0.489	4.89	0.489	ug/kg	U	U	
Chlorobenzene	108-90-7	0.489	4.89	0.489	ug/kg	U	U	
Chloroethane	75-00-3	0.979	4.89	0.979	ug/kg	U	U	
Chloroform	67-66-3	0.489	4.89	0.489	ug/kg	U	U	
Chloromethane	74-87-3	1.96	4.89	1.96	ug/kg	U	U	
cis-1,3-Dichloropropene	10061-01-5	0.489	4.89	0.489	ug/kg	U	U	
Dibromochloromethane	124-48-1	0.489	4.89	0.489	ug/kg	U	U	
Dibromofluoromethane	1868-53-7	53.3	0	0	ug/kg			

Analysis Method 8260B

Ethyl benzene	100-41-4	0.489	4.89	0.489	ug/kg	U	U
Methylene chloride	75-09-2	6.09	4.89	0.979	ug/kg		
p-Bromofluorobenzene	460-00-4	55.7	0	0	ug/kg		
Styrene	100-42-5	0.489	4.89	0.489	ug/kg	U	U
Tetrachloroethene	127-18-4	0.489	4.89	0.489	ug/kg	U	U
Toluene	108-88-3	0.489	4.89	0.489	ug/kg	U	U
Toluene-d8	2037-26-5	54.1	0	0	ug/kg		
trans-1,3-Dichloropropene	10061-02-6	0.489	4.89	0.489	ug/kg	U	U
Trichloroethene	79-01-6	0.489	4.89	0.489	ug/kg	U	U
Vinyl chloride	75-01-4	0.979	4.89	0.979	ug/kg	U	U
Xylenes, Total	1330-20-7	0.489	4.89	0.489	ug/kg	U	U

Analysis Method 8260B

Sample Name LLISS-525D-3037-SO **AnalysisType:** RES

Lab Sample Name: L09100645-10 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	0.453	4.53	0.453	ug/kg	U		
1,1,2,2-Tetrachloroethane	79-34-5	0.453	4.53	0.453	ug/kg	U		
1,1,2-Trichloroethane	79-00-5	0.453	4.53	0.453	ug/kg	U		
1,1-Dichloroethane	75-34-3	0.905	4.53	0.905	ug/kg	U		
1,1-Dichloroethene	75-35-4	0.453	4.53	0.453	ug/kg	U		
1,2-Dibromoethane	106-93-4	0.453	4.53	0.453	ug/kg	U		
1,2-Dichloroethane	107-06-2	0.453	4.53	0.453	ug/kg	U		
1,2-Dichloroethane-d4	17060-07-0	51.5	0	0	ug/kg			
1,2-Dichloroethene (total)	540-59-0	0.453	4.53	0.453	ug/kg	U		
1,2-Dichloropropane	78-87-5	0.453	4.53	0.453	ug/kg	U		
2-Butanone	78-93-3	2.26	4.53	2.26	ug/kg	U		
2-Hexanone	591-78-6	2.26	4.53	2.26	ug/kg	U		
4-Methyl-2-pentanone	108-10-1	2.26	4.53	2.26	ug/kg	U		
Acetone	67-64-1	4.53	9.05	4.53	ug/kg	U		
Benzene	71-43-2	0.453	4.53	0.453	ug/kg	U		
Bromochloromethane	74-97-5	0.453	4.53	0.453	ug/kg	U		
Bromodichloromethane	75-27-4	0.453	4.53	0.453	ug/kg	U		
Bromoform	75-25-2	0.453	4.53	0.453	ug/kg	U		
Bromomethane	74-83-9	0.905	4.53	0.905	ug/kg	U		
Carbon disulfide	75-15-0	0.453	4.53	0.453	ug/kg	U		
Carbon tetrachloride	56-23-5	0.453	4.53	0.453	ug/kg	U		
Chlorobenzene	108-90-7	0.453	4.53	0.453	ug/kg	U		
Chloroethane	75-00-3	0.905	4.53	0.905	ug/kg	U		
Chloroform	67-66-3	0.453	4.53	0.453	ug/kg	U		
Chloromethane	74-87-3	1.81	4.53	1.81	ug/kg	U		
cis-1,3-Dichloropropene	10061-01-5	0.453	4.53	0.453	ug/kg	U		
Dibromochloromethane	124-48-1	0.453	4.53	0.453	ug/kg	U		
Dibromofluoromethane	1868-53-7	53.5	0	0	ug/kg			

Analysis Method 8260B

Ethyl benzene	100-41-4	0.453	4.53	0.453	ug/kg	U
Methylene chloride	75-09-2	0.905	4.53	0.905	ug/kg	U
p-Bromofluorobenzene	460-00-4	58.2	0	0	ug/kg	
Styrene	100-42-5	0.453	4.53	0.453	ug/kg	U
Tetrachloroethene	127-18-4	0.453	4.53	0.453	ug/kg	U
Toluene	108-88-3	0.453	4.53	0.453	ug/kg	U
Toluene-d8	2037-26-5	56.6	0	0	ug/kg	
trans-1,3-Dichloropropene	10061-02-6	0.453	4.53	0.453	ug/kg	U
Trichloroethene	79-01-6	0.453	4.53	0.453	ug/kg	U
Vinyl chloride	75-01-4	0.905	4.53	0.905	ug/kg	U
Xylenes, Total	1330-20-7	0.453	4.53	0.453	ug/kg	U

Analysis Method 8260B

Sample Name TRIP BLANK-1026 **AnalysisType:** RES

Lab Sample Name: L09100645-13 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	0.25	1	0.25	ug/L	U		
1,1,2,2-Tetrachloroethane	79-34-5	0.125	1	0.125	ug/L	U		
1,1,2-Trichloroethane	79-00-5	0.25	1	0.25	ug/L	U		
1,1-Dichloroethane	75-34-3	0.125	1	0.125	ug/L	U		
1,1-Dichloroethene	75-35-4	0.5	1	0.5	ug/L	U		
1,2-Dibromoethane	106-93-4	0.25	1	0.25	ug/L	U		
1,2-Dichloroethane	107-06-2	0.25	1	0.25	ug/L	U		
1,2-Dichloroethane-d4	17060-07-0	23.6	0	0	ug/L			
1,2-Dichloroethene (total)	540-59-0	0.25	1	0.25	ug/L	U		
1,2-Dichloropropane	78-87-5	0.2	1	0.2	ug/L	U		
2-Butanone	78-93-3	2.5	10	2.5	ug/L	U		
2-Hexanone	591-78-6	2.5	10	2.5	ug/L	U		
4-Methyl-2-pentanone	108-10-1	2.5	10	2.5	ug/L	U		
Acetone	67-64-1	3.16	10	2.5	ug/L	J	J	
Benzene	71-43-2	0.125	1	0.125	ug/L	U		
Bromochloromethane	74-97-5	0.2	1	0.2	ug/L	U		
Bromodichloromethane	75-27-4	0.25	1	0.25	ug/L	U		
Bromoform	75-25-2	0.5	1	0.5	ug/L	U		
Bromomethane	74-83-9	0.5	1	0.5	ug/L	U		
Carbon disulfide	75-15-0	0.5	1	0.5	ug/L	U		
Carbon tetrachloride	56-23-5	0.25	1	0.25	ug/L	U		
Chlorobenzene	108-90-7	0.125	1	0.125	ug/L	U		
Chloroethane	75-00-3	0.5	1	0.5	ug/L	U		
Chloroform	67-66-3	0.125	1	0.125	ug/L	U		
Chloromethane	74-87-3	0.25	1	0.25	ug/L	U		
cis-1,3-Dichloropropene	10061-01-5	0.25	1	0.25	ug/L	U		
Dibromochloromethane	124-48-1	0.25	1	0.25	ug/L	U		
Dibromofluoromethane	1868-53-7	25.5	0	0	ug/L			

Analysis Method 8260B

Ethyl benzene	100-41-4	0.25	1	0.25	ug/L	U
Methylene chloride	75-09-2	0.25	1	0.25	ug/L	U
p-Bromofluorobenzene	460-00-4	26.2	0	0	ug/L	
Styrene	100-42-5	0.125	1	0.125	ug/L	U
Tetrachloroethene	127-18-4	0.25	1	0.25	ug/L	U
Toluene	108-88-3	0.25	1	0.25	ug/L	U
Toluene-d8	2037-26-5	25.5	0	0	ug/L	
trans-1,3-Dichloropropene	10061-02-6	0.5	1	0.5	ug/L	U
Trichloroethene	79-01-6	0.25	1	0.25	ug/L	U
Vinyl chloride	75-01-4	0.25	1	0.25	ug/L	U
Xylenes, Total	1330-20-7	0.5	2	0.5	ug/L	U

Analysis Method 8270C

Sample Name LLISS-523M-3027-SO **AnalysisType:** RES

Lab Sample Name: L09100645-01 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	428	857	428	ug/kg	U	UJ	S
1,2-Dichlorobenzene	95-50-1	428	857	428	ug/kg	U	UJ	S
1,3-Dichlorobenzene	541-73-1	428	857	428	ug/kg	U	UJ	S
1,4-Dichlorobenzene	106-46-7	428	857	428	ug/kg	U	UJ	S
2,4,5-Trichlorophenol	95-95-4	428	857	428	ug/kg	U	UJ	S
2,4,6-Tribromophenol	118-79-6	66100	0	0	ug/kg			
2,4,6-Trichlorophenol	88-06-2	428	857	428	ug/kg	U	UJ	S
2,4-Dichlorophenol	120-83-2	428	857	428	ug/kg	U	UJ	S
2,4-Dimethylphenol	105-67-9	428	857	428	ug/kg	U	UJ	S
2,4-Dinitrophenol	51-28-5	2140	4280	2140	ug/kg	U	UJ	S
2,4-Dinitrotoluene	121-14-2	428	857	428	ug/kg	U	UJ	S
2,6-Dinitrotoluene	606-20-2	428	857	428	ug/kg	U	UJ	S
2-Chloronaphthalene	91-58-7	428	857	428	ug/kg	U	UJ	S
2-Chlorophenol	95-57-8	428	857	428	ug/kg	U	UJ	S
2-Fluorobiphenyl	321-60-8	19900	0	0	ug/kg	*	J-	S
2-Fluorophenol	367-12-4	43200	0	0	ug/kg	*	J-	S
2-Methylnaphthalene	91-57-6	428	857	428	ug/kg	U	UJ	S
2-Methylphenol	95-48-7	428	857	428	ug/kg	U	UJ	S
2-Nitroaniline	88-74-4	2140	4280	2140	ug/kg	U	UJ	S
2-Nitrophenol	88-75-5	428	857	428	ug/kg	U	UJ	S
3,3'-Dichlorobenzidine	91-94-1	857	1710	857	ug/kg	U	R	C
3-,4-Methylphenol	106-44-5	428	857	428	ug/kg	U	UJ	S
3-Nitroaniline	99-09-2	2140	4280	2140	ug/kg	U	UJ	S
4,6-Dinitro-2-methylphenol	534-52-1	2140	4280	2140	ug/kg	U	UJ	S
4-Bromophenyl-phenylether	101-55-3	428	857	428	ug/kg	U	UJ	S
4-Chloro-3-methylphenol	59-50-7	428	857	428	ug/kg	U	UJ	S
4-Chloroaniline	106-47-8	428	857	428	ug/kg	U	UJ	S
4-Chlorophenyl-phenyl ether	7005-72-3	428	857	428	ug/kg	U	UJ	S

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4-Nitroaniline	100-01-6	2140	4280	2140	ug/kg	U	UJ	S
4-Nitrophenol	100-02-7	2140	4280	2140	ug/kg	U	UJ	S
Acenaphthene	83-32-9	428	857	428	ug/kg	U	UJ	S
Acenaphthylene	208-96-8	428	857	428	ug/kg	U	UJ	S
Anthracene	120-12-7	428	857	428	ug/kg	U	UJ	S
Benzo(a)anthracene	56-55-3	428	857	428	ug/kg	U	UJ	S
Benzo(a)pyrene	50-32-8	428	857	428	ug/kg	U	UJ	S
Benzo(b)fluoranthene	205-99-2	428	857	428	ug/kg	U	UJ	S
Benzo(g,h,i)Perylene	191-24-2	428	857	428	ug/kg	U	UJ	S
Benzo(k)fluoranthene	207-08-9	428	857	428	ug/kg	U	UJ	S
Benzoic acid	65-85-0	1710	26000	1710	ug/kg	U	UJ	S
Benzyl alcohol	100-51-6	428	857	428	ug/kg	U	UJ	S
Bis(2-Chloroethoxy)Methane	111-91-1	428	857	428	ug/kg	U	UJ	S
Bis(2-Chloroethyl)ether	111-44-4	428	857	428	ug/kg	U	UJ	S
bis(2-Chloroisopropyl)ether	39638-32-9	428	857	428	ug/kg	U	UJ	S
bis(2-Ethylhexyl)phthalate	117-81-7	428	857	428	ug/kg	U	UJ	S
Butylbenzylphthalate	85-68-7	428	857	428	ug/kg	U	UJ	S
Carbazole	86-74-8	428	857	428	ug/kg	U	UJ	S
Chrysene	218-01-9	428	857	428	ug/kg	U	UJ	S
Dibenzo(a,h)Anthracene	53-70-3	428	857	428	ug/kg	U	UJ	S
Dibenzofuran	132-64-9	428	857	428	ug/kg	U	UJ	S
Diethylphthalate	84-66-2	428	857	428	ug/kg	U	UJ	S
Dimethylphthalate	131-11-3	428	857	428	ug/kg	U	UJ	S
Di-N-Butylphthalate	84-74-2	428	857	428	ug/kg	U	UJ	S
Di-n-octylphthalate	117-84-0	428	857	428	ug/kg	U	UJ	S
Fluoranthene	206-44-0	428	857	428	ug/kg	U	UJ	S
Fluorene	86-73-7	428	857	428	ug/kg	U	UJ	S
Hexachlorobenzene	118-74-1	428	857	428	ug/kg	U	UJ	S
Hexachlorobutadiene	87-68-3	428	857	428	ug/kg	U	UJ	S
Hexachlorocyclopentadiene	77-47-4	428	857	428	ug/kg	U	R	C
Hexachloroethane	67-72-1	428	857	428	ug/kg	U	UJ	S
Indeno(1,2,3-cd)pyrene	193-39-5	428	857	428	ug/kg	U	UJ	S

Analysis Method 8270C

Isophorone	78-59-1	428	857	428	ug/kg	U	UJ	S
Naphthalene	91-20-3	428	857	428	ug/kg	U	UJ	S
Nitrobenzene	98-95-3	428	857	428	ug/kg	U	UJ	S
Nitrobenzene-d5	4165-60-0	20100	0	0	ug/kg	*	J-	S
N-Nitrosodiphenylamine	86-30-6	428	857	428	ug/kg	U	UJ	S
N-Nitrosodipropylamine	621-64-7	428	857	428	ug/kg	U	UJ	S
Pentachlorophenol	87-86-5	2140	4280	2140	ug/kg	U	UJ	S
Phenanthrene	85-01-8	428	857	428	ug/kg	U	UJ	S
Phenol	108-95-2	428	857	428	ug/kg	U	UJ	S
Phenol-d5	4165-62-2	40700	0	0	ug/kg	*	J-	S
p-Terphenyl-d14	1718-51-0	41500	0	0	ug/kg			
Pyrene	129-00-0	428	857	428	ug/kg	U	UJ	S

Analysis Method 8270C

Sample Name LLISS-523M-3029-SO **AnalysisType:** RES

Lab Sample Name: L09100645-02 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	432	865	432	ug/kg	U	UJ	S
1,2-Dichlorobenzene	95-50-1	432	865	432	ug/kg	U	UJ	S
1,3-Dichlorobenzene	541-73-1	432	865	432	ug/kg	U	UJ	S
1,4-Dichlorobenzene	106-46-7	432	865	432	ug/kg	U	UJ	S
2,4,5-Trichlorophenol	95-95-4	432	865	432	ug/kg	U	UJ	S
2,4,6-Tribromophenol	118-79-6	63700	0	0	ug/kg			
2,4,6-Trichlorophenol	88-06-2	432	865	432	ug/kg	U	UJ	S
2,4-Dichlorophenol	120-83-2	432	865	432	ug/kg	U	UJ	S
2,4-Dimethylphenol	105-67-9	432	865	432	ug/kg	U	UJ	S
2,4-Dinitrophenol	51-28-5	2160	4320	2160	ug/kg	U	UJ	S
2,4-Dinitrotoluene	121-14-2	432	865	432	ug/kg	U	UJ	S
2,6-Dinitrotoluene	606-20-2	432	865	432	ug/kg	U	UJ	S
2-Chloronaphthalene	91-58-7	432	865	432	ug/kg	U	UJ	S
2-Chlorophenol	95-57-8	432	865	432	ug/kg	U	UJ	S
2-Fluorobiphenyl	321-60-8	21900	0	0	ug/kg	*	J-	S
2-Fluorophenol	367-12-4	44400	0	0	ug/kg	*	J-	S
2-Methylnaphthalene	91-57-6	432	865	432	ug/kg	U	UJ	S
2-Methylphenol	95-48-7	432	865	432	ug/kg	U	UJ	S
2-Nitroaniline	88-74-4	2160	4320	2160	ug/kg	U	UJ	S
2-Nitrophenol	88-75-5	432	865	432	ug/kg	U	UJ	S
3,3'-Dichlorobenzidine	91-94-1	865	1730	865	ug/kg	U	R	C
3-,4-Methylphenol	106-44-5	432	865	432	ug/kg	U	UJ	S
3-Nitroaniline	99-09-2	2160	4320	2160	ug/kg	U	UJ	S
4,6-Dinitro-2-methylphenol	534-52-1	2160	4320	2160	ug/kg	U	UJ	S
4-Bromophenyl-phenylether	101-55-3	432	865	432	ug/kg	U	UJ	S
4-Chloro-3-methylphenol	59-50-7	432	865	432	ug/kg	U	UJ	S
4-Chloroaniline	106-47-8	432	865	432	ug/kg	U	UJ	S
4-Chlorophenyl-phenyl ether	7005-72-3	432	865	432	ug/kg	U	UJ	S

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4-Nitroaniline	100-01-6	2160	4320	2160	ug/kg	U	UJ	S
4-Nitrophenol	100-02-7	2160	4320	2160	ug/kg	U	UJ	S
Acenaphthene	83-32-9	432	865	432	ug/kg	U	UJ	S
Acenaphthylene	208-96-8	432	865	432	ug/kg	U	UJ	S
Anthracene	120-12-7	432	865	432	ug/kg	U	UJ	S
Benzo(a)anthracene	56-55-3	432	865	432	ug/kg	U	UJ	S
Benzo(a)pyrene	50-32-8	432	865	432	ug/kg	U	UJ	S
Benzo(b)fluoranthene	205-99-2	432	865	432	ug/kg	U	UJ	S
Benzo(g,h,i)Perylene	191-24-2	432	865	432	ug/kg	U	UJ	S
Benzo(k)fluoranthene	207-08-9	432	865	432	ug/kg	U	UJ	S
Benzoic acid	65-85-0	1730	26200	1730	ug/kg	U	UJ	S
Benzyl alcohol	100-51-6	432	865	432	ug/kg	U	UJ	S
Bis(2-Chloroethoxy)Methane	111-91-1	432	865	432	ug/kg	U	UJ	S
Bis(2-Chloroethyl)ether	111-44-4	432	865	432	ug/kg	U	UJ	S
bis(2-Chloroisopropyl)ether	39638-32-9	432	865	432	ug/kg	U	UJ	S
bis(2-Ethylhexyl)phthalate	117-81-7	432	865	432	ug/kg	U	UJ	S
Butylbenzylphthalate	85-68-7	432	865	432	ug/kg	U	UJ	S
Carbazole	86-74-8	432	865	432	ug/kg	U	UJ	S
Chrysene	218-01-9	432	865	432	ug/kg	U	UJ	S
Dibenzo(a,h)Anthracene	53-70-3	432	865	432	ug/kg	U	UJ	S
Dibenzofuran	132-64-9	432	865	432	ug/kg	U	UJ	S
Diethylphthalate	84-66-2	432	865	432	ug/kg	U	UJ	S
Dimethylphthalate	131-11-3	432	865	432	ug/kg	U	UJ	S
Di-N-Butylphthalate	84-74-2	432	865	432	ug/kg	U	UJ	S
Di-n-octylphthalate	117-84-0	432	865	432	ug/kg	U	UJ	S
Fluoranthene	206-44-0	432	865	432	ug/kg	U	UJ	S
Fluorene	86-73-7	432	865	432	ug/kg	U	UJ	S
Hexachlorobenzene	118-74-1	432	865	432	ug/kg	U	UJ	S
Hexachlorobutadiene	87-68-3	432	865	432	ug/kg	U	UJ	S
Hexachlorocyclopentadiene	77-47-4	432	865	432	ug/kg	U	R	C
Hexachloroethane	67-72-1	432	865	432	ug/kg	U	UJ	S
Indeno(1,2,3-cd)pyrene	193-39-5	432	865	432	ug/kg	U	UJ	S

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Isophorone	78-59-1	432	865	432	ug/kg	U	UJ	S
Naphthalene	91-20-3	432	865	432	ug/kg	U	UJ	S
Nitrobenzene	98-95-3	432	865	432	ug/kg	U	UJ	S
Nitrobenzene-d5	4165-60-0	21300	0	0	ug/kg	*	J-	S
N-Nitrosodiphenylamine	86-30-6	432	865	432	ug/kg	U	UJ	S
N-Nitrosodipropylamine	621-64-7	432	865	432	ug/kg	U	UJ	S
Pentachlorophenol	87-86-5	2160	4320	2160	ug/kg	U	UJ	S
Phenanthrene	85-01-8	432	865	432	ug/kg	U	UJ	S
Phenol	108-95-2	432	865	432	ug/kg	U	UJ	S
Phenol-d5	4165-62-2	43400	0	0	ug/kg	*	J-	S
p-Terphenyl-d14	1718-51-0	42200	0	0	ug/kg			
Pyrene	129-00-0	432	865	432	ug/kg	U	UJ	S

Analysis Method 8270C

Sample Name LLISS-523M-3030-SO **AnalysisType:** RES

Lab Sample Name: L09100645-03 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	400	800	400	ug/kg	U	UJ	S
1,2-Dichlorobenzene	95-50-1	400	800	400	ug/kg	U	UJ	S
1,3-Dichlorobenzene	541-73-1	400	800	400	ug/kg	U	UJ	S
1,4-Dichlorobenzene	106-46-7	400	800	400	ug/kg	U	UJ	S
2,4,5-Trichlorophenol	95-95-4	400	800	400	ug/kg	U	UJ	S
2,4,6-Tribromophenol	118-79-6	62400	0	0	ug/kg			
2,4,6-Trichlorophenol	88-06-2	400	800	400	ug/kg	U	UJ	S
2,4-Dichlorophenol	120-83-2	400	800	400	ug/kg	U	UJ	S
2,4-Dimethylphenol	105-67-9	400	800	400	ug/kg	U	UJ	S
2,4-Dinitrophenol	51-28-5	2000	4000	2000	ug/kg	U	UJ	S
2,4-Dinitrotoluene	121-14-2	400	800	400	ug/kg	U	UJ	S
2,6-Dinitrotoluene	606-20-2	400	800	400	ug/kg	U	UJ	S
2-Chloronaphthalene	91-58-7	400	800	400	ug/kg	U	UJ	S
2-Chlorophenol	95-57-8	400	800	400	ug/kg	U	UJ	S
2-Fluorobiphenyl	321-60-8	20200	0	0	ug/kg	*	J-	S
2-Fluorophenol	367-12-4	41800	0	0	ug/kg	*	J-	S
2-Methylnaphthalene	91-57-6	400	800	400	ug/kg	U	UJ	S
2-Methylphenol	95-48-7	400	800	400	ug/kg	U	UJ	S
2-Nitroaniline	88-74-4	2000	4000	2000	ug/kg	U	UJ	S
2-Nitrophenol	88-75-5	400	800	400	ug/kg	U	UJ	S
3,3'-Dichlorobenzidine	91-94-1	800	1600	800	ug/kg	U	R	C
3-,4-Methylphenol	106-44-5	400	800	400	ug/kg	U	UJ	S
3-Nitroaniline	99-09-2	2000	4000	2000	ug/kg	U	UJ	S
4,6-Dinitro-2-methylphenol	534-52-1	2000	4000	2000	ug/kg	U	UJ	S
4-Bromophenyl-phenylether	101-55-3	400	800	400	ug/kg	U	UJ	S
4-Chloro-3-methylphenol	59-50-7	400	800	400	ug/kg	U	UJ	S
4-Chloroaniline	106-47-8	400	800	400	ug/kg	U	UJ	S
4-Chlorophenyl-phenyl ether	7005-72-3	400	800	400	ug/kg	U	UJ	S

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4-Nitroaniline	100-01-6	2000	4000	2000	ug/kg	U	UJ	S
4-Nitrophenol	100-02-7	2000	4000	2000	ug/kg	U	UJ	S
Acenaphthene	83-32-9	400	800	400	ug/kg	U	UJ	S
Acenaphthylene	208-96-8	400	800	400	ug/kg	U	UJ	S
Anthracene	120-12-7	400	800	400	ug/kg	U	UJ	S
Benzo(a)anthracene	56-55-3	400	800	400	ug/kg	U	UJ	S
Benzo(a)pyrene	50-32-8	400	800	400	ug/kg	U	UJ	S
Benzo(b)fluoranthene	205-99-2	400	800	400	ug/kg	U	UJ	S
Benzo(g,h,i)Perylene	191-24-2	400	800	400	ug/kg	U	UJ	S
Benzo(k)fluoranthene	207-08-9	400	800	400	ug/kg	U	UJ	S
Benzoic acid	65-85-0	1600	24200	1600	ug/kg	U	UJ	S
Benzyl alcohol	100-51-6	400	800	400	ug/kg	U	UJ	S
Bis(2-Chloroethoxy)Methane	111-91-1	400	800	400	ug/kg	U	UJ	S
Bis(2-Chloroethyl)ether	111-44-4	400	800	400	ug/kg	U	UJ	S
bis(2-Chloroisopropyl)ether	39638-32-9	400	800	400	ug/kg	U	UJ	S
bis(2-Ethylhexyl)phthalate	117-81-7	400	800	400	ug/kg	U	UJ	S
Butylbenzylphthalate	85-68-7	400	800	400	ug/kg	U	UJ	S
Carbazole	86-74-8	400	800	400	ug/kg	U	UJ	S
Chrysene	218-01-9	400	800	400	ug/kg	U	UJ	S
Dibenzo(a,h)Anthracene	53-70-3	400	800	400	ug/kg	U	UJ	S
Dibenzofuran	132-64-9	400	800	400	ug/kg	U	UJ	S
Diethylphthalate	84-66-2	400	800	400	ug/kg	U	UJ	S
Dimethylphthalate	131-11-3	400	800	400	ug/kg	U	UJ	S
Di-N-Butylphthalate	84-74-2	400	800	400	ug/kg	U	UJ	S
Di-n-octylphthalate	117-84-0	400	800	400	ug/kg	U	UJ	S
Fluoranthene	206-44-0	400	800	400	ug/kg	U	UJ	S
Fluorene	86-73-7	400	800	400	ug/kg	U	UJ	S
Hexachlorobenzene	118-74-1	400	800	400	ug/kg	U	UJ	S
Hexachlorobutadiene	87-68-3	400	800	400	ug/kg	U	UJ	S
Hexachlorocyclopentadiene	77-47-4	400	800	400	ug/kg	U	R	C
Hexachloroethane	67-72-1	400	800	400	ug/kg	U	UJ	S
Indeno(1,2,3-cd)pyrene	193-39-5	400	800	400	ug/kg	U	UJ	S

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Isophorone	78-59-1	400	800	400	ug/kg	U	UJ	S
Naphthalene	91-20-3	400	800	400	ug/kg	U	UJ	S
Nitrobenzene	98-95-3	400	800	400	ug/kg	U	UJ	S
Nitrobenzene-d5	4165-60-0	20300	0	0	ug/kg	*	J-	S
N-Nitrosodiphenylamine	86-30-6	400	800	400	ug/kg	U	UJ	S
N-Nitrosodipropylamine	621-64-7	400	800	400	ug/kg	U	UJ	S
Pentachlorophenol	87-86-5	2000	4000	2000	ug/kg	U	UJ	S
Phenanthrene	85-01-8	400	800	400	ug/kg	U	UJ	S
Phenol	108-95-2	400	800	400	ug/kg	U	UJ	S
Phenol-d5	4165-62-2	41100	0	0	ug/kg	*	J-	S
p-Terphenyl-d14	1718-51-0	41100	0	0	ug/kg			
Pyrene	129-00-0	400	800	400	ug/kg	U	UJ	S

Analysis Method 8270C

Sample Name LLISS-524M-3034-SO **AnalysisType:** RES

Lab Sample Name: L09100645-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	427	855	427	ug/kg	U	UJ	S
1,2-Dichlorobenzene	95-50-1	427	855	427	ug/kg	U	UJ	S
1,3-Dichlorobenzene	541-73-1	427	855	427	ug/kg	U	UJ	S
1,4-Dichlorobenzene	106-46-7	427	855	427	ug/kg	U	UJ	S
2,4,5-Trichlorophenol	95-95-4	427	855	427	ug/kg	U	UJ	S
2,4,6-Tribromophenol	118-79-6	53700	0	0	ug/kg			
2,4,6-Trichlorophenol	88-06-2	427	855	427	ug/kg	U	UJ	S
2,4-Dichlorophenol	120-83-2	427	855	427	ug/kg	U	UJ	S
2,4-Dimethylphenol	105-67-9	427	855	427	ug/kg	U	UJ	S
2,4-Dinitrophenol	51-28-5	2130	4270	2130	ug/kg	U	UJ	S
2,4-Dinitrotoluene	121-14-2	427	855	427	ug/kg	U	UJ	S
2,6-Dinitrotoluene	606-20-2	427	855	427	ug/kg	U	UJ	S
2-Chloronaphthalene	91-58-7	427	855	427	ug/kg	U	UJ	S
2-Chlorophenol	95-57-8	427	855	427	ug/kg	U	UJ	S
2-Fluorobiphenyl	321-60-8	16900	0	0	ug/kg	*	J-	S
2-Fluorophenol	367-12-4	35100	0	0	ug/kg	*	J-	S
2-Methylnaphthalene	91-57-6	427	855	427	ug/kg	U	UJ	S
2-Methylphenol	95-48-7	427	855	427	ug/kg	U	UJ	S
2-Nitroaniline	88-74-4	2130	4270	2130	ug/kg	U	UJ	S
2-Nitrophenol	88-75-5	427	855	427	ug/kg	U	UJ	S
3,3'-Dichlorobenzidine	91-94-1	855	1710	855	ug/kg	U	UJ	S
3-,4-Methylphenol	106-44-5	427	855	427	ug/kg	U	UJ	S
3-Nitroaniline	99-09-2	2130	4270	2130	ug/kg	U	UJ	S
4,6-Dinitro-2-methylphenol	534-52-1	2130	4270	2130	ug/kg	U	UJ	S
4-Bromophenyl-phenylether	101-55-3	427	855	427	ug/kg	U	UJ	S
4-Chloro-3-methylphenol	59-50-7	427	855	427	ug/kg	U	UJ	S
4-Chloroaniline	106-47-8	427	855	427	ug/kg	U	UJ	S
4-Chlorophenyl-phenyl ether	7005-72-3	427	855	427	ug/kg	U	UJ	S

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4-Nitroaniline	100-01-6	2130	4270	2130	ug/kg	U	UJ	S
4-Nitrophenol	100-02-7	2130	4270	2130	ug/kg	U	UJ	S
Acenaphthene	83-32-9	427	855	427	ug/kg	U	UJ	S
Acenaphthylene	208-96-8	427	855	427	ug/kg	U	UJ	S
Anthracene	120-12-7	427	855	427	ug/kg	U	UJ	S
Benzo(a)anthracene	56-55-3	427	855	427	ug/kg	U	UJ	S
Benzo(a)pyrene	50-32-8	427	855	427	ug/kg	U	UJ	S
Benzo(b)fluoranthene	205-99-2	427	855	427	ug/kg	U	UJ	S
Benzo(g,h,i)Perylene	191-24-2	427	855	427	ug/kg	U	UJ	S
Benzo(k)fluoranthene	207-08-9	427	855	427	ug/kg	U	UJ	S
Benzoic acid	65-85-0	1710	25900	1710	ug/kg	U	UJ	S
Benzyl alcohol	100-51-6	427	855	427	ug/kg	U	UJ	S
Bis(2-Chloroethoxy)Methane	111-91-1	427	855	427	ug/kg	U	UJ	S
Bis(2-Chloroethyl)ether	111-44-4	427	855	427	ug/kg	U	UJ	S
bis(2-Chloroisopropyl)ether	39638-32-9	427	855	427	ug/kg	U	UJ	S
bis(2-Ethylhexyl)phthalate	117-81-7	427	855	427	ug/kg	U	UJ	S
Butylbenzylphthalate	85-68-7	427	855	427	ug/kg	U	UJ	S
Carbazole	86-74-8	427	855	427	ug/kg	U	UJ	S
Chrysene	218-01-9	427	855	427	ug/kg	U	UJ	S
Dibenzo(a,h)Anthracene	53-70-3	427	855	427	ug/kg	U	UJ	S
Dibenzofuran	132-64-9	427	855	427	ug/kg	U	UJ	S
Diethylphthalate	84-66-2	427	855	427	ug/kg	U	UJ	S
Dimethylphthalate	131-11-3	427	855	427	ug/kg	U	UJ	S
Di-N-Butylphthalate	84-74-2	427	855	427	ug/kg	U	UJ	S
Di-n-octylphthalate	117-84-0	427	855	427	ug/kg	U	UJ	S
Fluoranthene	206-44-0	427	855	427	ug/kg	U	UJ	S
Fluorene	86-73-7	427	855	427	ug/kg	U	UJ	S
Hexachlorobenzene	118-74-1	427	855	427	ug/kg	U	UJ	S
Hexachlorobutadiene	87-68-3	427	855	427	ug/kg	U	UJ	S
Hexachlorocyclopentadiene	77-47-4	427	855	427	ug/kg	U	UJ	S
Hexachloroethane	67-72-1	427	855	427	ug/kg	U	UJ	S
Indeno(1,2,3-cd)pyrene	193-39-5	427	855	427	ug/kg	U	UJ	S

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Isophorone	78-59-1	427	855	427	ug/kg	U	UJ	S
Naphthalene	91-20-3	427	855	427	ug/kg	U	UJ	S
Nitrobenzene	98-95-3	427	855	427	ug/kg	U	UJ	S
Nitrobenzene-d5	4165-60-0	17600	0	0	ug/kg	*	J-	S
N-Nitrosodiphenylamine	86-30-6	427	855	427	ug/kg	U	UJ	S
N-Nitrosodipropylamine	621-64-7	427	855	427	ug/kg	U	UJ	S
Pentachlorophenol	87-86-5	2130	4270	2130	ug/kg	U	UJ	S
Phenanthrene	85-01-8	427	855	427	ug/kg	U	UJ	S
Phenol	108-95-2	427	855	427	ug/kg	U	UJ	S
Phenol-d5	4165-62-2	34900	0	0	ug/kg	*	J-	S
p-Terphenyl-d14	1718-51-0	36000	0	0	ug/kg			
Pyrene	129-00-0	427	855	427	ug/kg	U	UJ	S

Analysis Method 8270C

Sample Name LLISS-525M-3036-SO **AnalysisType:** RES

Lab Sample Name: L09100645-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	480	960	480	ug/kg	U	UJ	S
1,2-Dichlorobenzene	95-50-1	480	960	480	ug/kg	U	UJ	S
1,3-Dichlorobenzene	541-73-1	480	960	480	ug/kg	U	UJ	S
1,4-Dichlorobenzene	106-46-7	480	960	480	ug/kg	U	UJ	S
2,4,5-Trichlorophenol	95-95-4	480	960	480	ug/kg	U	UJ	S
2,4,6-Tribromophenol	118-79-6	64800	0	0	ug/kg			
2,4,6-Trichlorophenol	88-06-2	480	960	480	ug/kg	U	UJ	S
2,4-Dichlorophenol	120-83-2	480	960	480	ug/kg	U	UJ	S
2,4-Dimethylphenol	105-67-9	480	960	480	ug/kg	U	UJ	S
2,4-Dinitrophenol	51-28-5	2400	4800	2400	ug/kg	U	UJ	S
2,4-Dinitrotoluene	121-14-2	480	960	480	ug/kg	U	UJ	S
2,6-Dinitrotoluene	606-20-2	480	960	480	ug/kg	U	UJ	S
2-Chloronaphthalene	91-58-7	480	960	480	ug/kg	U	UJ	S
2-Chlorophenol	95-57-8	480	960	480	ug/kg	U	UJ	S
2-Fluorobiphenyl	321-60-8	19500	0	0	ug/kg	*	J-	S
2-Fluorophenol	367-12-4	40100	0	0	ug/kg	*	J-	S
2-Methylnaphthalene	91-57-6	480	960	480	ug/kg	U	UJ	S
2-Methylphenol	95-48-7	480	960	480	ug/kg	U	UJ	S
2-Nitroaniline	88-74-4	2400	4800	2400	ug/kg	U	R	S
2-Nitrophenol	88-75-5	480	960	480	ug/kg	U	UJ	S
3,3'-Dichlorobenzidine	91-94-1	960	1920	960	ug/kg	U	UJ	S
3-,4-Methylphenol	106-44-5	480	960	480	ug/kg	U	UJ	S
3-Nitroaniline	99-09-2	2400	4800	2400	ug/kg	U	R	S
4,6-Dinitro-2-methylphenol	534-52-1	2400	4800	2400	ug/kg	U	UJ	S
4-Bromophenyl-phenylether	101-55-3	480	960	480	ug/kg	U	UJ	S
4-Chloro-3-methylphenol	59-50-7	480	960	480	ug/kg	U	UJ	S
4-Chloroaniline	106-47-8	480	960	480	ug/kg	U	UJ	S
4-Chlorophenyl-phenyl ether	7005-72-3	480	960	480	ug/kg	U	UJ	S

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4-Nitroaniline	100-01-6	2400	4800	2400	ug/kg	U	R	S
4-Nitrophenol	100-02-7	2400	4800	2400	ug/kg	U	R	S
Acenaphthene	83-32-9	480	960	480	ug/kg	U	UJ	S
Acenaphthylene	208-96-8	480	960	480	ug/kg	U	UJ	S
Anthracene	120-12-7	1080	960	480	ug/kg		J-	S
Benzo(a)anthracene	56-55-3	1870	960	480	ug/kg		J-	S
Benzo(a)pyrene	50-32-8	1400	960	480	ug/kg		J-	S
Benzo(b)fluoranthene	205-99-2	1150	960	480	ug/kg		J-	S
Benzo(g,h,i)Perylene	191-24-2	607	960	480	ug/kg	J	J	S
Benzo(k)fluoranthene	207-08-9	1380	960	480	ug/kg		J-	S
Benzoic acid	65-85-0	1920	29100	1920	ug/kg	U	UJ	S
Benzyl alcohol	100-51-6	480	960	480	ug/kg	U	UJ	S
Bis(2-Chloroethoxy)Methane	111-91-1	480	960	480	ug/kg	U	UJ	S
Bis(2-Chloroethyl)ether	111-44-4	480	960	480	ug/kg	U	UJ	S
bis(2-Chloroisopropyl)ether	39638-32-9	480	960	480	ug/kg	U	UJ	S
bis(2-Ethylhexyl)phthalate	117-81-7	480	960	480	ug/kg	U	UJ	S
Butylbenzylphthalate	85-68-7	480	960	480	ug/kg	U	UJ	S
Carbazole	86-74-8	666	960	480	ug/kg	J	J	S
Chrysene	218-01-9	1780	960	480	ug/kg		J-	S
Dibenzo(a,h)Anthracene	53-70-3	480	960	480	ug/kg	U	UJ	S
Dibenzofuran	132-64-9	480	960	480	ug/kg	U	UJ	S
Diethylphthalate	84-66-2	480	960	480	ug/kg	U	UJ	S
Dimethylphthalate	131-11-3	480	960	480	ug/kg	U	UJ	S
Di-N-Butylphthalate	84-74-2	480	960	480	ug/kg	U	UJ	S
Di-n-octylphthalate	117-84-0	480	960	480	ug/kg	U	UJ	S
Fluoranthene	206-44-0	4870	960	480	ug/kg		J-	S
Fluorene	86-73-7	480	960	480	ug/kg	U	UJ	S
Hexachlorobenzene	118-74-1	480	960	480	ug/kg	U	UJ	S
Hexachlorobutadiene	87-68-3	480	960	480	ug/kg	U	UJ	S
Hexachlorocyclopentadiene	77-47-4	480	960	480	ug/kg	U	R	S
Hexachloroethane	67-72-1	480	960	480	ug/kg	U	UJ	S
Indeno(1,2,3-cd)pyrene	193-39-5	684	960	480	ug/kg	J	J	S

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Isophorone	78-59-1	480	960	480	ug/kg	U	UJ	S
Naphthalene	91-20-3	480	960	480	ug/kg	U	UJ	S
Nitrobenzene	98-95-3	480	960	480	ug/kg	U	UJ	S
Nitrobenzene-d5	4165-60-0	19100	0	0	ug/kg	*	J-	S
N-Nitrosodiphenylamine	86-30-6	480	960	480	ug/kg	U	UJ	S
N-Nitrosodipropylamine	621-64-7	480	960	480	ug/kg	U	UJ	S
Pentachlorophenol	87-86-5	2400	4800	2400	ug/kg	U	UJ	S
Phenanthrene	85-01-8	3850	960	480	ug/kg		J-	S
Phenol	108-95-2	480	960	480	ug/kg	U	UJ	S
Phenol-d5	4165-62-2	39300	0	0	ug/kg	*	J-	S
p-Terphenyl-d14	1718-51-0	42200	0	0	ug/kg			
Pyrene	129-00-0	3610	960	480	ug/kg		J-	S

Analysis Method 8330

Sample Name LLISS-523M-3027-SO **AnalysisType:** RES

Lab Sample Name: L09100645-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.103	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.103	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0988	0.247	0.0988	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.0988	0.247	0.0988	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.0988	0.247	0.0988	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.0988	0.247	0.0988	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.0988	0.247	0.0988	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0988	0.247	0.0988	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.0988	0.247	0.0988	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.0988	0.247	0.0988	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0988	0.247	0.0988	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.0988	0.247	0.0988	mg/kg	U	U	
HMX	2691-41-0	0.0988	0.247	0.0988	mg/kg	U	U	
Nitrobenzene	98-95-3	0.0988	0.247	0.0988	mg/kg	U	U	
Nitroglycerin	55-63-0	0.0988	0.247	0.0988	mg/kg	U	U	
PETN	78-11-5	0.494	1.48	0.494	mg/kg	U	U	
RDX	121-82-4	0.0988	0.247	0.0988	mg/kg	U	U	
Tetryl	479-45-8	0.0988	0.247	0.0988	mg/kg	U	R	C

Analysis Method 8330

Sample Name LLISS-523M-3029-SO **AnalysisType:** RES

Lab Sample Name: L09100645-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0974	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0974	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0992	0.248	0.0992	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.0992	0.248	0.0992	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.0992	0.248	0.0992	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.0992	0.248	0.0992	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.0992	0.248	0.0992	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0992	0.248	0.0992	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.0992	0.248	0.0992	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.0992	0.248	0.0992	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0992	0.248	0.0992	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.0992	0.248	0.0992	mg/kg	U	U	
HMX	2691-41-0	0.0992	0.248	0.0992	mg/kg	U	U	
Nitrobenzene	98-95-3	0.0992	0.248	0.0992	mg/kg	U	U	
Nitroglycerin	55-63-0	0.0992	0.248	0.0992	mg/kg	U	U	
PETN	78-11-5	0.496	1.49	0.496	mg/kg	U	U	
RDX	121-82-4	0.0992	0.248	0.0992	mg/kg	U	U	
Tetryl	479-45-8	0.0992	0.248	0.0992	mg/kg	U	R	C

Analysis Method 8330

Sample Name LLISS-523M-3030-SO **AnalysisType:** RES

Lab Sample Name: L09100645-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0954	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0954	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0987	0.247	0.0987	mg/kg	U	U	
1,3-Dinitrobenzene	99-65-0	0.0987	0.247	0.0987	mg/kg	U	U	
2,4,6-Trinitrotoluene	118-96-7	0.0987	0.247	0.0987	mg/kg	U	U	
2,4-Dinitrotoluene	121-14-2	0.0987	0.247	0.0987	mg/kg	U	U	
2,6-Dinitrotoluene	606-20-2	0.0987	0.247	0.0987	mg/kg	U	U	
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0987	0.247	0.0987	mg/kg	U	U	
2-Nitrotoluene	88-72-2	0.0987	0.247	0.0987	mg/kg	U	U	
3-Nitrotoluene	99-08-1	0.0987	0.247	0.0987	mg/kg	U	U	
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0987	0.247	0.0987	mg/kg	U	U	
4-Nitrotoluene	99-99-0	0.0987	0.247	0.0987	mg/kg	U	U	
HMX	2691-41-0	0.0987	0.247	0.0987	mg/kg	U	U	
Nitrobenzene	98-95-3	0.0987	0.247	0.0987	mg/kg	U	U	
Nitroglycerin	55-63-0	0.0987	0.247	0.0987	mg/kg	U	U	
PETN	78-11-5	0.494	1.48	0.494	mg/kg	U	U	
RDX	121-82-4	0.0987	0.247	0.0987	mg/kg	U	U	
Tetryl	479-45-8	0.0987	0.247	0.0987	mg/kg	U	R	C

Analysis Method 8330

Sample Name LLISS-524M-3034-SO **AnalysisType:** RES

Lab Sample Name: L09100645-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.109	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0	0	0	mg/kg	U*		
1,2-Dinitrobenzene	528-29-0	0	0	0	mg/kg	U*	UJ	H
1,2-Dinitrobenzene	528-29-0	0.109	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.231	0	0	mg/kg	*	J	S
1,2-Dinitrobenzene	528-29-0	0	0	0	mg/kg	U*		
1,3,5-Trinitrobenzene	99-35-4	4.91	12.3	4.91	mg/kg	U	UJ	H
1,3,5-Trinitrobenzene	99-35-4	2.16	0.246	0.0982	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	2.16	0.246	0.0982	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	4.91	12.3	4.91	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	3.21	0.246	0.0982	mg/kg		J	S
1,3,5-Trinitrobenzene	99-35-4	4.91	12.3	4.91	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0982	0.246	0.0982	mg/kg	U	UJ	H
1,3-Dinitrobenzene	99-65-0	4.91	12.3	4.91	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0982	0.246	0.0982	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	4.91	12.3	4.91	mg/kg	U	UJ	H
1,3-Dinitrobenzene	99-65-0	0.0982	0.246	0.0982	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	4.91	12.3	4.91	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	182	0.246	0.0982	mg/kg	I	J	S
2,4,6-Trinitrotoluene	118-96-7	178	12.3	4.91	mg/kg		J-	H
2,4,6-Trinitrotoluene	118-96-7	158	12.3	4.91	mg/kg			
2,4,6-Trinitrotoluene	118-96-7	161	0.246	0.0982	mg/kg	I		
2,4,6-Trinitrotoluene	118-96-7	158	12.3	4.91	mg/kg		J+	C
2,4,6-Trinitrotoluene	118-96-7	161	0.246	0.0982	mg/kg	I	J+	C
2,4-Dinitrotoluene	121-14-2	4.91	12.3	4.91	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0982	0.246	0.0982	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	4.91	12.3	4.91	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0982	0.246	0.0982	mg/kg	U		

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2,4-Dinitrotoluene	121-14-2	0.0982	0.246	0.0982	mg/kg	U	UJ	H
2,4-Dinitrotoluene	121-14-2	4.91	12.3	4.91	mg/kg	U	UJ	H
2,6-Dinitrotoluene	606-20-2	4.91	12.3	4.91	mg/kg	U	UJ	H
2,6-Dinitrotoluene	606-20-2	0.0982	0.246	0.0982	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0982	0.246	0.0982	mg/kg	U	UJ	H
2,6-Dinitrotoluene	606-20-2	4.91	12.3	4.91	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	4.91	12.3	4.91	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0982	0.246	0.0982	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	4.91	12.3	4.91	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.853	0.246	0.0982	mg/kg			
2-Amino-4,6-dinitrotoluene	35572-78-2	4.91	12.3	4.91	mg/kg	U	UJ	H
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0982	0.246	0.0982	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	4.91	12.3	4.91	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.736	0.246	0.0982	mg/kg		J	S
2-Nitrotoluene	88-72-2	4.91	12.3	4.91	mg/kg	U	UJ	H
2-Nitrotoluene	88-72-2	0.0982	0.246	0.0982	mg/kg	U	UJ	H
2-Nitrotoluene	88-72-2	0.0982	0.246	0.0982	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0982	0.246	0.0982	mg/kg	U		
2-Nitrotoluene	88-72-2	4.91	12.3	4.91	mg/kg	U		
2-Nitrotoluene	88-72-2	4.91	12.3	4.91	mg/kg	U		
3-Nitrotoluene	99-08-1	4.91	12.3	4.91	mg/kg	U	UJ	H
3-Nitrotoluene	99-08-1	0.0982	0.246	0.0982	mg/kg	U	UJ	H
3-Nitrotoluene	99-08-1	4.91	12.3	4.91	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0982	0.246	0.0982	mg/kg	U		
3-Nitrotoluene	99-08-1	4.91	12.3	4.91	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0982	0.246	0.0982	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	4.91	12.3	4.91	mg/kg	U	UJ	H
4-Amino-2,6-dinitrotoluene	19406-51-0	4.91	12.3	4.91	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.851	0.246	0.0982	mg/kg		J	S
4-Amino-2,6-dinitrotoluene	19406-51-0	1.48	0.246	0.0982	mg/kg			
4-Amino-2,6-dinitrotoluene	19406-51-0	4.91	12.3	4.91	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	1.48	0.246	0.0982	mg/kg			

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4-Nitrotoluene	99-99-0	4.91	12.3	4.91	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0982	0.246	0.0982	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0982	0.246	0.0982	mg/kg	U	UJ	H
4-Nitrotoluene	99-99-0	0.0982	0.246	0.0982	mg/kg	U		
4-Nitrotoluene	99-99-0	4.91	12.3	4.91	mg/kg	U	R	H
4-Nitrotoluene	99-99-0	4.91	12.3	4.91	mg/kg	U		
HMX	2691-41-0	4.91	12.3	4.91	mg/kg	U		
HMX	2691-41-0	4.91	12.3	4.91	mg/kg	U		
HMX	2691-41-0	6.8	0.246	0.0982	mg/kg			
HMX	2691-41-0	7.64	0.246	0.0982	mg/kg		J	S
HMX	2691-41-0	6.8	0.246	0.0982	mg/kg			
HMX	2691-41-0	8.14	12.3	4.91	mg/kg	J	J	H
Nitrobenzene	98-95-3	0.0982	0.246	0.0982	mg/kg	U		
Nitrobenzene	98-95-3	4.91	12.3	4.91	mg/kg	U		
Nitrobenzene	98-95-3	4.91	12.3	4.91	mg/kg	U	UJ	H
Nitrobenzene	98-95-3	0.0982	0.246	0.0982	mg/kg	U	UJ	H
Nitrobenzene	98-95-3	4.91	12.3	4.91	mg/kg	U		
Nitrobenzene	98-95-3	0.0982	0.246	0.0982	mg/kg	U		
Nitroglycerin	55-63-0	0.0982	0.246	0.0982	mg/kg	U		
Nitroglycerin	55-63-0	4.91	12.3	4.91	mg/kg	U	UJ	H
Nitroglycerin	55-63-0	0.0982	0.246	0.0982	mg/kg	U	UJ	H
Nitroglycerin	55-63-0	4.91	12.3	4.91	mg/kg	U		
Nitroglycerin	55-63-0	4.91	12.3	4.91	mg/kg	U		
Nitroglycerin	55-63-0	0.0982	0.246	0.0982	mg/kg	U		
PETN	78-11-5	0.491	1.47	0.491	mg/kg	U	R	L
PETN	78-11-5	0.491	1.47	0.491	mg/kg	U	R	L
RDX	121-82-4	60.3	12.3	4.91	mg/kg			
RDX	121-82-4	67.3	0.246	0.0982	mg/kg	I	J	S
RDX	121-82-4	60.3	12.3	4.91	mg/kg			
RDX	121-82-4	59.4	0.246	0.0982	mg/kg	I		
RDX	121-82-4	59.4	0.246	0.0982	mg/kg	I		
RDX	121-82-4	67.3	12.3	4.91	mg/kg		J-	H

Analysis Method 8330

Tetryl	479-45-8	0.0982	0.246	0.0982	mg/kg	U		
Tetryl	479-45-8	0.0982	0.246	0.0982	mg/kg	U	R	C
Tetryl	479-45-8	4.91	12.3	4.91	mg/kg	U	R	C
Tetryl	479-45-8	0.0982	0.246	0.0982	mg/kg	U	R	C
Tetryl	479-45-8	4.91	12.3	4.91	mg/kg	U		
Tetryl	479-45-8	4.91	12.3	4.91	mg/kg	U	R	C

Analysis Method 8330

Sample Name LLISS-525M-3036-SO **AnalysisType:** RES

Lab Sample Name: L09100645-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.103	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.103	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0993	0.248	0.0993	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0993	0.248	0.0993	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0993	0.248	0.0993	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0993	0.248	0.0993	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0993	0.248	0.0993	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0993	0.248	0.0993	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0993	0.248	0.0993	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0993	0.248	0.0993	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0993	0.248	0.0993	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0993	0.248	0.0993	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0993	0.248	0.0993	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0993	0.248	0.0993	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0993	0.248	0.0993	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0993	0.248	0.0993	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0993	0.248	0.0993	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0993	0.248	0.0993	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0993	0.248	0.0993	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0993	0.248	0.0993	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0993	0.248	0.0993	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0993	0.248	0.0993	mg/kg	U		
HMX	2691-41-0	0.0993	0.248	0.0993	mg/kg	U		
HMX	2691-41-0	0.0993	0.248	0.0993	mg/kg	U		
Nitrobenzene	98-95-3	0.0993	0.248	0.0993	mg/kg	U		
Nitrobenzene	98-95-3	0.0993	0.248	0.0993	mg/kg	U		
Nitroglycerin	55-63-0	0.0993	0.248	0.0993	mg/kg	U		
Nitroglycerin	55-63-0	0.0993	0.248	0.0993	mg/kg	U		

Analysis Method 8330

PETN	78-11-5	0.497	1.49	0.497	mg/kg	U	R	L
PETN	78-11-5	0.497	1.49	0.497	mg/kg	U	R	L
RDX	121-82-4	0.0993	0.248	0.0993	mg/kg	U		
RDX	121-82-4	0.0993	0.248	0.0993	mg/kg	U		
Tetryl	479-45-8	0.0993	0.248	0.0993	mg/kg	U		
Tetryl	479-45-8	0.0993	0.248	0.0993	mg/kg	U	R	C

Analysis Method 8330-NG

Sample Name LLISS-523M-3027-SO **AnalysisType:** RES

Lab Sample Name: L09100645-01 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	125	250	125	ug/kg	U	U	

Sample Name LLISS-523M-3029-SO **AnalysisType:** RES

Lab Sample Name: L09100645-02 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	125	250	125	ug/kg	U	U	

Sample Name LLISS-523M-3030-SO **AnalysisType:** RES

Lab Sample Name: L09100645-03 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	125	250	125	ug/kg	U	U	

Sample Name LLISS-524M-3034-SO **AnalysisType:** RES

Lab Sample Name: L09100645-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	125	250	125	ug/kg	U		

Sample Name LLISS-525M-3036-SO **AnalysisType:** RES

Lab Sample Name: L09100645-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	125	250	125	ug/kg	U		

Analysis Method SM3500Cr-D 7196A

Sample Name LLISS-523M-3027-SO **AnalysisType:** RES

Lab Sample Name: L09100645-01 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0493	0.0987	0.0493	mg/kg	U	U	

Sample Name LLISS-523M-3029-SO **AnalysisType:** RES

Lab Sample Name: L09100645-02 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0497	0.0994	0.0497	mg/kg	U	U	

Sample Name LLISS-523M-3030-SO **AnalysisType:** RES

Lab Sample Name: L09100645-03 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0498	0.0997	0.0498	mg/kg	U	U	

Sample Name LLISS-524M-3034-SO **AnalysisType:** RES

Lab Sample Name: L09100645-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0491	0.0983	0.0491	mg/kg	U		

Sample Name LLISS-525M-3036-SO **AnalysisType:** RES

Lab Sample Name: L09100645-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0487	0.0973	0.0487	mg/kg	U		

Analysis Method USACRREL

Sample Name LLISS-523M-3027-SO **AnalysisType:** RES

Lab Sample Name: L09100645-01 **Validation Level:** IV

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.48	4.97	2.48	mg/kg	U	UJ	C

Sample Name LLISS-523M-3029-SO **AnalysisType:** RES

Lab Sample Name: L09100645-02 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.48	4.96	2.48	mg/kg	U	UJ	C

Sample Name LLISS-523M-3030-SO **AnalysisType:** RES

Lab Sample Name: L09100645-03 **Validation Level:** III

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.49	4.97	2.49	mg/kg	U	UJ	C

Sample Name LLISS-524M-3034-SO **AnalysisType:** RES

Lab Sample Name: L09100645-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	41.3	19.8	9.92	mg/kg			

Sample Name LLISS-525M-3036-SO **AnalysisType:** RES

Lab Sample Name: L09100645-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.49	4.98	2.49	mg/kg	U		

Validated Sample Result Forms: L09100686

Analysis Method 6010B

Sample Name LL1SS-527M-3039-SO **AnalysisType:** RES

Lab Sample Name: L09100686-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	12700	15.5	7.75	mg/kg		J	C
Barium	7440-39-3	105	0.388	0.0775	mg/kg			
Beryllium	7440-41-7	0.783	0.0194	0.0093	mg/kg			
Cadmium	7440-43-9	1.5	0.0775	0.0388	mg/kg			
Calcium	7440-70-2	4350	7.75	3.88	mg/kg			
Chromium	7440-47-3	33.9	0.194	0.093	mg/kg			
Cobalt	7440-48-4	8.74	0.194	0.093	mg/kg			
Copper	7440-50-8	17	0.194	0.093	mg/kg			
Iron	7439-89-6	21100	1.55	0.775	mg/kg	B		
Magnesium	7439-95-4	2020	19.4	9.3	mg/kg			
Manganese	7439-96-5	1040	7.75	1.55	mg/kg			
Potassium	7440-09-7	807	38.8	19.4	mg/kg			
Silver	7440-22-4	0.194	0.388	0.194	mg/kg	U		
Sodium	7440-23-5	48.7	19.4	3.88	mg/kg			
Vanadium	7440-62-2	25.7	0.388	0.194	mg/kg			
Zinc	7440-66-6	87.6	0.775	0.388	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-530M-3042-SO **AnalysisType:** RES

Lab Sample Name: L09100686-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	3770	14	7	mg/kg		J	C
Barium	7440-39-3	25.3	0.35	0.07	mg/kg			
Beryllium	7440-41-7	0.232	0.0175	0.0084	mg/kg			
Cadmium	7440-43-9	0.779	0.07	0.035	mg/kg			
Calcium	7440-70-2	4440	7	3.5	mg/kg			
Chromium	7440-47-3	12.9	0.175	0.084	mg/kg			
Cobalt	7440-48-4	2.98	0.175	0.084	mg/kg			
Copper	7440-50-8	12.1	0.175	0.084	mg/kg			
Iron	7439-89-6	14100	1.4	0.7	mg/kg	B		
Magnesium	7439-95-4	1400	17.5	8.4	mg/kg			
Manganese	7439-96-5	388	0.35	0.07	mg/kg			
Potassium	7440-09-7	467	35	17.5	mg/kg			
Silver	7440-22-4	0.175	0.35	0.175	mg/kg	U		
Sodium	7440-23-5	23.4	17.5	3.5	mg/kg			
Vanadium	7440-62-2	9.26	0.35	0.175	mg/kg			
Zinc	7440-66-6	57.9	0.7	0.35	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-534M-3046-SO **AnalysisType:** RES

Lab Sample Name: L09100686-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	7390	14.3	7.17	mg/kg		J	C
Barium	7440-39-3	37.2	0.358	0.0717	mg/kg			
Beryllium	7440-41-7	0.348	0.0179	0.0086	mg/kg			
Cadmium	7440-43-9	0.927	0.0717	0.0358	mg/kg			
Calcium	7440-70-2	4070	7.17	3.58	mg/kg			
Chromium	7440-47-3	16.4	0.179	0.086	mg/kg			
Cobalt	7440-48-4	4.16	0.179	0.086	mg/kg			
Copper	7440-50-8	17.5	0.179	0.086	mg/kg			
Iron	7439-89-6	18300	1.43	0.717	mg/kg	B		
Magnesium	7439-95-4	2350	17.9	8.6	mg/kg			
Manganese	7439-96-5	330	0.358	0.0717	mg/kg			
Potassium	7440-09-7	755	35.8	17.9	mg/kg			
Silver	7440-22-4	0.179	0.358	0.179	mg/kg	U		
Sodium	7440-23-5	36.1	17.9	3.58	mg/kg			
Vanadium	7440-62-2	14.9	0.358	0.179	mg/kg			
Zinc	7440-66-6	63.2	0.717	0.358	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-535M-3048-SO **AnalysisType:** RES

Lab Sample Name: L09100686-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	6360	15.3	7.64	mg/kg		J	C
Barium	7440-39-3	44.2	0.382	0.0764	mg/kg			
Beryllium	7440-41-7	0.378	0.0191	0.00917	mg/kg			
Cadmium	7440-43-9	0.899	0.0764	0.0382	mg/kg			
Calcium	7440-70-2	4000	7.64	3.82	mg/kg			
Chromium	7440-47-3	15.4	0.191	0.0917	mg/kg			
Cobalt	7440-48-4	6.48	0.191	0.0917	mg/kg			
Copper	7440-50-8	16.3	0.191	0.0917	mg/kg			
Iron	7439-89-6	17100	1.53	0.764	mg/kg	B		
Magnesium	7439-95-4	1860	19.1	9.17	mg/kg			
Manganese	7439-96-5	558	0.382	0.0764	mg/kg			
Potassium	7440-09-7	486	38.2	19.1	mg/kg			
Silver	7440-22-4	0.191	0.382	0.191	mg/kg	U		
Sodium	7440-23-5	28.2	19.1	3.82	mg/kg			
Vanadium	7440-62-2	14.1	0.382	0.191	mg/kg			
Zinc	7440-66-6	54.8	0.764	0.382	mg/kg			

Analysis Method 6010B

Sample Name LL1SS-536M-3049-SO **AnalysisType:** RES

Lab Sample Name: L09100686-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	8250	15.2	7.61	mg/kg		J	C
Barium	7440-39-3	56.4	0.38	0.0761	mg/kg			
Beryllium	7440-41-7	0.458	0.019	0.00913	mg/kg			
Cadmium	7440-43-9	1.11	0.0761	0.038	mg/kg			
Calcium	7440-70-2	3710	7.61	3.8	mg/kg			
Chromium	7440-47-3	23.5	0.19	0.0913	mg/kg			
Cobalt	7440-48-4	5.13	0.19	0.0913	mg/kg			
Copper	7440-50-8	20.8	0.19	0.0913	mg/kg			
Iron	7439-89-6	18200	1.52	0.761	mg/kg	B		
Magnesium	7439-95-4	2010	19	9.13	mg/kg			
Manganese	7439-96-5	467	0.38	0.0761	mg/kg			
Potassium	7440-09-7	690	38	19	mg/kg			
Silver	7440-22-4	0.19	0.38	0.19	mg/kg	U		
Sodium	7440-23-5	31.5	19	3.8	mg/kg			
Vanadium	7440-62-2	16.4	0.38	0.19	mg/kg			
Zinc	7440-66-6	87	0.761	0.38	mg/kg			

Analysis Method 6020

Sample Name LL1SS-527M-3039-SO **AnalysisType:** RE

Lab Sample Name: L09100686-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.445	0.107	0.0537	mg/kg			
Arsenic	7440-38-2	9.89	0.308	0.0769	mg/kg			
Lead	7439-92-1	20.2	0.205	0.103	mg/kg			
Nickel	7440-02-0	11.3	0.82	0.205	mg/kg			
Selenium	7782-49-2	0.108	0.205	0.103	mg/kg	J	J	
Thallium	7440-28-0	0.0739	0.0205	0.0103	mg/kg			

Sample Name LL1SS-530M-3042-SO **AnalysisType:** RE

Lab Sample Name: L09100686-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.192	0.0989	0.0494	mg/kg			
Arsenic	7440-38-2	12.1	0.297	0.0741	mg/kg			
Lead	7439-92-1	14.2	0.198	0.0989	mg/kg			
Nickel	7440-02-0	15.3	0.791	0.198	mg/kg			
Selenium	7782-49-2	0.176	0.198	0.0989	mg/kg	J	J	
Thallium	7440-28-0	0.112	0.0198	0.00989	mg/kg			

Sample Name LL1SS-534M-3046-SO **AnalysisType:** RE

Lab Sample Name: L09100686-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.273	0.0957	0.0478	mg/kg			
Arsenic	7440-38-2	8.82	0.276	0.0691	mg/kg			
Lead	7439-92-1	14.1	0.184	0.0922	mg/kg			
Nickel	7440-02-0	17.5	0.737	0.184	mg/kg			
Selenium	7782-49-2	0.208	0.184	0.0922	mg/kg			
Thallium	7440-28-0	0.115	0.0184	0.00922	mg/kg			

Analysis Method 6020

Sample Name LL1SS-535M-3048-SO **AnalysisType:** RE

Lab Sample Name: L09100686-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.3	0.098	0.049	mg/kg			
Arsenic	7440-38-2	8.98	0.296	0.0741	mg/kg			
Lead	7439-92-1	24.1	0.198	0.0988	mg/kg			
Nickel	7440-02-0	15.5	0.79	0.198	mg/kg			
Selenium	7782-49-2	0.275	0.198	0.0988	mg/kg			
Thallium	7440-28-0	0.119	0.0198	0.00988	mg/kg			

Sample Name LL1SS-536M-3049-SO **AnalysisType:** RE

Lab Sample Name: L09100686-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.371	0.0956	0.0478	mg/kg			
Arsenic	7440-38-2	5.87	0.302	0.0754	mg/kg			
Lead	7439-92-1	31.8	0.201	0.101	mg/kg			
Nickel	7440-02-0	12.5	0.805	0.201	mg/kg			
Selenium	7782-49-2	0.101	0.201	0.101	mg/kg	U		
Thallium	7440-28-0	0.0795	0.0201	0.0101	mg/kg			

Analysis Method 7471A

Sample Name LL1SS-527M-3039-SO **AnalysisType:** RES

Lab Sample Name: L09100686-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0551	0.108	0.0108	mg/kg	J	J	

Sample Name LL1SS-530M-3042-SO **AnalysisType:** RES

Lab Sample Name: L09100686-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0531	0.0964	0.00964	mg/kg	J	J	

Sample Name LL1SS-534M-3046-SO **AnalysisType:** RES

Lab Sample Name: L09100686-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0158	0.0954	0.00954	mg/kg	J	J	

Sample Name LL1SS-535M-3048-SO **AnalysisType:** RES

Lab Sample Name: L09100686-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.02	0.0988	0.00988	mg/kg	J	J	

Sample Name LL1SS-536M-3049-SO **AnalysisType:** RES

Lab Sample Name: L09100686-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0295	0.1	0.01	mg/kg	J	J	

Analysis Method 8081A

Sample Name LL1SS-534M-3046-SO **AnalysisType:** RES

Lab Sample Name: L09100686-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-xylene	877-09-8	10.5	0	0	ug/kg			
4,4'-DDD	72-54-8	0.341	1.71	0.341	ug/kg	U		
4,4'-DDE	72-55-9	0.341	1.71	0.341	ug/kg	U		
4,4'-DDT	50-29-3	0.341	1.71	0.341	ug/kg	U		
Aldrin	309-00-2	0.341	1.71	0.341	ug/kg	U		
alpha Chlordane	5103-71-9	0.341	1.71	0.341	ug/kg	U		
alpha-BHC	319-84-6	0.341	1.71	0.341	ug/kg	U		
beta-BHC	319-85-7	0.341	1.71	0.341	ug/kg	U		
Decachlorobiphenyl	2051-24-3	14.4	0	0	ug/kg			
delta-BHC	319-86-8	0.341	1.71	0.341	ug/kg	U		
Dieldrin	60-57-1	0.341	1.71	0.341	ug/kg	U		
Endosulfan I	959-98-8	0.341	1.71	0.341	ug/kg	U		
Endosulfan II	33213-65-9	0.341	1.71	0.341	ug/kg	U		
Endosulfan sulfate	1031-07-8	0.341	1.71	0.341	ug/kg	U		
Endrin	72-20-8	0.341	1.71	0.341	ug/kg	U		
Endrin aldehyde	7421-93-4	0.341	1.71	0.341	ug/kg	U		
Endrin ketone	53494-70-5	0.341	1.71	0.341	ug/kg	U		
gamma Chlordane	5103-74-2	0.341	1.71	0.341	ug/kg	U		
gamma-BHC (Lindane)	58-89-9	0.341	1.71	0.341	ug/kg	U		
Heptachlor	76-44-8	0.341	1.71	0.341	ug/kg	U		
Heptachlor epoxide	1024-57-3	0.341	1.71	0.341	ug/kg	U		
Methoxychlor	72-43-5	0.341	1.71	0.341	ug/kg	U		
Toxaphene	8001-35-2	17.3	34.1	17.3	ug/kg	U		

Analysis Method 8082

Sample Name LL1SS-534M-3046-SO **AnalysisType:** RES

Lab Sample Name: L09100686-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	12.7	0	0	ug/kg			
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	12.6	0	0	ug/kg			
Aroclor-1016	12674-11-2	8.53	17.1	8.53	ug/kg	U		
Aroclor-1016	12674-11-2	8.53	17.1	8.53	ug/kg	U		
Aroclor-1221	11104-28-2	8.53	17.1	8.53	ug/kg	U		
Aroclor-1221	11104-28-2	8.53	17.1	8.53	ug/kg	U		
Aroclor-1232	11141-16-5	8.53	17.1	8.53	ug/kg	U		
Aroclor-1232	11141-16-5	8.53	17.1	8.53	ug/kg	U		
Aroclor-1242	53469-21-9	8.53	17.1	8.53	ug/kg	U		
Aroclor-1242	53469-21-9	8.53	17.1	8.53	ug/kg	U		
Aroclor-1248	12672-29-6	8.53	17.1	8.53	ug/kg	U		
Aroclor-1248	12672-29-6	8.53	17.1	8.53	ug/kg	U		
Aroclor-1254	11097-69-1	119	17.1	8.53	ug/kg			
Aroclor-1254	11097-69-1	124	17.1	8.53	ug/kg			
Aroclor-1260	11096-82-5	8.53	17.1	8.53	ug/kg	U		
Aroclor-1260	11096-82-5	8.53	17.1	8.53	ug/kg	U		
Decachlorobiphenyl	2051-24-3	16	0	0	ug/kg			
Decachlorobiphenyl	2051-24-3	17.4	0	0	ug/kg			

Analysis Method 8082

Sample Name LL1SS-535M-3048-SO **AnalysisType:** RES

Lab Sample Name: L09100686-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	14	0	0	ug/kg			
2,4,5,6-Tetrachloro-m-Xylene	877-09-8	13.8	0	0	ug/kg			
Aroclor-1016	12674-11-2	8.83	17.7	8.83	ug/kg	U		
Aroclor-1016	12674-11-2	8.83	17.7	8.83	ug/kg	U		
Aroclor-1221	11104-28-2	8.83	17.7	8.83	ug/kg	U		
Aroclor-1221	11104-28-2	8.83	17.7	8.83	ug/kg	U		
Aroclor-1232	11141-16-5	8.83	17.7	8.83	ug/kg	U		
Aroclor-1232	11141-16-5	8.83	17.7	8.83	ug/kg	U		
Aroclor-1242	53469-21-9	8.83	17.7	8.83	ug/kg	U		
Aroclor-1242	53469-21-9	8.83	17.7	8.83	ug/kg	U		
Aroclor-1248	12672-29-6	8.83	17.7	8.83	ug/kg	U		
Aroclor-1248	12672-29-6	8.83	17.7	8.83	ug/kg	U		
Aroclor-1254	11097-69-1	333	17.7	8.83	ug/kg			
Aroclor-1254	11097-69-1	309	17.7	8.83	ug/kg			
Aroclor-1260	11096-82-5	8.83	17.7	8.83	ug/kg	U		
Aroclor-1260	11096-82-5	8.83	17.7	8.83	ug/kg	U		
Decachlorobiphenyl	2051-24-3	17.4	0	0	ug/kg			
Decachlorobiphenyl	2051-24-3	16	0	0	ug/kg			

Analysis Method 8260B

Sample Name LL1SS-524D-3035-SO **AnalysisType:** RES

Lab Sample Name: L09100686-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	0.461	4.61	0.461	ug/kg	U		
1,1,2,2-Tetrachloroethane	79-34-5	0.461	4.61	0.461	ug/kg	U		
1,1,2-Trichloroethane	79-00-5	0.461	4.61	0.461	ug/kg	U		
1,1-Dichloroethane	75-34-3	0.921	4.61	0.921	ug/kg	U		
1,1-Dichloroethene	75-35-4	0.461	4.61	0.461	ug/kg	U		
1,2-Dibromoethane	106-93-4	0.461	4.61	0.461	ug/kg	U		
1,2-Dichloroethane	107-06-2	0.461	4.61	0.461	ug/kg	U		
1,2-Dichloroethane-d4	17060-07-0	50.9	0	0	ug/kg			
1,2-Dichloroethene (total)	540-59-0	0.461	4.61	0.461	ug/kg	U		
1,2-Dichloropropane	78-87-5	0.461	4.61	0.461	ug/kg	U		
2-Butanone	78-93-3	2.3	4.61	2.3	ug/kg	U		
2-Hexanone	591-78-6	2.3	4.61	2.3	ug/kg	U		
4-Methyl-2-pentanone	108-10-1	2.3	4.61	2.3	ug/kg	U		
Acetone	67-64-1	4.61	9.21	4.61	ug/kg	U		
Benzene	71-43-2	0.461	4.61	0.461	ug/kg	U		
Bromochloromethane	74-97-5	0.461	4.61	0.461	ug/kg	U		
Bromodichloromethane	75-27-4	0.461	4.61	0.461	ug/kg	U		
Bromoform	75-25-2	0.461	4.61	0.461	ug/kg	U		
Bromomethane	74-83-9	0.921	4.61	0.921	ug/kg	U		
Carbon disulfide	75-15-0	0.461	4.61	0.461	ug/kg	U		
Carbon tetrachloride	56-23-5	0.461	4.61	0.461	ug/kg	U		
Chlorobenzene	108-90-7	0.461	4.61	0.461	ug/kg	U		
Chloroethane	75-00-3	0.921	4.61	0.921	ug/kg	U		
Chloroform	67-66-3	0.461	4.61	0.461	ug/kg	U		
Chloromethane	74-87-3	1.84	4.61	1.84	ug/kg	U		
cis-1,3-Dichloropropene	10061-01-5	0.461	4.61	0.461	ug/kg	U		
Dibromochloromethane	124-48-1	0.461	4.61	0.461	ug/kg	U		
Dibromofluoromethane	1868-53-7	55.2	0	0	ug/kg			

Analysis Method 8260B

Ethyl benzene	100-41-4	0.461	4.61	0.461	ug/kg	U
Methylene chloride	75-09-2	0.921	4.61	0.921	ug/kg	U
p-Bromofluorobenzene	460-00-4	61.7	0	0	ug/kg	
Styrene	100-42-5	0.461	4.61	0.461	ug/kg	U
Tetrachloroethene	127-18-4	0.461	4.61	0.461	ug/kg	U
Toluene	108-88-3	0.461	4.61	0.461	ug/kg	U
Toluene-d8	2037-26-5	57.9	0	0	ug/kg	
trans-1,3-Dichloropropene	10061-02-6	0.461	4.61	0.461	ug/kg	U
Trichloroethene	79-01-6	0.461	4.61	0.461	ug/kg	U
Vinyl chloride	75-01-4	0.921	4.61	0.921	ug/kg	U
Xylenes, Total	1330-20-7	0.461	4.61	0.461	ug/kg	U

Analysis Method 8260B

Sample Name LL1SS-534D-3047-SO **AnalysisType:** RES

Lab Sample Name: L09100686-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	0.575	5.75	0.575	ug/kg	U		
1,1,2,2-Tetrachloroethane	79-34-5	0.575	5.75	0.575	ug/kg	U		
1,1,2-Trichloroethane	79-00-5	0.575	5.75	0.575	ug/kg	U		
1,1-Dichloroethane	75-34-3	1.15	5.75	1.15	ug/kg	U		
1,1-Dichloroethene	75-35-4	0.575	5.75	0.575	ug/kg	U		
1,2-Dibromoethane	106-93-4	0.575	5.75	0.575	ug/kg	U		
1,2-Dichloroethane	107-06-2	0.575	5.75	0.575	ug/kg	U		
1,2-Dichloroethane-d4	17060-07-0	77.9	0	0	ug/kg			
1,2-Dichloroethene (total)	540-59-0	0.575	5.75	0.575	ug/kg	U		
1,2-Dichloropropane	78-87-5	0.575	5.75	0.575	ug/kg	U		
2-Butanone	78-93-3	2.87	5.75	2.87	ug/kg	U		
2-Hexanone	591-78-6	2.87	5.75	2.87	ug/kg	U		
4-Methyl-2-pentanone	108-10-1	2.87	5.75	2.87	ug/kg	U		
Acetone	67-64-1	5.75	11.5	5.75	ug/kg	U		
Benzene	71-43-2	0.575	5.75	0.575	ug/kg	U		
Bromochloromethane	74-97-5	0.575	5.75	0.575	ug/kg	U		
Bromodichloromethane	75-27-4	0.575	5.75	0.575	ug/kg	U		
Bromoform	75-25-2	0.575	5.75	0.575	ug/kg	U		
Bromomethane	74-83-9	1.15	5.75	1.15	ug/kg	U		
Carbon disulfide	75-15-0	1.26	5.75	0.575	ug/kg	J	J	
Carbon tetrachloride	56-23-5	0.575	5.75	0.575	ug/kg	U		
Chlorobenzene	108-90-7	0.575	5.75	0.575	ug/kg	U		
Chloroethane	75-00-3	1.15	5.75	1.15	ug/kg	U		
Chloroform	67-66-3	0.575	5.75	0.575	ug/kg	U		
Chloromethane	74-87-3	2.3	5.75	2.3	ug/kg	U		
cis-1,3-Dichloropropene	10061-01-5	0.575	5.75	0.575	ug/kg	U		
Dibromochloromethane	124-48-1	0.575	5.75	0.575	ug/kg	U		
Dibromofluoromethane	1868-53-7	82.3	0	0	ug/kg			

Analysis Method 8260B

Ethyl benzene	100-41-4	0.575	5.75	0.575	ug/kg	U
Methylene chloride	75-09-2	9.34	5.75	1.15	ug/kg	
p-Bromofluorobenzene	460-00-4	93.6	0	0	ug/kg	
Styrene	100-42-5	0.575	5.75	0.575	ug/kg	U
Tetrachloroethene	127-18-4	0.575	5.75	0.575	ug/kg	U
Toluene	108-88-3	0.575	5.75	0.575	ug/kg	U
Toluene-d8	2037-26-5	88	0	0	ug/kg	
trans-1,3-Dichloropropene	10061-02-6	0.575	5.75	0.575	ug/kg	U
Trichloroethene	79-01-6	0.575	5.75	0.575	ug/kg	U
Vinyl chloride	75-01-4	1.15	5.75	1.15	ug/kg	U
Xylenes, Total	1330-20-7	0.575	5.75	0.575	ug/kg	U

Analysis Method 8260B

Sample Name TRIP BLANK 1027 **AnalysisType:** RES

Lab Sample Name: L09100686-08 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	0.25	1	0.25	ug/L	U		
1,1,2,2-Tetrachloroethane	79-34-5	0.125	1	0.125	ug/L	U		
1,1,2-Trichloroethane	79-00-5	0.25	1	0.25	ug/L	U		
1,1-Dichloroethane	75-34-3	0.125	1	0.125	ug/L	U		
1,1-Dichloroethene	75-35-4	0.5	1	0.5	ug/L	U		
1,2-Dibromoethane	106-93-4	0.25	1	0.25	ug/L	U		
1,2-Dichloroethane	107-06-2	0.25	1	0.25	ug/L	U		
1,2-Dichloroethane-d4	17060-07-0	25.5	0	0	ug/L			
1,2-Dichloroethene (total)	540-59-0	0.25	1	0.25	ug/L	U		
1,2-Dichloropropane	78-87-5	0.2	1	0.2	ug/L	U		
2-Butanone	78-93-3	2.5	10	2.5	ug/L	U		
2-Hexanone	591-78-6	2.5	10	2.5	ug/L	U		
4-Methyl-2-pentanone	108-10-1	2.5	10	2.5	ug/L	U		
Acetone	67-64-1	4.76	10	2.5	ug/L	J	J	
Benzene	71-43-2	0.125	1	0.125	ug/L	U		
Bromochloromethane	74-97-5	0.2	1	0.2	ug/L	U		
Bromodichloromethane	75-27-4	0.25	1	0.25	ug/L	U		
Bromoform	75-25-2	0.5	1	0.5	ug/L	U		
Bromomethane	74-83-9	0.5	1	0.5	ug/L	U		
Carbon disulfide	75-15-0	0.5	1	0.5	ug/L	U		
Carbon tetrachloride	56-23-5	0.25	1	0.25	ug/L	U		
Chlorobenzene	108-90-7	0.125	1	0.125	ug/L	U		
Chloroethane	75-00-3	0.5	1	0.5	ug/L	U		
Chloroform	67-66-3	0.125	1	0.125	ug/L	U		
Chloromethane	74-87-3	0.25	1	0.25	ug/L	U		
cis-1,3-Dichloropropene	10061-01-5	0.25	1	0.25	ug/L	U		
Dibromochloromethane	124-48-1	0.25	1	0.25	ug/L	U		
Dibromofluoromethane	1868-53-7	27.5	0	0	ug/L			

Analysis Method 8260B

Ethyl benzene	100-41-4	0.25	1	0.25	ug/L	U	
Methylene chloride	75-09-2	0.416	1	0.25	ug/L	J	J
p-Bromofluorobenzene	460-00-4	26.2	0	0	ug/L		
Styrene	100-42-5	0.125	1	0.125	ug/L	U	
Tetrachloroethene	127-18-4	0.25	1	0.25	ug/L	U	
Toluene	108-88-3	0.25	1	0.25	ug/L	U	
Toluene-d8	2037-26-5	26	0	0	ug/L		
trans-1,3-Dichloropropene	10061-02-6	0.5	1	0.5	ug/L	U	
Trichloroethene	79-01-6	0.25	1	0.25	ug/L	U	
Vinyl chloride	75-01-4	0.25	1	0.25	ug/L	U	
Xylenes, Total	1330-20-7	0.5	2	0.5	ug/L	U	

Analysis Method 8270C

Sample Name LL1SS-534M-3046-SO **AnalysisType:** RES

Lab Sample Name: L09100686-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	86.7	173	86.7	ug/kg	U	UJ	S
1,2,4-Trichlorobenzene	120-82-1	86.7	173	86.7	ug/kg	U	UJ	S
1,2-Dichlorobenzene	95-50-1	86.7	173	86.7	ug/kg	U	UJ	S
1,2-Dichlorobenzene	95-50-1	86.7	173	86.7	ug/kg	U	UJ	S
1,3-Dichlorobenzene	541-73-1	86.7	173	86.7	ug/kg	U	UJ	S
1,3-Dichlorobenzene	541-73-1	86.7	173	86.7	ug/kg	U	UJ	S
1,4-Dichlorobenzene	106-46-7	86.7	173	86.7	ug/kg	U	UJ	S
1,4-Dichlorobenzene	106-46-7	86.7	173	86.7	ug/kg	U	UJ	S
2,4,5-Trichlorophenol	95-95-4	86.7	173	86.7	ug/kg	U	UJ	S
2,4,5-Trichlorophenol	95-95-4	86.7	173	86.7	ug/kg	U	UJ	S
2,4,6-Tribromophenol	118-79-6	52900	0	0	ug/kg			
2,4,6-Tribromophenol	118-79-6	52900	0	0	ug/kg			
2,4,6-Trichlorophenol	88-06-2	86.7	173	86.7	ug/kg	U	UJ	S
2,4,6-Trichlorophenol	88-06-2	86.7	173	86.7	ug/kg	U	UJ	S
2,4-Dichlorophenol	120-83-2	86.7	173	86.7	ug/kg	U	UJ	S
2,4-Dichlorophenol	120-83-2	86.7	173	86.7	ug/kg	U	UJ	S
2,4-Dimethylphenol	105-67-9	86.7	173	86.7	ug/kg	U	UJ	S
2,4-Dimethylphenol	105-67-9	86.7	173	86.7	ug/kg	U	UJ	S
2,4-Dinitrophenol	51-28-5	433	867	433	ug/kg	U	UJ	S
2,4-Dinitrophenol	51-28-5	433	867	433	ug/kg	U	UJ	S
2,4-Dinitrotoluene	121-14-2	86.7	173	86.7	ug/kg	U	UJ	S
2,4-Dinitrotoluene	121-14-2	86.7	173	86.7	ug/kg	U	UJ	S
2,6-Dinitrotoluene	606-20-2	86.7	173	86.7	ug/kg	U	UJ	S
2,6-Dinitrotoluene	606-20-2	86.7	173	86.7	ug/kg	U	UJ	S
2-Chloronaphthalene	91-58-7	86.7	173	86.7	ug/kg	U	UJ	S
2-Chloronaphthalene	91-58-7	86.7	173	86.7	ug/kg	U	UJ	S
2-Chlorophenol	95-57-8	86.7	173	86.7	ug/kg	U	UJ	S
2-Chlorophenol	95-57-8	86.7	173	86.7	ug/kg	U	UJ	S

Analysis Method 8270C

2-Fluorobiphenyl	321-60-8	20200	0	0	ug/kg	*	J-	S
2-Fluorobiphenyl	321-60-8	20200	0	0	ug/kg	*	J-	S
2-Fluorophenol	367-12-4	45700	0	0	ug/kg	*	J-	S
2-Fluorophenol	367-12-4	45700	0	0	ug/kg	*	J-	S
2-Methylnaphthalene	91-57-6	86.7	173	86.7	ug/kg	U	UJ	S
2-Methylnaphthalene	91-57-6	86.7	173	86.7	ug/kg	U	UJ	S
2-Methylphenol	95-48-7	86.7	173	86.7	ug/kg	U	UJ	S
2-Methylphenol	95-48-7	86.7	173	86.7	ug/kg	U	UJ	S
2-Nitroaniline	88-74-4	433	867	433	ug/kg	U	UJ	S
2-Nitroaniline	88-74-4	433	867	433	ug/kg	U	UJ	S
2-Nitrophenol	88-75-5	86.7	173	86.7	ug/kg	U	UJ	S
2-Nitrophenol	88-75-5	86.7	173	86.7	ug/kg	U	UJ	S
3,3'-Dichlorobenzidine	91-94-1	173	347	173	ug/kg	U	UJ	S
3,3'-Dichlorobenzidine	91-94-1	173	347	173	ug/kg	U	UJ	S
3-,4-Methylphenol	106-44-5	86.7	173	86.7	ug/kg	U	UJ	S
3-,4-Methylphenol	106-44-5	86.7	173	86.7	ug/kg	U	UJ	S
3-Nitroaniline	99-09-2	433	867	433	ug/kg	U	UJ	S
3-Nitroaniline	99-09-2	433	867	433	ug/kg	U	UJ	S
4,6-Dinitro-2-methylphenol	534-52-1	433	867	433	ug/kg	U	UJ	S
4,6-Dinitro-2-methylphenol	534-52-1	433	867	433	ug/kg	U	UJ	S
4-Bromophenyl-phenylether	101-55-3	86.7	173	86.7	ug/kg	U	UJ	S
4-Bromophenyl-phenylether	101-55-3	86.7	173	86.7	ug/kg	U	UJ	S
4-Chloro-3-methylphenol	59-50-7	86.7	173	86.7	ug/kg	U	UJ	S
4-Chloro-3-methylphenol	59-50-7	86.7	173	86.7	ug/kg	U	UJ	S
4-Chloroaniline	106-47-8	86.7	173	86.7	ug/kg	U	UJ	S
4-Chloroaniline	106-47-8	86.7	173	86.7	ug/kg	U	UJ	S
4-Chlorophenyl-phenyl ether	7005-72-3	86.7	173	86.7	ug/kg	U	UJ	S
4-Chlorophenyl-phenyl ether	7005-72-3	86.7	173	86.7	ug/kg	U	UJ	S
4-Nitroaniline	100-01-6	433	867	433	ug/kg	U	UJ	S
4-Nitroaniline	100-01-6	433	867	433	ug/kg	U	UJ	S
4-Nitrophenol	100-02-7	433	867	433	ug/kg	U	UJ	S
4-Nitrophenol	100-02-7	433	867	433	ug/kg	U	UJ	S

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Acenaphthene	83-32-9	86.7	173	86.7	ug/kg	U	UJ	S
Acenaphthene	83-32-9	86.7	173	86.7	ug/kg	U	UJ	S
Acenaphthylene	208-96-8	86.7	173	86.7	ug/kg	U	UJ	S
Acenaphthylene	208-96-8	86.7	173	86.7	ug/kg	U	UJ	S
Anthracene	120-12-7	86.7	173	86.7	ug/kg	U	UJ	S
Anthracene	120-12-7	86.7	173	86.7	ug/kg	U	UJ	S
Benzo(a)anthracene	56-55-3	86.7	173	86.7	ug/kg	U	UJ	S
Benzo(a)anthracene	56-55-3	86.7	173	86.7	ug/kg	U	UJ	S
Benzo(a)pyrene	50-32-8	86.7	173	86.7	ug/kg	U	UJ	S
Benzo(a)pyrene	50-32-8	86.7	173	86.7	ug/kg	U	UJ	S
Benzo(b)fluoranthene	205-99-2	86.7	173	86.7	ug/kg	U	UJ	S
Benzo(b)fluoranthene	205-99-2	86.7	173	86.7	ug/kg	U	UJ	S
Benzo(g,h,i)Perylene	191-24-2	86.7	173	86.7	ug/kg	U	UJ	S
Benzo(g,h,i)Perylene	191-24-2	86.7	173	86.7	ug/kg	U	UJ	S
Benzo(k)fluoranthene	207-08-9	86.7	173	86.7	ug/kg	U	UJ	S
Benzo(k)fluoranthene	207-08-9	86.7	173	86.7	ug/kg	U	UJ	S
Benzoic acid	65-85-0	347	5260	347	ug/kg	U	UJ	S
Benzoic acid	65-85-0	347	5260	347	ug/kg	U	UJ	S
Benzyl alcohol	100-51-6	86.7	173	86.7	ug/kg	U	UJ	S
Benzyl alcohol	100-51-6	86.7	173	86.7	ug/kg	U	UJ	S
Bis(2-Chloroethoxy)Methane	111-91-1	86.7	173	86.7	ug/kg	U	UJ	S
Bis(2-Chloroethoxy)Methane	111-91-1	86.7	173	86.7	ug/kg	U	UJ	S
Bis(2-Chloroethyl)ether	111-44-4	86.7	173	86.7	ug/kg	U	UJ	S
Bis(2-Chloroethyl)ether	111-44-4	86.7	173	86.7	ug/kg	U	UJ	S
bis(2-Chloroisopropyl)ether	39638-32-9	86.7	173	86.7	ug/kg	U	UJ	S
bis(2-Chloroisopropyl)ether	39638-32-9	86.7	173	86.7	ug/kg	U	UJ	S
bis(2-Ethylhexyl)phthalate	117-81-7	86.7	173	86.7	ug/kg	U	UJ	S
bis(2-Ethylhexyl)phthalate	117-81-7	86.7	173	86.7	ug/kg	U	UJ	S
Butylbenzylphthalate	85-68-7	86.7	173	86.7	ug/kg	U	UJ	S
Butylbenzylphthalate	85-68-7	86.7	173	86.7	ug/kg	U	UJ	S
Carbazole	86-74-8	86.7	173	86.7	ug/kg	U	UJ	S
Carbazole	86-74-8	86.7	173	86.7	ug/kg	U	UJ	S

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Chrysene	218-01-9	86.7	173	86.7	ug/kg	U	UJ	S
Chrysene	218-01-9	86.7	173	86.7	ug/kg	U	UJ	S
Dibenzo(a,h)Anthracene	53-70-3	86.7	173	86.7	ug/kg	U	UJ	S
Dibenzo(a,h)Anthracene	53-70-3	86.7	173	86.7	ug/kg	U	UJ	S
Dibenzofuran	132-64-9	86.7	173	86.7	ug/kg	U	UJ	S
Dibenzofuran	132-64-9	86.7	173	86.7	ug/kg	U	UJ	S
Diethylphthalate	84-66-2	86.7	173	86.7	ug/kg	U	UJ	S
Diethylphthalate	84-66-2	86.7	173	86.7	ug/kg	U	UJ	S
Dimethylphthalate	131-11-3	86.7	173	86.7	ug/kg	U	UJ	S
Dimethylphthalate	131-11-3	86.7	173	86.7	ug/kg	U	UJ	S
Di-N-Butylphthalate	84-74-2	86.7	173	86.7	ug/kg	U	UJ	S
Di-N-Butylphthalate	84-74-2	86.7	173	86.7	ug/kg	U	UJ	S
Di-n-octylphthalate	117-84-0	86.7	173	86.7	ug/kg	U	UJ	S
Di-n-octylphthalate	117-84-0	86.7	173	86.7	ug/kg	U	UJ	S
Fluoranthene	206-44-0	86.7	173	86.7	ug/kg	U	UJ	S
Fluoranthene	206-44-0	86.7	173	86.7	ug/kg	U	UJ	S
Fluorene	86-73-7	86.7	173	86.7	ug/kg	U	UJ	S
Fluorene	86-73-7	86.7	173	86.7	ug/kg	U	UJ	S
Hexachlorobenzene	118-74-1	86.7	173	86.7	ug/kg	U	UJ	S
Hexachlorobenzene	118-74-1	86.7	173	86.7	ug/kg	U	UJ	S
Hexachlorobutadiene	87-68-3	86.7	173	86.7	ug/kg	U	UJ	S
Hexachlorobutadiene	87-68-3	86.7	173	86.7	ug/kg	U	UJ	S
Hexachlorocyclopentadiene	77-47-4	86.7	173	86.7	ug/kg	U	UJ	S
Hexachlorocyclopentadiene	77-47-4	86.7	173	86.7	ug/kg	U	UJ	S
Hexachloroethane	67-72-1	86.7	173	86.7	ug/kg	U	UJ	S
Hexachloroethane	67-72-1	86.7	173	86.7	ug/kg	U	UJ	S
Indeno(1,2,3-cd)pyrene	193-39-5	86.7	173	86.7	ug/kg	U	UJ	S
Indeno(1,2,3-cd)pyrene	193-39-5	86.7	173	86.7	ug/kg	U	UJ	S
Isophorone	78-59-1	86.7	173	86.7	ug/kg	U	UJ	S
Isophorone	78-59-1	86.7	173	86.7	ug/kg	U	UJ	S
Naphthalene	91-20-3	86.7	173	86.7	ug/kg	U	UJ	S
Naphthalene	91-20-3	86.7	173	86.7	ug/kg	U	UJ	S

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Nitrobenzene	98-95-3	86.7	173	86.7	ug/kg	U	UJ	S
Nitrobenzene	98-95-3	86.7	173	86.7	ug/kg	U	UJ	S
Nitrobenzene-d5	4165-60-0	20900	0	0	ug/kg	*	J-	S
Nitrobenzene-d5	4165-60-0	20900	0	0	ug/kg	*	J-	S
N-Nitrosodiphenylamine	86-30-6	86.7	173	86.7	ug/kg	U	UJ	S
N-Nitrosodiphenylamine	86-30-6	86.7	173	86.7	ug/kg	U	UJ	S
N-Nitrosodipropylamine	621-64-7	86.7	173	86.7	ug/kg	U	UJ	S
N-Nitrosodipropylamine	621-64-7	86.7	173	86.7	ug/kg	U	UJ	S
Pentachlorophenol	87-86-5	433	867	433	ug/kg	U	UJ	S
Pentachlorophenol	87-86-5	433	867	433	ug/kg	U	UJ	S
Phenanthrene	85-01-8	86.7	173	86.7	ug/kg	U	UJ	S
Phenanthrene	85-01-8	86.7	173	86.7	ug/kg	U	UJ	S
Phenol	108-95-2	86.7	173	86.7	ug/kg	U	UJ	S
Phenol	108-95-2	86.7	173	86.7	ug/kg	U	UJ	S
Phenol-d5	4165-62-2	47200	0	0	ug/kg	*	J-	S
Phenol-d5	4165-62-2	47200	0	0	ug/kg	*	J-	S
p-Terphenyl-d14	1718-51-0	26600	0	0	ug/kg			
p-Terphenyl-d14	1718-51-0	26600	0	0	ug/kg			
Pyrene	129-00-0	86.7	173	86.7	ug/kg	U	UJ	S
Pyrene	129-00-0	86.7	173	86.7	ug/kg	U	UJ	S

Analysis Method 8330

Sample Name LL1SS-527M-3039-SO **AnalysisType:** RES

Lab Sample Name: L09100686-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.103	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.244	0	0	mg/kg	*	J+	S
1,2-Dinitrobenzene	528-29-0	0.103	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0977	0.244	0.0977	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0977	0.244	0.0977	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0977	0.244	0.0977	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0977	0.244	0.0977	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0977	0.244	0.0977	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0977	0.244	0.0977	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.938	0.244	0.0977	mg/kg		J+	C
2,4,6-Trinitrotoluene	118-96-7	0.933	0.244	0.0977	mg/kg		J+	S
2,4,6-Trinitrotoluene	118-96-7	0.938	0.244	0.0977	mg/kg			
2,4-Dinitrotoluene	121-14-2	0.0977	0.244	0.0977	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0977	0.244	0.0977	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0977	0.244	0.0977	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0977	0.244	0.0977	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0977	0.244	0.0977	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0977	0.244	0.0977	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0977	0.244	0.0977	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0977	0.244	0.0977	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0977	0.244	0.0977	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0977	0.244	0.0977	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0977	0.244	0.0977	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0977	0.244	0.0977	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0977	0.244	0.0977	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0977	0.244	0.0977	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0977	0.244	0.0977	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0977	0.244	0.0977	mg/kg	U		

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4-Amino-2,6-dinitrotoluene	19406-51-0	0.0977	0.244	0.0977	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0977	0.244	0.0977	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0977	0.244	0.0977	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0977	0.244	0.0977	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0977	0.244	0.0977	mg/kg	U		
HMX	2691-41-0	0.0977	0.244	0.0977	mg/kg	U		
HMX	2691-41-0	0.0977	0.244	0.0977	mg/kg	U		
HMX	2691-41-0	0.0977	0.244	0.0977	mg/kg	U		
Nitrobenzene	98-95-3	0.0977	0.244	0.0977	mg/kg	U		
Nitrobenzene	98-95-3	0.0977	0.244	0.0977	mg/kg	U		
Nitrobenzene	98-95-3	0.0977	0.244	0.0977	mg/kg	U		
Nitroglycerin	55-63-0	0.0977	0.244	0.0977	mg/kg	U		
Nitroglycerin	55-63-0	0.0977	0.244	0.0977	mg/kg	U		
Nitroglycerin	55-63-0	0.0977	0.244	0.0977	mg/kg	U		
PETN	78-11-5	0.488	1.46	0.488	mg/kg	U	R	L
PETN	78-11-5	0.488	1.46	0.488	mg/kg	U	R	L
RDX	121-82-4	0.0977	0.244	0.0977	mg/kg	U		
RDX	121-82-4	0.0977	0.244	0.0977	mg/kg	U		
RDX	121-82-4	0.0977	0.244	0.0977	mg/kg	U		
Tetryl	479-45-8	0.0977	0.244	0.0977	mg/kg	U		
Tetryl	479-45-8	0.0977	0.244	0.0977	mg/kg	U		
Tetryl	479-45-8	0.0977	0.244	0.0977	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-530M-3042-SO **AnalysisType:** RES

Lab Sample Name: L09100686-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0956	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0956	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.212	0	0	mg/kg	*	J+	S
1,3,5-Trinitrobenzene	99-35-4	0.0968	0.242	0.0968	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0968	0.242	0.0968	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0968	0.242	0.0968	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0968	0.242	0.0968	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0968	0.242	0.0968	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0968	0.242	0.0968	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0968	0.242	0.0968	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0968	0.242	0.0968	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0968	0.242	0.0968	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0968	0.242	0.0968	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0968	0.242	0.0968	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0968	0.242	0.0968	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0968	0.242	0.0968	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0968	0.242	0.0968	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0968	0.242	0.0968	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0968	0.242	0.0968	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0968	0.242	0.0968	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0968	0.242	0.0968	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0968	0.242	0.0968	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0968	0.242	0.0968	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0968	0.242	0.0968	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0968	0.242	0.0968	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0968	0.242	0.0968	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0968	0.242	0.0968	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0968	0.242	0.0968	mg/kg	U		

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4-Amino-2,6-dinitrotoluene	19406-51-0	0.0968	0.242	0.0968	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0968	0.242	0.0968	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0968	0.242	0.0968	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0968	0.242	0.0968	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0968	0.242	0.0968	mg/kg	U		
HMX	2691-41-0	0.0968	0.242	0.0968	mg/kg	U		
HMX	2691-41-0	0.0968	0.242	0.0968	mg/kg	U		
HMX	2691-41-0	0.0968	0.242	0.0968	mg/kg	U		
Nitrobenzene	98-95-3	0.0968	0.242	0.0968	mg/kg	U		
Nitrobenzene	98-95-3	0.0968	0.242	0.0968	mg/kg	U		
Nitrobenzene	98-95-3	0.0968	0.242	0.0968	mg/kg	U		
Nitroglycerin	55-63-0	0.0968	0.242	0.0968	mg/kg	U		
Nitroglycerin	55-63-0	0.0968	0.242	0.0968	mg/kg	U		
Nitroglycerin	55-63-0	0.0968	0.242	0.0968	mg/kg	U		
PETN	78-11-5	0.484	1.45	0.484	mg/kg	U	R	L
PETN	78-11-5	0.484	1.45	0.484	mg/kg	U	R	L
RDX	121-82-4	0.305	0.242	0.0968	mg/kg			
RDX	121-82-4	0.305	0.242	0.0968	mg/kg			
RDX	121-82-4	0.308	0.242	0.0968	mg/kg		J+	S
Tetryl	479-45-8	0.0968	0.242	0.0968	mg/kg	U		
Tetryl	479-45-8	0.0968	0.242	0.0968	mg/kg	U		
Tetryl	479-45-8	0.0968	0.242	0.0968	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-534M-3046-SO **AnalysisType:** RES

Lab Sample Name: L09100686-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0938	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0938	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0991	0.248	0.0991	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0991	0.248	0.0991	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0991	0.248	0.0991	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0991	0.248	0.0991	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0991	0.248	0.0991	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0991	0.248	0.0991	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0991	0.248	0.0991	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0991	0.248	0.0991	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0991	0.248	0.0991	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0991	0.248	0.0991	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0991	0.248	0.0991	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0991	0.248	0.0991	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0991	0.248	0.0991	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0991	0.248	0.0991	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0991	0.248	0.0991	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0991	0.248	0.0991	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0991	0.248	0.0991	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0991	0.248	0.0991	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0991	0.248	0.0991	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0991	0.248	0.0991	mg/kg	U		
HMX	2691-41-0	0.0991	0.248	0.0991	mg/kg	U		
HMX	2691-41-0	0.0991	0.248	0.0991	mg/kg	U		
Nitrobenzene	98-95-3	0.0991	0.248	0.0991	mg/kg	U		
Nitrobenzene	98-95-3	0.0991	0.248	0.0991	mg/kg	U		
Nitroglycerin	55-63-0	0.0991	0.248	0.0991	mg/kg	U		
Nitroglycerin	55-63-0	0.0991	0.248	0.0991	mg/kg	U		

Analysis Method 8330

PETN	78-11-5	0.496	1.49	0.496	mg/kg	U	R	L
PETN	78-11-5	0.496	1.49	0.496	mg/kg	U	R	L
RDX	121-82-4	0.0991	0.248	0.0991	mg/kg	U		
RDX	121-82-4	0.0991	0.248	0.0991	mg/kg	U		
Tetryl	479-45-8	0.0991	0.248	0.0991	mg/kg	U		
Tetryl	479-45-8	0.0991	0.248	0.0991	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-535M-3048-SO **AnalysisType:** RES

Lab Sample Name: L09100686-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0962	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0962	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0981	0.245	0.0981	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0981	0.245	0.0981	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0981	0.245	0.0981	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0981	0.245	0.0981	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0981	0.245	0.0981	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0981	0.245	0.0981	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0981	0.245	0.0981	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0981	0.245	0.0981	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0981	0.245	0.0981	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0981	0.245	0.0981	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0981	0.245	0.0981	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0981	0.245	0.0981	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0981	0.245	0.0981	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0981	0.245	0.0981	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0981	0.245	0.0981	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0981	0.245	0.0981	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0981	0.245	0.0981	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0981	0.245	0.0981	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0981	0.245	0.0981	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0981	0.245	0.0981	mg/kg	U		
HMX	2691-41-0	0.0981	0.245	0.0981	mg/kg	U		
HMX	2691-41-0	0.0981	0.245	0.0981	mg/kg	U		
Nitrobenzene	98-95-3	0.0981	0.245	0.0981	mg/kg	U		
Nitrobenzene	98-95-3	0.0981	0.245	0.0981	mg/kg	U		
Nitroglycerin	55-63-0	0.0981	0.245	0.0981	mg/kg	U		
Nitroglycerin	55-63-0	0.0981	0.245	0.0981	mg/kg	U		

Analysis Method 8330

PETN	78-11-5	0.491	1.47	0.491	mg/kg	U	R	L
PETN	78-11-5	0.491	1.47	0.491	mg/kg	U	R	L
RDX	121-82-4	0.0981	0.245	0.0981	mg/kg	U		
RDX	121-82-4	0.0981	0.245	0.0981	mg/kg	U		
Tetryl	479-45-8	0.0981	0.245	0.0981	mg/kg	U		
Tetryl	479-45-8	0.0981	0.245	0.0981	mg/kg	U	R	C

Analysis Method 8330

Sample Name LL1SS-536M-3049-SO **AnalysisType:** RES

Lab Sample Name: L09100686-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0929	0	0	mg/kg			
1,2-Dinitrobenzene	528-29-0	0.0929	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0984	0.246	0.0984	mg/kg	U		
1,3,5-Trinitrobenzene	99-35-4	0.0984	0.246	0.0984	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0984	0.246	0.0984	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0984	0.246	0.0984	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0984	0.246	0.0984	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0984	0.246	0.0984	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0984	0.246	0.0984	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0984	0.246	0.0984	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0984	0.246	0.0984	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0984	0.246	0.0984	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0984	0.246	0.0984	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0984	0.246	0.0984	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0984	0.246	0.0984	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0984	0.246	0.0984	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0984	0.246	0.0984	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0984	0.246	0.0984	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0984	0.246	0.0984	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0984	0.246	0.0984	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0984	0.246	0.0984	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0984	0.246	0.0984	mg/kg	U		
HMX	2691-41-0	0.0984	0.246	0.0984	mg/kg	U		
HMX	2691-41-0	0.0984	0.246	0.0984	mg/kg	U		
Nitrobenzene	98-95-3	0.0984	0.246	0.0984	mg/kg	U		
Nitrobenzene	98-95-3	0.0984	0.246	0.0984	mg/kg	U		
Nitroglycerin	55-63-0	0.0984	0.246	0.0984	mg/kg	U		
Nitroglycerin	55-63-0	0.0984	0.246	0.0984	mg/kg	U		

Analysis Method 8330

PETN	78-11-5	0.492	1.48	0.492	mg/kg	U	R	L
PETN	78-11-5	0.492	1.48	0.492	mg/kg	U	R	L
RDX	121-82-4	0.0984	0.246	0.0984	mg/kg	U		
RDX	121-82-4	0.0984	0.246	0.0984	mg/kg	U		
Tetryl	479-45-8	0.0984	0.246	0.0984	mg/kg	U	R	C
Tetryl	479-45-8	0.0984	0.246	0.0984	mg/kg	U		

Analysis Method 8330-NG

Sample Name LL1SS-530M-3042-SO **AnalysisType:** RES

Lab Sample Name: L09100686-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	125	251	125	ug/kg	U		

Sample Name LL1SS-534M-3046-SO **AnalysisType:** RES

Lab Sample Name: L09100686-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	125	251	125	ug/kg	U		

Sample Name LL1SS-535M-3048-SO **AnalysisType:** RES

Lab Sample Name: L09100686-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	126	252	126	ug/kg	U		

Analysis Method SM3500Cr-D 7196A

Sample Name LL1SS-527M-3039-SO **AnalysisType:** RES

Lab Sample Name: L09100686-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0557	0.111	0.0557	mg/kg	U		

Sample Name LL1SS-530M-3042-SO **AnalysisType:** RES

Lab Sample Name: L09100686-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.049	0.098	0.049	mg/kg	U		

Sample Name LL1SS-534M-3046-SO **AnalysisType:** RES

Lab Sample Name: L09100686-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0498	0.0996	0.0498	mg/kg	U		

Sample Name LL1SS-535M-3048-SO **AnalysisType:** RES

Lab Sample Name: L09100686-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.05	0.1	0.05	mg/kg	U		

Sample Name LL1SS-536M-3049-SO **AnalysisType:** RES

Lab Sample Name: L09100686-07 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.049	0.0979	0.049	mg/kg	U		

Analysis Method USACRREL

Sample Name LL1SS-527M-3039-SO **AnalysisType:** RES

Lab Sample Name: L09100686-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	14.1	4.99	2.49	mg/kg			

Sample Name LL1SS-530M-3042-SO **AnalysisType:** RES

Lab Sample Name: L09100686-03 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.48	4.96	2.48	mg/kg	U		

Sample Name LL1SS-534M-3046-SO **AnalysisType:** RES

Lab Sample Name: L09100686-04 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.48	4.95	2.48	mg/kg	U		

Sample Name LL1SS-535M-3048-SO **AnalysisType:** RES

Lab Sample Name: L09100686-06 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	2.48	4.97	2.48	mg/kg	U		

Validated Sample Result Forms: L09100770

Analysis Method 6010B

Sample Name LL1SS-514M-3057-SO **AnalysisType:** RES

Lab Sample Name: L09100770-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	8790	15.2	7.59	mg/kg		J	Q
Barium	7440-39-3	71.9	0.38	0.0759	mg/kg			
Beryllium	7440-41-7	0.532	0.019	0.00911	mg/kg			
Cadmium	7440-43-9	1.58	0.0759	0.038	mg/kg			
Calcium	7440-70-2	7290	7.59	3.8	mg/kg		J-	Q
Chromium	7440-47-3	16.5	0.19	0.0911	mg/kg			
Cobalt	7440-48-4	7.23	0.19	0.0911	mg/kg			
Copper	7440-50-8	19.8	0.19	0.0911	mg/kg		J	E
Iron	7439-89-6	18100	1.52	0.759	mg/kg	B	J-	Q
Magnesium	7439-95-4	2000	19	9.11	mg/kg		J+	Q
Manganese	7439-96-5	961	7.59	1.52	mg/kg		J+	Q
Potassium	7440-09-7	672	38	19	mg/kg			
Silver	7440-22-4	0.19	0.38	0.19	mg/kg	U		
Sodium	7440-23-5	93.8	19	3.8	mg/kg			
Vanadium	7440-62-2	18	0.38	0.19	mg/kg			
Zinc	7440-66-6	83.4	0.759	0.38	mg/kg		J+	Q

Analysis Method 6010B

Sample Name LL1SS-523M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100770-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	0.05	0.1	0.05	mg/L	U		
Barium	7440-39-3	0.0025	0.01	0.0025	mg/L	U		
Beryllium	7440-41-7	0.0005	0.002	0.0005	mg/L	U		
Cadmium	7440-43-9	#######	0.0005	0.00025	mg/L	U		
Calcium	7440-70-2	0.1	0.2	0.1	mg/L	U		
Chromium	7440-47-3	0.0025	0.005	0.0025	mg/L	U		
Cobalt	7440-48-4	0.0025	0.005	0.0025	mg/L	U		
Copper	7440-50-8	0.0025	0.005	0.0025	mg/L	U		
Iron	7439-89-6	0.193	0.1	0.025	mg/L			
Magnesium	7439-95-4	0.25	0.5	0.25	mg/L	U		
Manganese	7439-96-5	0.005	0.01	0.005	mg/L	U		
Potassium	7440-09-7	0.25	1	0.25	mg/L	U		
Silver	7440-22-4	0.002	0.004	0.002	mg/L	U		
Sodium	7440-23-5	0.25	0.5	0.25	mg/L	U		
Vanadium	7440-62-2	0.005	0.01	0.005	mg/L	U		
Zinc	7440-66-6	0.005	0.02	0.005	mg/L	U		

Analysis Method 6010B

Sample Name LL1SS-542M-3058-SO **AnalysisType:** RES

Lab Sample Name: L09100770-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Aluminum	7429-90-5	9940	13.6	6.78	mg/kg		J	Q
Barium	7440-39-3	66.4	0.339	0.0678	mg/kg			
Beryllium	7440-41-7	0.574	0.017	0.00814	mg/kg			
Cadmium	7440-43-9	1.11	0.0678	0.0339	mg/kg			
Calcium	7440-70-2	8110	6.78	3.39	mg/kg		J-	Q
Chromium	7440-47-3	16.7	0.17	0.0814	mg/kg			
Cobalt	7440-48-4	7.78	0.17	0.0814	mg/kg			
Copper	7440-50-8	14.3	0.17	0.0814	mg/kg		J	E
Iron	7439-89-6	20900	1.36	0.678	mg/kg	B	J-	Q
Magnesium	7439-95-4	2230	17	8.14	mg/kg		J+	Q
Manganese	7439-96-5	1040	6.78	1.36	mg/kg		J+	Q
Potassium	7440-09-7	740	33.9	17	mg/kg			
Silver	7440-22-4	0.17	0.339	0.17	mg/kg	U		
Sodium	7440-23-5	67.1	17	3.39	mg/kg			
Vanadium	7440-62-2	20.7	0.339	0.17	mg/kg			
Zinc	7440-66-6	59.5	0.678	0.339	mg/kg		J+	Q

Analysis Method 6020

Sample Name LL1SS-514M-3057-SO **AnalysisType:** RE

Lab Sample Name: L09100770-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.272	0.0959	0.0479	mg/kg			
Arsenic	7440-38-2	7.77	0.285	0.0712	mg/kg			
Lead	7439-92-1	50.8	1.9	0.95	mg/kg		J-	Q
Nickel	7440-02-0	18.7	0.76	0.19	mg/kg		J-	Q
Selenium	7782-49-2	0.32	0.19	0.095	mg/kg		J-	Q
Thallium	7440-28-0	0.146	0.019	0.0095	mg/kg			

Sample Name LL1SS-523M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100770-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	######	0.001	0.00025	mg/L	U		
Arsenic	7440-38-2	######	0.001	0.00025	mg/L	U		
Lead	7439-92-1	######	0.001	0.00025	mg/L	U		
Nickel	7440-02-0	0.0252	0.004	0.001	mg/L			
Selenium	7782-49-2	0.0005	0.001	0.0005	mg/L	U		
Thallium	7440-28-0	######	0.0002	0.00005	mg/L	U		

Sample Name LL1SS-542M-3058-SO **AnalysisType:** RE

Lab Sample Name: L09100770-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Antimony	7440-36-0	0.275	0.0986	0.0493	mg/kg			
Arsenic	7440-38-2	8.6	0.302	0.0755	mg/kg			
Lead	7439-92-1	33.1	0.201	0.101	mg/kg		J-	Q
Nickel	7440-02-0	15.9	0.806	0.201	mg/kg		J-	Q
Selenium	7782-49-2	0.306	0.201	0.101	mg/kg		J-	Q
Thallium	7440-28-0	0.147	0.0201	0.0101	mg/kg			

Analysis Method 7470A

Sample Name LL1SS-523M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100770-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0001	0.0002	0.0001	mg/L	U		

Analysis Method 7471A

Sample Name LL1SS-514M-3057-SO **AnalysisType:** RES

Lab Sample Name: L09100770-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0358	0.0995	0.00995	mg/kg	J	J	

Sample Name LL1SS-542M-3058-SO **AnalysisType:** RES

Lab Sample Name: L09100770-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Mercury	7439-97-6	0.0262	0.101	0.0101	mg/kg	J	J	

Analysis Method 8081A

Sample Name LL1SS-523M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100770-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-xylene	877-09-8	13.8	0	0	ug/L			
4,4'-DDD	72-54-8	0.0111	0.0556	0.0111	ug/L	U		
4,4'-DDE	72-55-9	0.0111	0.0556	0.0111	ug/L	U		
4,4'-DDT	50-29-3	0.0111	0.0556	0.0111	ug/L	U		
Aldrin	309-00-2	0.0111	0.0556	0.0111	ug/L	U		
alpha Chlordane	5103-71-9	0.0111	0.0556	0.0111	ug/L	U		
alpha-BHC	319-84-6	0.0111	0.0556	0.0111	ug/L	U		
beta-BHC	319-85-7	0.0111	0.0556	0.0111	ug/L	U		
Decachlorobiphenyl	2051-24-3	15.4	0	0	ug/L			
delta-BHC	319-86-8	0.0111	0.0556	0.0111	ug/L	U		
Dieldrin	60-57-1	0.0111	0.0556	0.0111	ug/L	U		
Endosulfan I	959-98-8	0.0111	0.0556	0.0111	ug/L	U		
Endosulfan II	33213-65-9	0.0111	0.0556	0.0111	ug/L	U		
Endosulfan sulfate	1031-07-8	0.0111	0.0556	0.0111	ug/L	U		
Endrin	72-20-8	0.0111	0.0556	0.0111	ug/L	U		
Endrin aldehyde	7421-93-4	0.0111	0.0556	0.0111	ug/L	U		
Endrin ketone	53494-70-5	0.0111	0.0556	0.0111	ug/L	U		
gamma Chlordane	5103-74-2	0.0111	0.0556	0.0111	ug/L	U		
gamma-BHC (Lindane)	58-89-9	0.0111	0.0556	0.0111	ug/L	U		
Heptachlor	76-44-8	0.0111	0.0556	0.0111	ug/L	U		
Heptachlor epoxide	1024-57-3	0.0111	0.0556	0.0111	ug/L	U		
Methoxychlor	72-43-5	0.0111	0.0556	0.0111	ug/L	U		
Toxaphene	8001-35-2	0.333	1.11	0.333	ug/L	U		

Analysis Method 8082

Sample Name LL1SS-523M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100770-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
2,4,5,6-Tetrachloro-m-xylene	877-09-8	13.7	0	0	ug/L			
Aroclor-1016	12674-11-2	0.278	0.556	0.278	ug/L	U		
Aroclor-1221	11104-28-2	0.278	0.556	0.278	ug/L	U		
Aroclor-1232	11141-16-5	0.278	0.556	0.278	ug/L	U		
Aroclor-1242	53469-21-9	0.278	0.556	0.278	ug/L	U		
Aroclor-1248	12672-29-6	0.278	0.556	0.278	ug/L	U		
Aroclor-1254	11097-69-1	0.278	0.556	0.278	ug/L	U		
Aroclor-1260	11096-82-5	0.278	0.556	0.278	ug/L	U		
Decachlorobiphenyl	2051-24-3	13.6	0	0	ug/L			

Analysis Method 8260B

Sample Name LL1SS-523M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100770-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,1,1-Trichloroethane	71-55-6	0.25	1	0.25	ug/L	U		
1,1,2,2-Tetrachloroethane	79-34-5	0.125	1	0.125	ug/L	U		
1,1,2-Trichloroethane	79-00-5	0.25	1	0.25	ug/L	U		
1,1-Dichloroethane	75-34-3	0.125	1	0.125	ug/L	U		
1,1-Dichloroethene	75-35-4	0.5	1	0.5	ug/L	U		
1,2-Dibromoethane	106-93-4	0.25	1	0.25	ug/L	U		
1,2-Dichloroethane	107-06-2	0.25	1	0.25	ug/L	U		
1,2-Dichloroethane-d4	17060-07-0	24.5	0	0	ug/L			
1,2-Dichloroethene (total)	540-59-0	0.25	1	0.25	ug/L	U		
1,2-Dichloropropane	78-87-5	0.2	1	0.2	ug/L	U		
2-Butanone	78-93-3	2.5	10	2.5	ug/L	U		
2-Hexanone	591-78-6	2.5	10	2.5	ug/L	U		
4-Methyl-2-pentanone	108-10-1	2.5	10	2.5	ug/L	U		
Acetone	67-64-1	70.9	10	2.5	ug/L			
Benzene	71-43-2	0.125	1	0.125	ug/L	U		
Bromochloromethane	74-97-5	0.2	1	0.2	ug/L	U		
Bromodichloromethane	75-27-4	0.25	1	0.25	ug/L	U		
Bromoform	75-25-2	0.5	1	0.5	ug/L	U		
Bromomethane	74-83-9	0.5	1	0.5	ug/L	U		
Carbon disulfide	75-15-0	0.5	1	0.5	ug/L	U		
Carbon tetrachloride	56-23-5	0.25	1	0.25	ug/L	U		
Chlorobenzene	108-90-7	0.125	1	0.125	ug/L	U		
Chloroethane	75-00-3	0.5	1	0.5	ug/L	U		
Chloroform	67-66-3	0.125	1	0.125	ug/L	U		
Chloromethane	74-87-3	0.25	1	0.25	ug/L	U		
cis-1,3-Dichloropropene	10061-01-5	0.25	1	0.25	ug/L	U		
Dibromochloromethane	124-48-1	0.25	1	0.25	ug/L	U		
Dibromofluoromethane	1868-53-7	26.5	0	0	ug/L			

Analysis Method 8260B

Ethyl benzene	100-41-4	0.25	1	0.25	ug/L	U	
Methylene chloride	75-09-2	0.295	1	0.25	ug/L	J	J
p-Bromofluorobenzene	460-00-4	24.9	0	0	ug/L		
Styrene	100-42-5	0.125	1	0.125	ug/L	U	
Tetrachloroethene	127-18-4	0.25	1	0.25	ug/L	U	
Toluene	108-88-3	0.25	1	0.25	ug/L	U	
Toluene-d8	2037-26-5	25	0	0	ug/L		
trans-1,3-Dichloropropene	10061-02-6	0.5	1	0.5	ug/L	U	
Trichloroethene	79-01-6	0.25	1	0.25	ug/L	U	
Vinyl chloride	75-01-4	0.25	1	0.25	ug/L	U	
Xylenes, Total	1330-20-7	0.5	2	0.5	ug/L	U	

Analysis Method 8270C

Sample Name LL1SS-523M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100770-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2,4-Trichlorobenzene	120-82-1	2.78	11.1	2.78	ug/L	U		
1,2-Dichlorobenzene	95-50-1	2.78	11.1	2.78	ug/L	U		
1,3-Dichlorobenzene	541-73-1	2.78	11.1	2.78	ug/L	U		
1,4-Dichlorobenzene	106-46-7	2.78	11.1	2.78	ug/L	U		
2,4,5-Trichlorophenol	95-95-4	2.78	11.1	2.78	ug/L	U		
2,4,6-Tribromophenol	118-79-6	69000	0	0	ug/L			
2,4,6-Trichlorophenol	88-06-2	2.78	11.1	2.78	ug/L	U		
2,4-Dichlorophenol	120-83-2	2.78	11.1	2.78	ug/L	U		
2,4-Dimethylphenol	105-67-9	2.78	11.1	2.78	ug/L	U		
2,4-Dinitrophenol	51-28-5	13.9	27.8	13.9	ug/L	U		
2,4-Dinitrotoluene	121-14-2	2.78	11.1	2.78	ug/L	U		
2,6-Dinitrotoluene	606-20-2	2.78	11.1	2.78	ug/L	U		
2-Chloronaphthalene	91-58-7	2.78	11.1	2.78	ug/L	U		
2-Chlorophenol	95-57-8	2.78	11.1	2.78	ug/L	U		
2-Fluorobiphenyl	321-60-8	37900	0	0	ug/L			
2-Fluorophenol	367-12-4	75400	0	0	ug/L			
2-Methylnaphthalene	91-57-6	2.78	11.1	2.78	ug/L	U		
2-Methylphenol	95-48-7	2.78	11.1	2.78	ug/L	U		
2-Nitroaniline	88-74-4	13.9	27.8	13.9	ug/L	U		
2-Nitrophenol	88-75-5	2.78	11.1	2.78	ug/L	U		
3,3'-Dichlorobenzidine	91-94-1	2.78	11.1	2.78	ug/L	U		
3-,4-Methylphenol	106-44-5	2.78	11.1	2.78	ug/L	U		
3-Nitroaniline	99-09-2	13.9	27.8	13.9	ug/L	U		
4,6-Dinitro-2-methylphenol	534-52-1	13.9	27.8	13.9	ug/L	U		
4-Bromophenyl-phenylether	101-55-3	2.78	11.1	2.78	ug/L	U		
4-Chloro-3-methylphenol	59-50-7	2.78	11.1	2.78	ug/L	U		
4-Chloroaniline	106-47-8	2.78	11.1	2.78	ug/L	U		
4-Chlorophenyl-phenyl ether	7005-72-3	2.78	11.1	2.78	ug/L	U		

Analysis Method 8270C

4-Nitroaniline	100-01-6	13.9	27.8	13.9	ug/L	U		
4-Nitrophenol	100-02-7	13.9	27.8	13.9	ug/L	U		
Acenaphthene	83-32-9	2.78	11.1	2.78	ug/L	U		
Acenaphthylene	208-96-8	2.78	11.1	2.78	ug/L	U		
Anthracene	120-12-7	2.78	11.1	2.78	ug/L	U		
Benzo(a)anthracene	56-55-3	2.78	11.1	2.78	ug/L	U		
Benzo(a)pyrene	50-32-8	2.78	11.1	2.78	ug/L	U		
Benzo(b)fluoranthene	205-99-2	2.78	11.1	2.78	ug/L	U		
Benzo(g,h,i)Perylene	191-24-2	2.78	11.1	2.78	ug/L	U		
Benzo(k)fluoranthene	207-08-9	2.78	11.1	2.78	ug/L	U		
Benzoic acid	65-85-0	13.9	27.8	13.9	ug/L	U		
Benzyl alcohol	100-51-6	2.78	11.1	2.78	ug/L	U		
Bis(2-Chloroethoxy)Methane	111-91-1	2.78	11.1	2.78	ug/L	U	UJ	C
Bis(2-Chloroethyl)ether	111-44-4	2.78	11.1	2.78	ug/L	U		
bis(2-Chloroisopropyl)ether	39638-32-9	2.78	11.1	2.78	ug/L	U		
bis(2-Ethylhexyl)phthalate	117-81-7	3.33	11.1	3.33	ug/L	U		
Butylbenzylphthalate	85-68-7	2.78	11.1	2.78	ug/L	U		
Carbazole	86-74-8	2.78	22.2	2.78	ug/L	U		
Chrysene	218-01-9	2.78	11.1	2.78	ug/L	U		
Dibenzo(a,h)Anthracene	53-70-3	2.78	11.1	2.78	ug/L	U		
Dibenzofuran	132-64-9	2.78	11.1	2.78	ug/L	U		
Diethylphthalate	84-66-2	2.78	11.1	2.78	ug/L	U		
Dimethylphthalate	131-11-3	2.78	11.1	2.78	ug/L	U		
Di-N-Butylphthalate	84-74-2	2.78	11.1	2.78	ug/L	U		
Di-n-octylphthalate	117-84-0	2.78	11.1	2.78	ug/L	U		
Fluoranthene	206-44-0	2.78	11.1	2.78	ug/L	U		
Fluorene	86-73-7	2.78	11.1	2.78	ug/L	U		
Hexachlorobenzene	118-74-1	2.78	11.1	2.78	ug/L	U		
Hexachlorobutadiene	87-68-3	2.78	11.1	2.78	ug/L	U		
Hexachlorocyclopentadiene	77-47-4	2.78	11.1	2.78	ug/L	U		
Hexachloroethane	67-72-1	2.78	11.1	2.78	ug/L	U		
Indeno(1,2,3-cd)pyrene	193-39-5	2.78	11.1	2.78	ug/L	U		

Analysis Method 8270C

Isophorone	78-59-1	2.78	11.1	2.78	ug/L	U
Naphthalene	91-20-3	2.78	11.1	2.78	ug/L	U
Nitrobenzene	98-95-3	2.78	11.1	2.78	ug/L	U
Nitrobenzene-d5	4165-60-0	39300	0	0	ug/L	
N-Nitrosodiphenylamine	86-30-6	2.78	11.1	2.78	ug/L	U
N-NITROSODIPROPYLAMINE	621-64-7	2.78	11.1	2.78	ug/L	U
Pentachlorophenol	87-86-5	13.9	44.4	13.9	ug/L	U
Phenanthrene	85-01-8	2.78	11.1	2.78	ug/L	U
Phenol	108-95-2	2.78	11.1	2.78	ug/L	U
Phenol-d5	4165-62-2	77200	0	0	ug/L	
p-Terphenyl-d14	1718-51-0	33100	0	0	ug/L	
Pyrene	129-00-0	2.78	11.1	2.78	ug/L	U

Analysis Method 8330

Sample Name LL1SS-514M-3057-SO **AnalysisType:** RES

Lab Sample Name: L09100770-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0945	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0993	0.248	0.0993	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0993	0.248	0.0993	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0993	0.248	0.0993	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0993	0.248	0.0993	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0993	0.248	0.0993	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0993	0.248	0.0993	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0993	0.248	0.0993	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0993	0.248	0.0993	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0993	0.248	0.0993	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0993	0.248	0.0993	mg/kg	U		
HMX	2691-41-0	0.0993	0.248	0.0993	mg/kg	U		
Nitrobenzene	98-95-3	0.0993	0.248	0.0993	mg/kg	U		
Nitroglycerin	55-63-0	0.0993	0.248	0.0993	mg/kg	U		
PETN	78-11-5	0.497	1.49	0.497	mg/kg	U	R	L
RDX	121-82-4	0.0993	0.248	0.0993	mg/kg	U		
Tetryl	479-45-8	0.0993	0.248	0.0993	mg/kg	U		

Analysis Method 8330

Sample Name LL1SS-523M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100770-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	382	0	0	ug/L			
1,3,5-Trinitrobenzene	99-35-4	0.25	1	0.25	ug/L	U		
1,3-Dinitrobenzene	99-65-0	0.25	1	0.25	ug/L	U		
2,4,6-Trinitrotoluene	118-96-7	0.25	1	0.25	ug/L	U		
2,4-Dinitrotoluene	121-14-2	0.25	1	0.25	ug/L	U		
2,6-Dinitrotoluene	606-20-2	0.25	1	0.25	ug/L	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.25	1	0.25	ug/L	U		
2-Nitrotoluene	88-72-2	0.25	1	0.25	ug/L	U		
3-Nitrotoluene	99-08-1	0.25	1	0.25	ug/L	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.25	1	0.25	ug/L	U		
4-Nitrotoluene	99-99-0	0.25	1	0.25	ug/L	U		
HMX	2691-41-0	0.25	1	0.25	ug/L	U		
Nitrobenzene	98-95-3	0.25	1	0.25	ug/L	U		
Nitroglycerin	55-63-0	0.25	1	0.25	ug/L	U		
PETN	78-11-5	0.25	1	0.25	ug/L	U		
RDX	121-82-4	0.25	1	0.25	ug/L	U		
Tetryl	479-45-8	0.25	1	0.25	ug/L	U		

Analysis Method 8330

Sample Name LL1SS-542M-3058-SO **AnalysisType:** RES

Lab Sample Name: L09100770-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
1,2-Dinitrobenzene	528-29-0	0.0942	0	0	mg/kg			
1,3,5-Trinitrobenzene	99-35-4	0.0985	0.246	0.0985	mg/kg	U		
1,3-Dinitrobenzene	99-65-0	0.0985	0.246	0.0985	mg/kg	U		
2,4,6-Trinitrotoluene	118-96-7	0.0985	0.246	0.0985	mg/kg	U		
2,4-Dinitrotoluene	121-14-2	0.0985	0.246	0.0985	mg/kg	U		
2,6-Dinitrotoluene	606-20-2	0.0985	0.246	0.0985	mg/kg	U		
2-Amino-4,6-dinitrotoluene	35572-78-2	0.0985	0.246	0.0985	mg/kg	U		
2-Nitrotoluene	88-72-2	0.0985	0.246	0.0985	mg/kg	U		
3-Nitrotoluene	99-08-1	0.0985	0.246	0.0985	mg/kg	U		
4-Amino-2,6-dinitrotoluene	19406-51-0	0.0985	0.246	0.0985	mg/kg	U		
4-Nitrotoluene	99-99-0	0.0985	0.246	0.0985	mg/kg	U		
HMX	2691-41-0	0.0985	0.246	0.0985	mg/kg	U		
Nitrobenzene	98-95-3	0.0985	0.246	0.0985	mg/kg	U		
Nitroglycerin	55-63-0	0.0985	0.246	0.0985	mg/kg	U		
PETN	78-11-5	0.493	1.48	0.493	mg/kg	U	R	L
RDX	121-82-4	0.0985	0.246	0.0985	mg/kg	U		
Tetryl	479-45-8	0.0985	0.246	0.0985	mg/kg	U		

Analysis Method 8330-NG

Sample Name LL1SS-514M-3057-SO **AnalysisType:** RES

Lab Sample Name: L09100770-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	126	253	126	ug/kg	U		

Sample Name LL1SS-523M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100770-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	25	50	25	ug/L	U		

Sample Name LL1SS-542M-3058-SO **AnalysisType:** RES

Lab Sample Name: L09100770-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitroguanidine	556-88-7	126	253	126	ug/kg	U		

Analysis Method SM3500Cr-D 7196A

Sample Name LL1SS-514M-3057-SO **AnalysisType:** RES

Lab Sample Name: L09100770-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0503	0.101	0.0503	mg/kg	U		

Sample Name LL1SS-523M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100770-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.005	0.01	0.005	mg/L	U		

Sample Name LL1SS-542M-3058-SO **AnalysisType:** RES

Lab Sample Name: L09100770-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Chromium, Hexavalent, Leachable	7440-47-3	0.0489	0.0978	0.0489	mg/kg	U		

Analysis Method USACRREL

Sample Name LL1SS-514M-3057-SO **AnalysisType:** RES

Lab Sample Name: L09100770-01 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	15.8	4.97	2.49	mg/kg		J-	Q

Sample Name LL1SS-523M-0000-ER **AnalysisType:** RES

Lab Sample Name: L09100770-05 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	0.25	0.5	0.25	mg/L	U	UJ	*III

Sample Name LL1SS-542M-3058-SO **AnalysisType:** RES

Lab Sample Name: L09100770-02 **Validation Level:** ADR

	CAS No	Result Value	RL	MDL	Result Units	Lab Qualifier	Validation Qualifier	Validation Qualifier Code
Nitrocellulose	9004-70-0	12.7	4.94	2.47	mg/kg		J-	Q

APPENDIX B

Sample Qualification Summary

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 Blank Spike/Blank Spike 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).

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
F15SS-012M-0500-SO	Aluminum	12200	14.1	7.07	mg/kg	J	E	L09110136
F15SS-012M-0500-SO	Barium	76.1	0.354	0.0707	mg/kg	J+	Q	L09110136
F15SS-012M-0500-SO	Beryllium	0.588	0.0177	0.0085	mg/kg			L09110136
F15SS-012M-0500-SO	Cadmium	1.03	0.0707	0.0354	mg/kg			L09110136
F15SS-012M-0500-SO	Calcium	5690	7.07	3.54	mg/kg			L09110136
F15SS-012M-0500-SO	Chromium	21.9	0.177	0.0849	mg/kg	J+	Q	L09110136
F15SS-012M-0500-SO	Cobalt	6.83	0.177	0.0849	mg/kg			L09110136
F15SS-012M-0500-SO	Copper	16.9	0.177	0.0849	mg/kg			L09110136
F15SS-012M-0500-SO	Iron	22800	1.41	0.707	mg/kg			L09110136
F15SS-012M-0500-SO	Magnesium	3300	17.7	8.49	mg/kg			L09110136
F15SS-012M-0500-SO	Manganese	330	0.354	0.0707	mg/kg	J	E	L09110136
F15SS-012M-0500-SO	Potassium	981	35.4	17.7	mg/kg	J	Q, E	L09110136
F15SS-012M-0500-SO	Silver	0.177	0.354	0.177	mg/kg	R	C	L09110136
F15SS-012M-0500-SO	Sodium	102	17.7	3.54	mg/kg			L09110136
F15SS-012M-0500-SO	Vanadium	22	0.354	0.177	mg/kg	J+	Q	L09110136
F15SS-012M-0500-SO	Zinc	56	0.707	0.354	mg/kg	J	Q, E	L09110136
F15SS-012M-0502-SO	Aluminum	11600	15.6	7.79	mg/kg	J	E	L09110136
F15SS-012M-0502-SO	Barium	76.7	0.39	0.0779	mg/kg	J+	Q	L09110136
F15SS-012M-0502-SO	Beryllium	0.578	0.0195	0.0094	mg/kg			L09110136
F15SS-012M-0502-SO	Cadmium	1.06	0.0779	0.039	mg/kg			L09110136
F15SS-012M-0502-SO	Calcium	5760	7.79	3.9	mg/kg			L09110136
F15SS-012M-0502-SO	Chromium	19.8	0.195	0.0935	mg/kg	J+	Q	L09110136
F15SS-012M-0502-SO	Cobalt	6.33	0.195	0.0935	mg/kg			L09110136
F15SS-012M-0502-SO	Copper	16.3	0.195	0.0935	mg/kg			L09110136
F15SS-012M-0502-SO	Iron	22600	1.56	0.779	mg/kg			L09110136
F15SS-012M-0502-SO	Magnesium	3190	19.5	9.35	mg/kg			L09110136
F15SS-012M-0502-SO	Manganese	340	0.39	0.0779	mg/kg	J	E	L09110136
F15SS-012M-0502-SO	Potassium	859	39	19.5	mg/kg	J	Q, E	L09110136
F15SS-012M-0502-SO	Silver	0.195	0.39	0.195	mg/kg	R	C	L09110136
F15SS-012M-0502-SO	Sodium	85.9	19.5	3.9	mg/kg			L09110136
F15SS-012M-0502-SO	Vanadium	21.8	0.39	0.195	mg/kg	J+	Q	L09110136
F15SS-012M-0502-SO	Zinc	56.5	0.779	0.39	mg/kg	J	Q, E	L09110136
F15SS-012M-0503-SO	Aluminum	11600	15.1	7.54	mg/kg	J	E	L09110136
F15SS-012M-0503-SO	Barium	80	0.377	0.0754	mg/kg	J+	Q	L09110136
F15SS-012M-0503-SO	Beryllium	0.592	0.0189	0.0091	mg/kg			L09110136
F15SS-012M-0503-SO	Cadmium	1.09	0.0754	0.0377	mg/kg			L09110136
F15SS-012M-0503-SO	Calcium	6150	7.54	3.77	mg/kg			L09110136
F15SS-012M-0503-SO	Chromium	18.5	0.189	0.0905	mg/kg	J+	Q	L09110136
F15SS-012M-0503-SO	Cobalt	6.58	0.189	0.0905	mg/kg			L09110136
F15SS-012M-0503-SO	Copper	17.2	0.189	0.0905	mg/kg			L09110136
F15SS-012M-0503-SO	Iron	23200	1.51	0.754	mg/kg			L09110136
F15SS-012M-0503-SO	Magnesium	3410	18.9	9.05	mg/kg			L09110136
F15SS-012M-0503-SO	Manganese	366	0.377	0.0754	mg/kg	J	E	L09110136
F15SS-012M-0503-SO	Potassium	848	37.7	18.9	mg/kg	J	Q, E	L09110136
F15SS-012M-0503-SO	Silver	0.189	0.377	0.189	mg/kg	R	C	L09110136
F15SS-012M-0503-SO	Sodium	91.8	18.9	3.77	mg/kg			L09110136
F15SS-012M-0503-SO	Vanadium	21.6	0.377	0.189	mg/kg	J+	Q	L09110136
F15SS-012M-0503-SO	Zinc	58.9	0.754	0.377	mg/kg	J	Q, E	L09110136
LL1SS-517M-3018-SO	Aluminum	5220	14.2	7.12	mg/kg			L09100553

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LL1SS-517M-3018-SO	Barium	32	0.356	0.0712	mg/kg	J+	Q	L09100553
LL1SS-517M-3018-SO	Beryllium	0.308	0.0178	0.0086	mg/kg			L09100553
LL1SS-517M-3018-SO	Cadmium	0.831	0.0712	0.0356	mg/kg			L09100553
LL1SS-517M-3018-SO	Calcium	3980	7.12	3.56	mg/kg	J	E	L09100553
LL1SS-517M-3018-SO	Chromium	16.9	0.178	0.0855	mg/kg	J-	A	L09100553
LL1SS-517M-3018-SO	Cobalt	4.43	0.178	0.0855	mg/kg	J-	A	L09100553
LL1SS-517M-3018-SO	Copper	16.3	0.178	0.0855	mg/kg			L09100553
LL1SS-517M-3018-SO	Iron	15600	1.42	0.712	mg/kg	J	A	L09100553
LL1SS-517M-3018-SO	Magnesium	2090	17.8	8.55	mg/kg			L09100553
LL1SS-517M-3018-SO	Manganese	353	0.356	0.0712	mg/kg	J-	A	L09100553
LL1SS-517M-3018-SO	Potassium	406	35.6	17.8	mg/kg	J+	Q	L09100553
LL1SS-517M-3018-SO	Silver	0.178	0.356	0.178	mg/kg	R	C	L09100553
LL1SS-517M-3018-SO	Sodium	23.1	17.8	3.56	mg/kg			L09100553
LL1SS-517M-3018-SO	Vanadium	11.1	0.356	0.178	mg/kg			L09100553
LL1SS-517M-3018-SO	Zinc	68.3	0.712	0.356	mg/kg			L09100553
LL1SS-517M-3020-SO	Aluminum	5830	14.2	7.1	mg/kg			L09100553
LL1SS-517M-3020-SO	Barium	38	0.355	0.071	mg/kg	J+	Q	L09100553
LL1SS-517M-3020-SO	Beryllium	0.352	0.0177	0.0085	mg/kg			L09100553
LL1SS-517M-3020-SO	Cadmium	0.904	0.071	0.0355	mg/kg			L09100553
LL1SS-517M-3020-SO	Calcium	3830	7.1	3.55	mg/kg	J	E	L09100553
LL1SS-517M-3020-SO	Chromium	14.2	0.177	0.0852	mg/kg	J-	A	L09100553
LL1SS-517M-3020-SO	Cobalt	4.9	0.177	0.0852	mg/kg	J-	A	L09100553
LL1SS-517M-3020-SO	Copper	16.4	0.177	0.0852	mg/kg			L09100553
LL1SS-517M-3020-SO	Iron	16300	1.42	0.71	mg/kg	J	A	L09100553
LL1SS-517M-3020-SO	Magnesium	2180	17.7	8.52	mg/kg			L09100553
LL1SS-517M-3020-SO	Manganese	386	0.355	0.071	mg/kg	J-	A	L09100553
LL1SS-517M-3020-SO	Potassium	453	35.5	17.7	mg/kg	J+	Q	L09100553
LL1SS-517M-3020-SO	Silver	0.177	0.355	0.177	mg/kg	R	C	L09100553
LL1SS-517M-3020-SO	Sodium	28.5	17.7	3.55	mg/kg			L09100553
LL1SS-517M-3020-SO	Vanadium	12	0.355	0.177	mg/kg			L09100553
LL1SS-517M-3020-SO	Zinc	70.6	0.71	0.355	mg/kg			L09100553
LL1SS-517M-3021-SO	Aluminum	5370	14.3	7.15	mg/kg			L09100553
LL1SS-517M-3021-SO	Barium	35	0.358	0.0715	mg/kg	J+	Q	L09100553
LL1SS-517M-3021-SO	Beryllium	0.381	0.0179	0.0086	mg/kg			L09100553
LL1SS-517M-3021-SO	Cadmium	0.83	0.0715	0.0358	mg/kg			L09100553
LL1SS-517M-3021-SO	Calcium	6230	7.15	3.58	mg/kg	J	E	L09100553
LL1SS-517M-3021-SO	Chromium	14.5	0.179	0.0858	mg/kg	J-	A	L09100553
LL1SS-517M-3021-SO	Cobalt	4.95	0.179	0.0858	mg/kg	J-	A	L09100553
LL1SS-517M-3021-SO	Copper	16	0.179	0.0858	mg/kg			L09100553
LL1SS-517M-3021-SO	Iron	14700	1.43	0.715	mg/kg	J	A	L09100553
LL1SS-517M-3021-SO	Magnesium	2300	17.9	8.58	mg/kg			L09100553
LL1SS-517M-3021-SO	Manganese	392	0.358	0.0715	mg/kg	J-	A	L09100553
LL1SS-517M-3021-SO	Potassium	410	35.8	17.9	mg/kg	J+	Q	L09100553
LL1SS-517M-3021-SO	Silver	0.179	0.358	0.179	mg/kg	R	C	L09100553
LL1SS-517M-3021-SO	Sodium	34.1	17.9	3.58	mg/kg			L09100553
LL1SS-517M-3021-SO	Vanadium	10.6	0.358	0.179	mg/kg			L09100553
LL1SS-517M-3021-SO	Zinc	65.7	0.715	0.358	mg/kg			L09100553
LL1SS-537M-3050-SO	Aluminum	5070	13.5	6.74	mg/kg	J	E	L09110136
LL1SS-537M-3050-SO	Barium	31	0.337	0.0674	mg/kg	J+	Q	L09110136

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LL1SS-537M-3050-SO	Beryllium	0.293	0.0168	0.0081	mg/kg			L09110136
LL1SS-537M-3050-SO	Cadmium	0.917	0.0674	0.0337	mg/kg			L09110136
LL1SS-537M-3050-SO	Calcium	3100	6.74	3.37	mg/kg			L09110136
LL1SS-537M-3050-SO	Chromium	14.5	0.168	0.0808	mg/kg	J+	Q	L09110136
LL1SS-537M-3050-SO	Cobalt	4.26	0.168	0.0808	mg/kg			L09110136
LL1SS-537M-3050-SO	Copper	18	0.168	0.0808	mg/kg			L09110136
LL1SS-537M-3050-SO	Iron	16300	1.35	0.674	mg/kg			L09110136
LL1SS-537M-3050-SO	Magnesium	1880	16.8	8.08	mg/kg			L09110136
LL1SS-537M-3050-SO	Manganese	356	0.337	0.0674	mg/kg	J	E	L09110136
LL1SS-537M-3050-SO	Potassium	415	33.7	16.8	mg/kg	J	Q, E	L09110136
LL1SS-537M-3050-SO	Silver	0.168	0.337	0.168	mg/kg	R	C	L09110136
LL1SS-537M-3050-SO	Sodium	20.2	16.8	3.37	mg/kg			L09110136
LL1SS-537M-3050-SO	Vanadium	11	0.337	0.168	mg/kg	J+	Q	L09110136
LL1SS-537M-3050-SO	Zinc	59.7	0.674	0.337	mg/kg	J	Q, E	L09110136
LL1SS-537M-3052-SO	Aluminum	5450	14.9	7.45	mg/kg	J	E	L09110136
LL1SS-537M-3052-SO	Barium	30.8	0.373	0.0745	mg/kg	J+	Q	L09110136
LL1SS-537M-3052-SO	Beryllium	0.3	0.0186	0.0089	mg/kg			L09110136
LL1SS-537M-3052-SO	Cadmium	0.947	0.0745	0.0373	mg/kg			L09110136
LL1SS-537M-3052-SO	Calcium	3100	7.45	3.73	mg/kg			L09110136
LL1SS-537M-3052-SO	Chromium	15.8	0.186	0.0894	mg/kg	J+	Q	L09110136
LL1SS-537M-3052-SO	Cobalt	4.05	0.186	0.0894	mg/kg			L09110136
LL1SS-537M-3052-SO	Copper	17.8	0.186	0.0894	mg/kg			L09110136
LL1SS-537M-3052-SO	Iron	17000	1.49	0.745	mg/kg			L09110136
LL1SS-537M-3052-SO	Magnesium	1830	18.6	8.94	mg/kg			L09110136
LL1SS-537M-3052-SO	Manganese	332	0.373	0.0745	mg/kg	J	E	L09110136
LL1SS-537M-3052-SO	Potassium	523	37.3	18.6	mg/kg	J	Q, E	L09110136
LL1SS-537M-3052-SO	Silver	0.186	0.373	0.186	mg/kg	R	C	L09110136
LL1SS-537M-3052-SO	Sodium	26.2	18.6	3.73	mg/kg			L09110136
LL1SS-537M-3052-SO	Vanadium	11.6	0.373	0.186	mg/kg	J+	Q	L09110136
LL1SS-537M-3052-SO	Zinc	60.4	0.745	0.373	mg/kg	J	Q, E	L09110136
LL1SS-537M-3053-SO	Aluminum	5160	14.5	7.26	mg/kg	J	E	L09110136
LL1SS-537M-3053-SO	Barium	30.9	0.363	0.0726	mg/kg	J+	Q	L09110136
LL1SS-537M-3053-SO	Beryllium	0.295	0.0182	0.0087	mg/kg			L09110136
LL1SS-537M-3053-SO	Cadmium	0.883	0.0726	0.0363	mg/kg			L09110136
LL1SS-537M-3053-SO	Calcium	3680	7.26	3.63	mg/kg			L09110136
LL1SS-537M-3053-SO	Chromium	15.2	0.182	0.0872	mg/kg	J+	Q	L09110136
LL1SS-537M-3053-SO	Cobalt	3.96	0.182	0.0872	mg/kg			L09110136
LL1SS-537M-3053-SO	Copper	17.2	0.182	0.0872	mg/kg			L09110136
LL1SS-537M-3053-SO	Iron	15800	1.45	0.726	mg/kg			L09110136
LL1SS-537M-3053-SO	Magnesium	1900	18.2	8.72	mg/kg			L09110136
LL1SS-537M-3053-SO	Manganese	338	0.363	0.0726	mg/kg	J	E	L09110136
LL1SS-537M-3053-SO	Potassium	477	36.3	18.2	mg/kg	J	Q, E	L09110136
LL1SS-537M-3053-SO	Silver	0.182	0.363	0.182	mg/kg	R	C	L09110136
LL1SS-537M-3053-SO	Sodium	28.6	18.2	3.63	mg/kg			L09110136
LL1SS-537M-3053-SO	Vanadium	10.7	0.363	0.182	mg/kg	J+	Q	L09110136
LL1SS-537M-3053-SO	Zinc	60.9	0.726	0.363	mg/kg	J	Q, E	L09110136
LL4SS-280M-2000-SO	Aluminum	10200	15.2	7.6	mg/kg			L09100553
LL4SS-280M-2000-SO	Barium	46.4	0.38	0.076	mg/kg	J+	Q	L09100553
LL4SS-280M-2000-SO	Beryllium	0.448	0.019	0.0091	mg/kg			L09100553

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LL4SS-280M-2000-SO	Cadmium	1.09	0.076	0.038	mg/kg			L09100553
LL4SS-280M-2000-SO	Calcium	4130	7.6	3.8	mg/kg	J	E	L09100553
LL4SS-280M-2000-SO	Chromium	20.5	0.19	0.0912	mg/kg	J-	A	L09100553
LL4SS-280M-2000-SO	Cobalt	5.41	0.19	0.0912	mg/kg	J-	A	L09100553
LL4SS-280M-2000-SO	Copper	22.3	0.19	0.0912	mg/kg			L09100553
LL4SS-280M-2000-SO	Iron	21600	1.52	0.76	mg/kg	J-	A	L09100553
LL4SS-280M-2000-SO	Magnesium	3250	19	9.12	mg/kg			L09100553
LL4SS-280M-2000-SO	Manganese	363	0.38	0.076	mg/kg	J-	A	L09100553
LL4SS-280M-2000-SO	Potassium	1280	38	19	mg/kg	J+	Q	L09100553
LL4SS-280M-2000-SO	Silver	0.19	0.38	0.19	mg/kg	R	C	L09100553
LL4SS-280M-2000-SO	Sodium	64.8	19	3.8	mg/kg			L09100553
LL4SS-280M-2000-SO	Vanadium	18.9	0.38	0.19	mg/kg			L09100553
LL4SS-280M-2000-SO	Zinc	79.9	0.76	0.38	mg/kg			L09100553
LL4SS-280M-2002-SO	Aluminum	10400	15	7.5	mg/kg			L09100553
LL4SS-280M-2002-SO	Barium	49.6	0.375	0.075	mg/kg	J+	Q	L09100553
LL4SS-280M-2002-SO	Beryllium	0.471	0.0187	0.009	mg/kg			L09100553
LL4SS-280M-2002-SO	Cadmium	1.06	0.075	0.0375	mg/kg			L09100553
LL4SS-280M-2002-SO	Calcium	5700	7.5	3.75	mg/kg	J	E	L09100553
LL4SS-280M-2002-SO	Chromium	20.9	0.187	0.0899	mg/kg	J-	A	L09100553
LL4SS-280M-2002-SO	Cobalt	5.27	0.187	0.0899	mg/kg	J-	A	L09100553
LL4SS-280M-2002-SO	Copper	21	0.187	0.0899	mg/kg			L09100553
LL4SS-280M-2002-SO	Iron	21600	1.5	0.75	mg/kg	J-	A	L09100553
LL4SS-280M-2002-SO	Magnesium	3220	18.7	8.99	mg/kg			L09100553
LL4SS-280M-2002-SO	Manganese	387	0.375	0.075	mg/kg	J-	A	L09100553
LL4SS-280M-2002-SO	Potassium	1250	37.5	18.7	mg/kg	J+	Q	L09100553
LL4SS-280M-2002-SO	Silver	0.187	0.375	0.187	mg/kg	R	C	L09100553
LL4SS-280M-2002-SO	Sodium	74	18.7	3.75	mg/kg			L09100553
LL4SS-280M-2002-SO	Vanadium	18.7	0.375	0.187	mg/kg			L09100553
LL4SS-280M-2002-SO	Zinc	76	0.75	0.375	mg/kg			L09100553
LL4SS-280M-2003-SO	Aluminum	9150	14.2	7.11	mg/kg			L09100553
LL4SS-280M-2003-SO	Barium	44.8	0.355	0.0711	mg/kg	J+	Q	L09100553
LL4SS-280M-2003-SO	Beryllium	0.436	0.0178	0.0085	mg/kg			L09100553
LL4SS-280M-2003-SO	Cadmium	1.07	0.0711	0.0355	mg/kg			L09100553
LL4SS-280M-2003-SO	Calcium	4300	7.11	3.55	mg/kg	J	E	L09100553
LL4SS-280M-2003-SO	Chromium	22.1	0.178	0.0853	mg/kg	J-	A	L09100553
LL4SS-280M-2003-SO	Cobalt	5.67	0.178	0.0853	mg/kg	J-	A	L09100553
LL4SS-280M-2003-SO	Copper	22.9	0.178	0.0853	mg/kg			L09100553
LL4SS-280M-2003-SO	Iron	21300	1.42	0.711	mg/kg	J-	A	L09100553
LL4SS-280M-2003-SO	Magnesium	3100	17.8	8.53	mg/kg			L09100553
LL4SS-280M-2003-SO	Manganese	420	0.355	0.0711	mg/kg	J-	A	L09100553
LL4SS-280M-2003-SO	Potassium	1090	35.5	17.8	mg/kg	J+	Q	L09100553
LL4SS-280M-2003-SO	Silver	0.178	0.355	0.178	mg/kg	R	C	L09100553
LL4SS-280M-2003-SO	Sodium	60	17.8	3.55	mg/kg			L09100553
LL4SS-280M-2003-SO	Vanadium	17.2	0.355	0.178	mg/kg			L09100553
LL4SS-280M-2003-SO	Zinc	82.3	0.711	0.355	mg/kg			L09100553
LLISS-523M-3027-SO	Aluminum	2940	14.5	7.27	mg/kg			L09100645
LLISS-523M-3027-SO	Barium	22.7	0.364	0.0727	mg/kg			L09100645
LLISS-523M-3027-SO	Beryllium	0.198	0.0182	0.0087	mg/kg			L09100645
LLISS-523M-3027-SO	Cadmium	0.729	0.0727	0.0364	mg/kg			L09100645

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LLISS-523M-3027-SO	Calcium	4390	7.27	3.64	mg/kg			L09100645
LLISS-523M-3027-SO	Chromium	17.9	0.182	0.0872	mg/kg			L09100645
LLISS-523M-3027-SO	Cobalt	2.58	0.182	0.0872	mg/kg			L09100645
LLISS-523M-3027-SO	Copper	11.1	0.182	0.0872	mg/kg			L09100645
LLISS-523M-3027-SO	Iron	12900	1.45	0.727	mg/kg			L09100645
LLISS-523M-3027-SO	Magnesium	1090	18.2	8.72	mg/kg			L09100645
LLISS-523M-3027-SO	Manganese	431	0.364	0.0727	mg/kg			L09100645
LLISS-523M-3027-SO	Potassium	424	36.4	18.2	mg/kg			L09100645
LLISS-523M-3027-SO	Silver	0.182	0.364	0.182	mg/kg	R	C	L09100645
LLISS-523M-3027-SO	Sodium	25.7	18.2	3.64	mg/kg			L09100645
LLISS-523M-3027-SO	Vanadium	8.25	0.364	0.182	mg/kg			L09100645
LLISS-523M-3027-SO	Zinc	51.7	0.727	0.364	mg/kg			L09100645
LLISS-523M-3029-SO	Aluminum	3010	14.8	7.4	mg/kg			L09100645
LLISS-523M-3029-SO	Barium	23.9	0.37	0.074	mg/kg			L09100645
LLISS-523M-3029-SO	Beryllium	0.198	0.0185	0.0089	mg/kg			L09100645
LLISS-523M-3029-SO	Cadmium	0.691	0.074	0.037	mg/kg			L09100645
LLISS-523M-3029-SO	Calcium	4950	7.4	3.7	mg/kg			L09100645
LLISS-523M-3029-SO	Chromium	14.1	0.185	0.0889	mg/kg			L09100645
LLISS-523M-3029-SO	Cobalt	2.57	0.185	0.0889	mg/kg			L09100645
LLISS-523M-3029-SO	Copper	9.71	0.185	0.0889	mg/kg			L09100645
LLISS-523M-3029-SO	Iron	12800	1.48	0.74	mg/kg			L09100645
LLISS-523M-3029-SO	Magnesium	1230	18.5	8.89	mg/kg			L09100645
LLISS-523M-3029-SO	Manganese	431	0.37	0.074	mg/kg			L09100645
LLISS-523M-3029-SO	Potassium	420	37	18.5	mg/kg			L09100645
LLISS-523M-3029-SO	Silver	0.185	0.37	0.185	mg/kg	R	C	L09100645
LLISS-523M-3029-SO	Sodium	26.9	18.5	3.7	mg/kg			L09100645
LLISS-523M-3029-SO	Vanadium	8.04	0.37	0.185	mg/kg			L09100645
LLISS-523M-3029-SO	Zinc	57.2	0.74	0.37	mg/kg			L09100645
LLISS-523M-3030-SO	Aluminum	2770	14.1	7.06	mg/kg			L09100645
LLISS-523M-3030-SO	Barium	21.7	0.353	0.0706	mg/kg			L09100645
LLISS-523M-3030-SO	Beryllium	0.183	0.0176	0.0085	mg/kg			L09100645
LLISS-523M-3030-SO	Cadmium	0.611	0.0706	0.0353	mg/kg			L09100645
LLISS-523M-3030-SO	Calcium	4610	7.06	3.53	mg/kg			L09100645
LLISS-523M-3030-SO	Chromium	13	0.176	0.0847	mg/kg			L09100645
LLISS-523M-3030-SO	Cobalt	2.49	0.176	0.0847	mg/kg			L09100645
LLISS-523M-3030-SO	Copper	9.3	0.176	0.0847	mg/kg			L09100645
LLISS-523M-3030-SO	Iron	11300	1.41	0.706	mg/kg			L09100645
LLISS-523M-3030-SO	Magnesium	1060	17.6	8.47	mg/kg			L09100645
LLISS-523M-3030-SO	Manganese	401	0.353	0.0706	mg/kg			L09100645
LLISS-523M-3030-SO	Potassium	418	35.3	17.6	mg/kg			L09100645
LLISS-523M-3030-SO	Silver	0.176	0.353	0.176	mg/kg	R	C	L09100645
LLISS-523M-3030-SO	Sodium	27.1	17.6	3.53	mg/kg			L09100645
LLISS-523M-3030-SO	Vanadium	7.5	0.353	0.176	mg/kg			L09100645
LLISS-523M-3030-SO	Zinc	54.8	0.706	0.353	mg/kg			L09100645
F15SS-012M-0500-SO	Antimony	0.444	0.0998	0.0499	mg/kg			L09110136
F15SS-012M-0500-SO	Arsenic	10	0.292	0.073	mg/kg	J-	Q	L09110136
F15SS-012M-0500-SO	Lead	16.9	0.195	0.0973	mg/kg			L09110136
F15SS-012M-0500-SO	Nickel	30.6	0.779	0.195	mg/kg	J-	A	L09110136
F15SS-012M-0500-SO	Selenium	0.367	0.195	0.0973	mg/kg	J	C, Q, E	L09110136

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
F15SS-012M-0500-SO	Thallium	0.143	0.0195	0.0097	mg/kg	J	C	L09110136
F15SS-012M-0502-SO	Antimony	0.278	0.0994	0.0497	mg/kg			L09110136
F15SS-012M-0502-SO	Arsenic	9.18	0.303	0.0758	mg/kg	J-	Q	L09110136
F15SS-012M-0502-SO	Lead	18	0.202	0.101	mg/kg			L09110136
F15SS-012M-0502-SO	Nickel	35.5	0.808	0.202	mg/kg	J-	A	L09110136
F15SS-012M-0502-SO	Selenium	0.307	0.202	0.101	mg/kg	J	C, Q, E	L09110136
F15SS-012M-0502-SO	Thallium	0.143	0.0202	0.0101	mg/kg	J	C	L09110136
F15SS-012M-0503-SO	Antimony	0.441	0.101	0.0506	mg/kg			L09110136
F15SS-012M-0503-SO	Arsenic	10	0.302	0.0756	mg/kg	J-	Q	L09110136
F15SS-012M-0503-SO	Lead	19.8	0.202	0.101	mg/kg			L09110136
F15SS-012M-0503-SO	Nickel	35.3	0.806	0.202	mg/kg	J-	A	L09110136
F15SS-012M-0503-SO	Selenium	0.36	0.202	0.101	mg/kg	J	C, Q, E	L09110136
F15SS-012M-0503-SO	Thallium	0.155	0.0202	0.0101	mg/kg	J	C	L09110136
LL1SS-517M-3018-SO	Antimony	0.363	0.101	0.0503	mg/kg			L09100553
LL1SS-517M-3018-SO	Arsenic	9.51	0.299	0.0747	mg/kg	J-	Q	L09100553
LL1SS-517M-3018-SO	Lead	15.6	0.199	0.0996	mg/kg	J	Q, A	L09100553
LL1SS-517M-3018-SO	Nickel	14.7	0.797	0.199	mg/kg			L09100553
LL1SS-517M-3018-SO	Selenium	0.25	0.398	0.199	mg/kg	J-	Q	L09100553
LL1SS-517M-3018-SO	Thallium	0.164	0.0199	0.01	mg/kg			L09100553
LL1SS-517M-3020-SO	Antimony	0.284	0.1	0.0502	mg/kg			L09100553
LL1SS-517M-3020-SO	Arsenic	12.9	0.3	0.075	mg/kg	J-	Q	L09100553
LL1SS-517M-3020-SO	Lead	16.6	0.2	0.1	mg/kg	J	Q, A	L09100553
LL1SS-517M-3020-SO	Nickel	15.4	0.8	0.2	mg/kg			L09100553
LL1SS-517M-3020-SO	Selenium	0.223	0.2	0.1	mg/kg	J-	Q	L09100553
LL1SS-517M-3020-SO	Thallium	0.123	0.02	0.01	mg/kg			L09100553
LL1SS-517M-3021-SO	Antimony	0.281	0.0994	0.0497	mg/kg			L09100553
LL1SS-517M-3021-SO	Arsenic	10.5	0.299	0.0747	mg/kg	J-	Q	L09100553
LL1SS-517M-3021-SO	Lead	17.2	0.199	0.0996	mg/kg	J	Q, A	L09100553
LL1SS-517M-3021-SO	Nickel	13.8	0.797	0.199	mg/kg			L09100553
LL1SS-517M-3021-SO	Selenium	0.252	0.199	0.0996	mg/kg	J-	Q	L09100553
LL1SS-517M-3021-SO	Thallium	0.122	0.0199	0.01	mg/kg			L09100553
LL1SS-537M-3050-SO	Antimony	0.455	0.0982	0.0491	mg/kg			L09110136
LL1SS-537M-3050-SO	Arsenic	10.4	0.288	0.072	mg/kg	J-	Q	L09110136
LL1SS-537M-3050-SO	Lead	13.6	0.192	0.096	mg/kg			L09110136
LL1SS-537M-3050-SO	Nickel	15.2	0.768	0.192	mg/kg	J-	A	L09110136
LL1SS-537M-3050-SO	Selenium	0.267	0.192	0.096	mg/kg	J	C, Q, E	L09110136
LL1SS-537M-3050-SO	Thallium	0.0954	0.0192	0.0096	mg/kg	J	C	L09110136
LL1SS-537M-3052-SO	Antimony	0.232	0.101	0.0503	mg/kg			L09110136
LL1SS-537M-3052-SO	Arsenic	10.8	0.285	0.0713	mg/kg	J-	Q	L09110136
LL1SS-537M-3052-SO	Lead	13.7	0.19	0.0951	mg/kg			L09110136
LL1SS-537M-3052-SO	Nickel	20.6	0.76	0.19	mg/kg	J-	A	L09110136
LL1SS-537M-3052-SO	Selenium	0.255	0.19	0.0951	mg/kg	J	C, Q, E	L09110136
LL1SS-537M-3052-SO	Thallium	0.0923	0.019	0.0095	mg/kg	J	C	L09110136
LL1SS-537M-3053-SO	Antimony	0.249	0.0991	0.0496	mg/kg			L09110136
LL1SS-537M-3053-SO	Arsenic	8.78	0.298	0.0745	mg/kg	J-	Q	L09110136
LL1SS-537M-3053-SO	Lead	12.2	0.199	0.0993	mg/kg			L09110136
LL1SS-537M-3053-SO	Nickel	16.5	0.794	0.199	mg/kg	J-	A	L09110136
LL1SS-537M-3053-SO	Selenium	0.299	0.199	0.0993	mg/kg	J	C, Q, E	L09110136
LL1SS-537M-3053-SO	Thallium	0.081	0.0199	0.0099	mg/kg	J	C	L09110136

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LL4SS-280M-2000-SO	Antimony	0.321	0.0967	0.0484	mg/kg			L09100553
LL4SS-280M-2000-SO	Arsenic	14.4	0.302	0.0756	mg/kg	J-	Q, C	L09100553
LL4SS-280M-2000-SO	Lead	23.4	0.202	0.101	mg/kg	J	Q, A	L09100553
LL4SS-280M-2000-SO	Nickel	21.5	0.806	0.202	mg/kg	J-	C	L09100553
LL4SS-280M-2000-SO	Selenium	0.295	0.202	0.101	mg/kg	J-	Q	L09100553
LL4SS-280M-2000-SO	Thallium	0.146	0.0202	0.0101	mg/kg			L09100553
LL4SS-280M-2002-SO	Antimony	0.323	0.0943	0.0471	mg/kg			L09100553
LL4SS-280M-2002-SO	Arsenic	12.9	0.296	0.0741	mg/kg	J-	Q	L09100553
LL4SS-280M-2002-SO	Lead	19.5	0.197	0.0987	mg/kg	J	Q, A	L09100553
LL4SS-280M-2002-SO	Nickel	24.2	0.79	0.197	mg/kg			L09100553
LL4SS-280M-2002-SO	Selenium	0.288	0.197	0.0987	mg/kg	J-	Q	L09100553
LL4SS-280M-2002-SO	Thallium	0.154	0.0197	0.0099	mg/kg			L09100553
LL4SS-280M-2003-SO	Antimony	0.307	0.0999	0.05	mg/kg			L09100553
LL4SS-280M-2003-SO	Arsenic	11.5	0.295	0.0738	mg/kg	J-	Q	L09100553
LL4SS-280M-2003-SO	Lead	19.7	0.197	0.0984	mg/kg	J	Q, A	L09100553
LL4SS-280M-2003-SO	Nickel	18.1	0.787	0.197	mg/kg			L09100553
LL4SS-280M-2003-SO	Selenium	0.21	0.197	0.0984	mg/kg	J-	Q	L09100553
LL4SS-280M-2003-SO	Thallium	0.128	0.0197	0.0098	mg/kg			L09100553
LLISS-523M-3027-SO	Antimony	0.136	0.0956	0.0478	mg/kg			L09100645
LLISS-523M-3027-SO	Arsenic	5.4	0.296	0.074	mg/kg	J	E	L09100645
LLISS-523M-3027-SO	Lead	19.7	0.197	0.0986	mg/kg	J	E	L09100645
LLISS-523M-3027-SO	Nickel	10.2	0.789	0.197	mg/kg	J	E	L09100645
LLISS-523M-3027-SO	Selenium	0.0986	0.197	0.0986	mg/kg	UJ	Q, E	L09100645
LLISS-523M-3027-SO	Thallium	0.106	0.0197	0.0099	mg/kg	J	E, C	L09100645
LLISS-523M-3029-SO	Antimony	0.151	0.1	0.0501	mg/kg			L09100645
LLISS-523M-3029-SO	Arsenic	6.64	0.278	0.0694	mg/kg	J	E	L09100645
LLISS-523M-3029-SO	Lead	22.6	0.185	0.0926	mg/kg	J	E	L09100645
LLISS-523M-3029-SO	Nickel	11.8	0.741	0.185	mg/kg	J	E	L09100645
LLISS-523M-3029-SO	Selenium	0.0926	0.185	0.0926	mg/kg	UJ	Q, E	L09100645
LLISS-523M-3029-SO	Thallium	0.0704	0.0185	0.0093	mg/kg	J	E, C	L09100645
LLISS-523M-3030-SO	Antimony	0.164	0.0983	0.0491	mg/kg			L09100645
LLISS-523M-3030-SO	Arsenic	6.04	0.29	0.0726	mg/kg	J	E	L09100645
LLISS-523M-3030-SO	Lead	20.4	0.194	0.0968	mg/kg	J	E	L09100645
LLISS-523M-3030-SO	Nickel	13.8	0.774	0.194	mg/kg	J	E	L09100645
LLISS-523M-3030-SO	Selenium	0.0968	0.194	0.0968	mg/kg	UJ	Q, E	L09100645
LLISS-523M-3030-SO	Thallium	0.0585	0.0194	0.0097	mg/kg	J	E, C	L09100645
F15SS-012M-0500-SO	Mercury	0.03	0.0985	0.0099	mg/kg	J		L09110136
F15SS-012M-0502-SO	Mercury	0.0361	0.101	0.0101	mg/kg	J		L09110136
F15SS-012M-0503-SO	Mercury	0.0366	0.0999	0.01	mg/kg	J		L09110136
LL1SS-517M-3018-SO	Mercury	0.0162	0.0996	0.01	mg/kg	J		L09100553
LL1SS-517M-3020-SO	Mercury	0.0131	0.1	0.01	mg/kg	J		L09100553
LL1SS-517M-3021-SO	Mercury	0.0203	0.0946	0.0095	mg/kg	J		L09100553
LL1SS-537M-3050-SO	Mercury	0.0166	0.0998	0.01	mg/kg	J		L09110136
LL1SS-537M-3052-SO	Mercury	0.0148	0.0975	0.0098	mg/kg	J		L09110136
LL1SS-537M-3053-SO	Mercury	0.0175	0.0968	0.0097	mg/kg	J		L09110136
LL4SS-280M-2000-SO	Mercury	0.0234	0.0937	0.0094	mg/kg	J		L09100553
LL4SS-280M-2002-SO	Mercury	0.0378	0.0981	0.0098	mg/kg	J		L09100553
LL4SS-280M-2003-SO	Mercury	0.0222	0.097	0.0097	mg/kg	J		L09100553
LLISS-523M-3027-SO	Mercury	0.025	0.0957	0.0096	mg/kg	J		L09100645

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LLISS-523M-3029-SO	Mercury	0.0179	0.0926	0.0093	mg/kg	J		L09100645
LLISS-523M-3030-SO	Mercury	0.0202	0.0973	0.0097	mg/kg	J		L09100645
LLISS-523M-3027-SO	4,4'-DDD	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	4,4'-DDE	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	4,4'-DDT	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	Aldrin	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	alpha Chlordane	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	alpha-BHC	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	beta-BHC	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	delta-BHC	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	Dieldrin	0.345	1.72	0.345	ug/kg	NJ	$, *III, -	L09100645
LLISS-523M-3027-SO	Endosulfan I	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	Endosulfan II	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	Endosulfan sulfate	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	Endrin	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	Endrin aldehyde	0.345	1.72	0.345	ug/kg	J	$, *III, -	L09100645
LLISS-523M-3027-SO	Endrin ketone	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	gamma Chlordane	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	gamma-BHC (Lindane)	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	Heptachlor	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	Heptachlor epoxide	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	Methoxychlor	0.345	1.72	0.345	ug/kg	U		L09100645
LLISS-523M-3027-SO	Toxaphene	17.5	34.5	17.5	ug/kg	U		L09100645
LLISS-523M-3029-SO	4,4'-DDD	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	4,4'-DDE	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	4,4'-DDT	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	Aldrin	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	alpha Chlordane	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	alpha-BHC	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	beta-BHC	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	delta-BHC	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	Dieldrin	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	Endosulfan I	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	Endosulfan II	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	Endosulfan sulfate	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	Endrin	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	Endrin aldehyde	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	Endrin ketone	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	gamma Chlordane	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	gamma-BHC (Lindane)	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	Heptachlor	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	Heptachlor epoxide	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	Methoxychlor	0.315	1.58	0.315	ug/kg	U		L09100645
LLISS-523M-3029-SO	Toxaphene	15.9	31.5	15.9	ug/kg	U		L09100645
LLISS-523M-3030-SO	4,4'-DDD	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	4,4'-DDE	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	4,4'-DDT	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	Aldrin	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	alpha Chlordane	0.329	1.65	0.329	ug/kg	U		L09100645

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LLISS-523M-3030-SO	alpha-BHC	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	beta-BHC	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	delta-BHC	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	Dieldrin	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	Endosulfan I	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	Endosulfan II	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	Endosulfan sulfate	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	Endrin	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	Endrin aldehyde	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	Endrin ketone	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	gamma Chlordane	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	gamma-BHC (Lindane)	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	Heptachlor	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	Heptachlor epoxide	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	Methoxychlor	0.329	1.65	0.329	ug/kg	U		L09100645
LLISS-523M-3030-SO	Toxaphene	16.7	32.9	16.7	ug/kg	U		L09100645
LLISS-523M-3027-SO	Aroclor-1016	86.2	172	86.2	ug/kg	R	D	L09100645
LLISS-523M-3027-SO	Aroclor-1016	8.62	17.2	8.62	ug/kg	U		L09100645
LLISS-523M-3027-SO	Aroclor-1221	8.62	17.2	8.62	ug/kg	U		L09100645
LLISS-523M-3027-SO	Aroclor-1221	86.2	172	86.2	ug/kg	R	D	L09100645
LLISS-523M-3027-SO	Aroclor-1232	86.2	172	86.2	ug/kg	R	D	L09100645
LLISS-523M-3027-SO	Aroclor-1232	8.62	17.2	8.62	ug/kg	U		L09100645
LLISS-523M-3027-SO	Aroclor-1242	86.2	172	86.2	ug/kg	R	D	L09100645
LLISS-523M-3027-SO	Aroclor-1242	8.62	17.2	8.62	ug/kg	U		L09100645
LLISS-523M-3027-SO	Aroclor-1248	86.2	172	86.2	ug/kg	R	D	L09100645
LLISS-523M-3027-SO	Aroclor-1248	8.62	17.2	8.62	ug/kg	U		L09100645
LLISS-523M-3027-SO	Aroclor-1254	932	17.2	8.62	ug/kg	R	D	L09100645
LLISS-523M-3027-SO	Aroclor-1254	1220	172	86.2	ug/kg			L09100645
LLISS-523M-3027-SO	Aroclor-1260	86.2	172	86.2	ug/kg	R	D	L09100645
LLISS-523M-3027-SO	Aroclor-1260	8.62	17.2	8.62	ug/kg	U		L09100645
LLISS-523M-3029-SO	Aroclor-1016	7.88	15.8	7.88	ug/kg	U		L09100645
LLISS-523M-3029-SO	Aroclor-1016	78.8	158	78.8	ug/kg	R	D	L09100645
LLISS-523M-3029-SO	Aroclor-1221	78.8	158	78.8	ug/kg	R	D	L09100645
LLISS-523M-3029-SO	Aroclor-1221	7.88	15.8	7.88	ug/kg	U		L09100645
LLISS-523M-3029-SO	Aroclor-1232	78.8	158	78.8	ug/kg	R	D	L09100645
LLISS-523M-3029-SO	Aroclor-1232	7.88	15.8	7.88	ug/kg	U		L09100645
LLISS-523M-3029-SO	Aroclor-1242	78.8	158	78.8	ug/kg	R	D	L09100645
LLISS-523M-3029-SO	Aroclor-1242	7.88	15.8	7.88	ug/kg	U		L09100645
LLISS-523M-3029-SO	Aroclor-1248	78.8	158	78.8	ug/kg	R	D	L09100645
LLISS-523M-3029-SO	Aroclor-1248	7.88	15.8	7.88	ug/kg	U		L09100645
LLISS-523M-3029-SO	Aroclor-1254	1060	15.8	7.88	ug/kg	R	D	L09100645
LLISS-523M-3029-SO	Aroclor-1254	1280	158	78.8	ug/kg			L09100645
LLISS-523M-3029-SO	Aroclor-1260	7.88	15.8	7.88	ug/kg	U		L09100645
LLISS-523M-3029-SO	Aroclor-1260	78.8	158	78.8	ug/kg	R	D	L09100645
LLISS-523M-3030-SO	Aroclor-1016	8.23	16.5	8.23	ug/kg	U		L09100645
LLISS-523M-3030-SO	Aroclor-1016	82.3	165	82.3	ug/kg	R	D	L09100645
LLISS-523M-3030-SO	Aroclor-1221	82.3	165	82.3	ug/kg	R	D	L09100645
LLISS-523M-3030-SO	Aroclor-1221	8.23	16.5	8.23	ug/kg	U		L09100645
LLISS-523M-3030-SO	Aroclor-1232	82.3	165	82.3	ug/kg	R	D	L09100645

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LLISS-523M-3030-SO	Aroclor-1232	8.23	16.5	8.23	ug/kg	U		L09100645
LLISS-523M-3030-SO	Aroclor-1242	8.23	16.5	8.23	ug/kg	U		L09100645
LLISS-523M-3030-SO	Aroclor-1242	82.3	165	82.3	ug/kg	R	D	L09100645
LLISS-523M-3030-SO	Aroclor-1248	82.3	165	82.3	ug/kg	R	D	L09100645
LLISS-523M-3030-SO	Aroclor-1248	8.23	16.5	8.23	ug/kg	U		L09100645
LLISS-523M-3030-SO	Aroclor-1254	1200	165	82.3	ug/kg			L09100645
LLISS-523M-3030-SO	Aroclor-1254	973	16.5	8.23	ug/kg	R	D	L09100645
LLISS-523M-3030-SO	Aroclor-1260	8.23	16.5	8.23	ug/kg	U		L09100645
LLISS-523M-3030-SO	Aroclor-1260	82.3	165	82.3	ug/kg	R	D	L09100645
LLISS-523D-3031-SO	1,1,1-Trichloroethane	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	1,1,2,2-Tetrachloroethane	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	1,1,2-Trichloroethane	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	1,1-Dichloroethane	0.885	4.42	0.885	ug/kg	U		L09100645
LLISS-523D-3031-SO	1,1-Dichloroethene	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	1,2-Dibromoethane	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	1,2-Dichloroethane	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	1,2-Dichloroethene (total)	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	1,2-Dichloropropane	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	2-Butanone	2.21	4.42	2.21	ug/kg	U		L09100645
LLISS-523D-3031-SO	2-Hexanone	2.21	4.42	2.21	ug/kg	U		L09100645
LLISS-523D-3031-SO	4-Methyl-2-pentanone	2.21	4.42	2.21	ug/kg	U		L09100645
LLISS-523D-3031-SO	Acetone	4.42	8.85	4.42	ug/kg	U		L09100645
LLISS-523D-3031-SO	Benzene	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Bromochloromethane	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Bromodichloromethane	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Bromoform	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Bromomethane	0.885	4.42	0.885	ug/kg	U		L09100645
LLISS-523D-3031-SO	Carbon disulfide	0.496	4.42	0.442	ug/kg	J		L09100645
LLISS-523D-3031-SO	Carbon tetrachloride	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Chlorobenzene	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Chloroethane	0.885	4.42	0.885	ug/kg	U		L09100645
LLISS-523D-3031-SO	Chloroform	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Chloromethane	1.77	4.42	1.77	ug/kg	U		L09100645
LLISS-523D-3031-SO	cis-1,3-Dichloropropene	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Dibromochloromethane	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Ethyl benzene	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Methylene chloride	1.83	4.42	0.885	ug/kg	J		L09100645
LLISS-523D-3031-SO	Styrene	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Tetrachloroethene	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Toluene	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	trans-1,3-Dichloropropene	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Trichloroethene	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3031-SO	Vinyl chloride	0.885	4.42	0.885	ug/kg	U		L09100645
LLISS-523D-3031-SO	Xylenes, Total	0.442	4.42	0.442	ug/kg	U		L09100645
LLISS-523D-3033-SO	1,1,1-Trichloroethane	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	1,1,2,2-Tetrachloroethane	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	1,1,2-Trichloroethane	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	1,1-Dichloroethane	0.979	4.89	0.979	ug/kg	U		L09100645
LLISS-523D-3033-SO	1,1-Dichloroethene	0.489	4.89	0.489	ug/kg	U		L09100645

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LLISS-523D-3033-SO	1,2-Dibromoethane	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	1,2-Dichloroethane	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	1,2-Dichloroethene (total)	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	1,2-Dichloropropane	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	2-Butanone	2.45	4.89	2.45	ug/kg	U		L09100645
LLISS-523D-3033-SO	2-Hexanone	2.45	4.89	2.45	ug/kg	U		L09100645
LLISS-523D-3033-SO	4-Methyl-2-pentanone	2.45	4.89	2.45	ug/kg	U		L09100645
LLISS-523D-3033-SO	Acetone	12	9.79	4.89	ug/kg	U	T	L09100645
LLISS-523D-3033-SO	Benzene	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Bromochloromethane	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Bromodichloromethane	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Bromoform	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Bromomethane	0.979	4.89	0.979	ug/kg	U		L09100645
LLISS-523D-3033-SO	Carbon disulfide	0.907	4.89	0.489	ug/kg	J		L09100645
LLISS-523D-3033-SO	Carbon tetrachloride	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Chlorobenzene	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Chloroethane	0.979	4.89	0.979	ug/kg	U		L09100645
LLISS-523D-3033-SO	Chloroform	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Chloromethane	1.96	4.89	1.96	ug/kg	U		L09100645
LLISS-523D-3033-SO	cis-1,3-Dichloropropene	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Dibromochloromethane	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Ethyl benzene	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Methylene chloride	6.09	4.89	0.979	ug/kg			L09100645
LLISS-523D-3033-SO	Styrene	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Tetrachloroethene	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Toluene	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	trans-1,3-Dichloropropene	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Trichloroethene	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523D-3033-SO	Vinyl chloride	0.979	4.89	0.979	ug/kg	U		L09100645
LLISS-523D-3033-SO	Xylenes, Total	0.489	4.89	0.489	ug/kg	U		L09100645
LLISS-523M-3027-SO	1,2,4-Trichlorobenzene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	1,2-Dichlorobenzene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	1,3-Dichlorobenzene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	1,4-Dichlorobenzene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	2,4,5-Trichlorophenol	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	2,4,6-Trichlorophenol	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	2,4-Dichlorophenol	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	2,4-Dimethylphenol	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	2,4-Dinitrophenol	2140	4280	2140	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	2,4-Dinitrotoluene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	2,6-Dinitrotoluene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	2-Chloronaphthalene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	2-Chlorophenol	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	2-Methylnaphthalene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	2-Methylphenol	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	2-Nitroaniline	2140	4280	2140	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	2-Nitrophenol	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	3,3'-Dichlorobenzidine	857	1710	857	ug/kg	R	C	L09100645
LLISS-523M-3027-SO	3-,4-Methylphenol	428	857	428	ug/kg	UJ	S	L09100645

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LLISS-523M-3027-SO	3-Nitroaniline	2140	4280	2140	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	4,6-Dinitro-2-methylphenol	2140	4280	2140	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	4-Bromophenyl-phenylether	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	4-Chloro-3-methylphenol	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	4-Chloroaniline	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	4-Chlorophenyl-phenyl	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	4-Nitroaniline	2140	4280	2140	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	4-Nitrophenol	2140	4280	2140	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Acenaphthene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Acenaphthylene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Anthracene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Benzo(a)anthracene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Benzo(a)pyrene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Benzo(b)fluoranthene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Benzo(g,h,i)Perylene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Benzo(k)fluoranthene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Benzoic acid	1710	26000	1710	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Benzyl alcohol	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Bis(2-	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Bis(2-Chloroethyl)ether	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	bis(2-Chloroisopropyl)ether	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	bis(2-Ethylhexyl)phthalate	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Butylbenzylphthalate	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Carbazole	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Chrysene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Dibenzo(a,h)Anthracene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Dibenzofuran	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Diethylphthalate	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Dimethylphthalate	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Di-N-Butylphthalate	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Di-n-octylphthalate	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Fluoranthene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Fluorene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Hexachlorobenzene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Hexachlorobutadiene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Hexachlorocyclopentadiene	428	857	428	ug/kg	R	C	L09100645
LLISS-523M-3027-SO	Hexachloroethane	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Indeno(1,2,3-cd)pyrene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Isophorone	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Naphthalene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Nitrobenzene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	N-Nitrosodiphenylamine	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	N-Nitrosodipropylamine	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Pentachlorophenol	2140	4280	2140	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Phenanthrene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Phenol	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3027-SO	Pyrene	428	857	428	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	1,2,4-Trichlorobenzene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	1,2-Dichlorobenzene	432	865	432	ug/kg	UJ	S	L09100645

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LLISS-523M-3029-SO	1,3-Dichlorobenzene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	1,4-Dichlorobenzene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	2,4,5-Trichlorophenol	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	2,4,6-Trichlorophenol	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	2,4-Dichlorophenol	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	2,4-Dimethylphenol	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	2,4-Dinitrophenol	2160	4320	2160	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	2,4-Dinitrotoluene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	2,6-Dinitrotoluene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	2-Chloronaphthalene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	2-Chlorophenol	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	2-Methylnaphthalene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	2-Methylphenol	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	2-Nitroaniline	2160	4320	2160	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	2-Nitrophenol	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	3,3'-Dichlorobenzidine	865	1730	865	ug/kg	R	C	L09100645
LLISS-523M-3029-SO	3-,4-Methylphenol	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	3-Nitroaniline	2160	4320	2160	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	4,6-Dinitro-2-methylphenol	2160	4320	2160	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	4-Bromophenyl-phenylether	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	4-Chloro-3-methylphenol	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	4-Chloroaniline	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	4-Chlorophenyl-phenyl	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	4-Nitroaniline	2160	4320	2160	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	4-Nitrophenol	2160	4320	2160	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Acenaphthene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Acenaphthylene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Anthracene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Benzo(a)anthracene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Benzo(a)pyrene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Benzo(b)fluoranthene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Benzo(g,h,i)Perylene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Benzo(k)fluoranthene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Benzoic acid	1730	26200	1730	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Benzyl alcohol	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Bis(2-	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Bis(2-Chloroethyl)ether	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	bis(2-Chloroisopropyl)ether	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	bis(2-Ethylhexyl)phthalate	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Butylbenzylphthalate	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Carbazole	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Chrysene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Dibenzo(a,h)Anthracene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Dibenzofuran	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Diethylphthalate	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Dimethylphthalate	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Di-N-Butylphthalate	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Di-n-octylphthalate	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Fluoranthene	432	865	432	ug/kg	UJ	S	L09100645

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LLISS-523M-3029-SO	Fluorene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Hexachlorobenzene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Hexachlorobutadiene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Hexachlorocyclopentadiene	432	865	432	ug/kg	R	C	L09100645
LLISS-523M-3029-SO	Hexachloroethane	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Indeno(1,2,3-cd)pyrene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Isophorone	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Naphthalene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Nitrobenzene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	N-Nitrosodiphenylamine	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	N-Nitrosodipropylamine	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Pentachlorophenol	2160	4320	2160	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Phenanthrene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Phenol	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3029-SO	Pyrene	432	865	432	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	1,2,4-Trichlorobenzene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	1,2-Dichlorobenzene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	1,3-Dichlorobenzene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	1,4-Dichlorobenzene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	2,4,5-Trichlorophenol	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	2,4,6-Trichlorophenol	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	2,4-Dichlorophenol	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	2,4-Dimethylphenol	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	2,4-Dinitrophenol	2000	4000	2000	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	2,4-Dinitrotoluene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	2,6-Dinitrotoluene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	2-Chloronaphthalene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	2-Chlorophenol	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	2-Methylnaphthalene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	2-Methylphenol	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	2-Nitroaniline	2000	4000	2000	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	2-Nitrophenol	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	3,3'-Dichlorobenzidine	800	1600	800	ug/kg	R	C	L09100645
LLISS-523M-3030-SO	3-,4-Methylphenol	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	3-Nitroaniline	2000	4000	2000	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	4,6-Dinitro-2-methylphenol	2000	4000	2000	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	4-Bromophenyl-phenylether	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	4-Chloro-3-methylphenol	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	4-Chloroaniline	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	4-Chlorophenyl-phenyl	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	4-Nitroaniline	2000	4000	2000	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	4-Nitrophenol	2000	4000	2000	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Acenaphthene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Acenaphthylene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Anthracene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Benzo(a)anthracene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Benzo(a)pyrene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Benzo(b)fluoranthene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Benzo(g,h,i)Perylene	400	800	400	ug/kg	UJ	S	L09100645

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LLISS-523M-3030-SO	Benzo(k)fluoranthene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Benzoic acid	1600	24200	1600	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Benzyl alcohol	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Bis(2-	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Bis(2-Chloroethyl)ether	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	bis(2-Chloroisopropyl)ether	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	bis(2-Ethylhexyl)phthalate	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Butylbenzylphthalate	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Carbazole	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Chrysene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Dibenzo(a,h)Anthracene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Dibenzofuran	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Diethylphthalate	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Dimethylphthalate	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Di-N-Butylphthalate	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Di-n-octylphthalate	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Fluoranthene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Fluorene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Hexachlorobenzene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Hexachlorobutadiene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Hexachlorocyclopentadiene	400	800	400	ug/kg	R	C	L09100645
LLISS-523M-3030-SO	Hexachloroethane	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Indeno(1,2,3-cd)pyrene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Isophorone	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Naphthalene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Nitrobenzene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	N-Nitrosodiphenylamine	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	N-Nitrosodipropylamine	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Pentachlorophenol	2000	4000	2000	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Phenanthrene	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Phenol	400	800	400	ug/kg	UJ	S	L09100645
LLISS-523M-3030-SO	Pyrene	400	800	400	ug/kg	UJ	S	L09100645
F15SS-012M-0500-SO	1,3,5-Trinitrobenzene	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	1,3-Dinitrobenzene	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	2,4,6-Trinitrotoluene	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	2,4-Dinitrotoluene	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	2,6-Dinitrotoluene	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	2-Amino-4,6-dinitrotoluene	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	2-Nitrotoluene	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	3-Nitrotoluene	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	4-Amino-2,6-dinitrotoluene	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	4-Nitrotoluene	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	HMX	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	Nitrobenzene	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	Nitroglycerin	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	PETN	0.499	1.5	0.499	mg/kg	U		L09110136
F15SS-012M-0500-SO	RDX	0.0997	0.249	0.0997	mg/kg	U		L09110136
F15SS-012M-0500-SO	Tetryl	0.0997	0.249	0.0997	mg/kg	R	C	L09110136
F15SS-012M-0502-SO	1,3,5-Trinitrobenzene	0.0998	0.25	0.0998	mg/kg	U		L09110136

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
F15SS-012M-0502-SO	1,3-Dinitrobenzene	0.0998	0.25	0.0998	mg/kg	U		L09110136
F15SS-012M-0502-SO	2,4,6-Trinitrotoluene	0.0998	0.25	0.0998	mg/kg	U		L09110136
F15SS-012M-0502-SO	2,4-Dinitrotoluene	0.0998	0.25	0.0998	mg/kg	U		L09110136
F15SS-012M-0502-SO	2,6-Dinitrotoluene	0.0998	0.25	0.0998	mg/kg	U		L09110136
F15SS-012M-0502-SO	2-Amino-4,6-dinitrotoluene	0.0998	0.25	0.0998	mg/kg	U		L09110136
F15SS-012M-0502-SO	2-Nitrotoluene	0.0998	0.25	0.0998	mg/kg	U		L09110136
F15SS-012M-0502-SO	3-Nitrotoluene	0.0998	0.25	0.0998	mg/kg	U		L09110136
F15SS-012M-0502-SO	4-Amino-2,6-dinitrotoluene	0.0998	0.25	0.0998	mg/kg	U		L09110136
F15SS-012M-0502-SO	4-Nitrotoluene	0.0998	0.25	0.0998	mg/kg	U		L09110136
F15SS-012M-0502-SO	HMX	0.0998	0.25	0.0998	mg/kg	U		L09110136
F15SS-012M-0502-SO	Nitrobenzene	0.0998	0.25	0.0998	mg/kg	U		L09110136
F15SS-012M-0502-SO	Nitroglycerin	0.0998	0.25	0.0998	mg/kg	U		L09110136
F15SS-012M-0502-SO	PETN	0.499	1.5	0.499	mg/kg	U		L09110136
F15SS-012M-0502-SO	RDX	0.0998	0.25	0.0998	mg/kg	U		L09110136
F15SS-012M-0502-SO	Tetryl	0.0998	0.25	0.0998	mg/kg	R	C	L09110136
F15SS-012M-0503-SO	1,3,5-Trinitrobenzene	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	1,3-Dinitrobenzene	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	2,4,6-Trinitrotoluene	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	2,4-Dinitrotoluene	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	2,6-Dinitrotoluene	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	2-Amino-4,6-dinitrotoluene	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	2-Nitrotoluene	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	3-Nitrotoluene	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	4-Amino-2,6-dinitrotoluene	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	4-Nitrotoluene	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	HMX	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	Nitrobenzene	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	Nitroglycerin	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	PETN	0.5	1.5	0.5	mg/kg	U		L09110136
F15SS-012M-0503-SO	RDX	0.0999	0.25	0.0999	mg/kg	U		L09110136
F15SS-012M-0503-SO	Tetryl	0.0999	0.25	0.0999	mg/kg	R	C	L09110136
LL1SS-517M-3018-SO	1,3,5-Trinitrobenzene	0.0988	0.247	0.0988	mg/kg	U		L09100553
LL1SS-517M-3018-SO	1,3,5-Trinitrobenzene	0.0988	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3018-SO	1,3-Dinitrobenzene	0.0988	0.247	0.0988	mg/kg	U		L09100553
LL1SS-517M-3018-SO	1,3-Dinitrobenzene	0.0988	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3018-SO	2,4,6-Trinitrotoluene	5.09	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3018-SO	2,4,6-Trinitrotoluene	4.71	0.247	0.0988	mg/kg			L09100553
LL1SS-517M-3018-SO	2,4-Dinitrotoluene	0.0988	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3018-SO	2,4-Dinitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100553
LL1SS-517M-3018-SO	2,6-Dinitrotoluene	0.0988	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3018-SO	2,6-Dinitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100553
LL1SS-517M-3018-SO	2-Amino-4,6-dinitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100553
LL1SS-517M-3018-SO	2-Amino-4,6-dinitrotoluene	0.0988	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3018-SO	2-Nitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100553
LL1SS-517M-3018-SO	2-Nitrotoluene	0.0988	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3018-SO	3-Nitrotoluene	0.0988	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3018-SO	3-Nitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100553
LL1SS-517M-3018-SO	4-Amino-2,6-dinitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100553
LL1SS-517M-3018-SO	4-Amino-2,6-dinitrotoluene	0.0988	0.247	0.0988	mg/kg	R	D	L09100553

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LL1SS-517M-3018-SO	4-Nitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100553
LL1SS-517M-3018-SO	4-Nitrotoluene	0.0988	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3018-SO	HMX	0.0988	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3018-SO	HMX	0.0988	0.247	0.0988	mg/kg	U		L09100553
LL1SS-517M-3018-SO	Nitrobenzene	0.0988	0.247	0.0988	mg/kg	U		L09100553
LL1SS-517M-3018-SO	Nitrobenzene	0.0988	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3018-SO	Nitroglycerin	0.0988	0.247	0.0988	mg/kg	U		L09100553
LL1SS-517M-3018-SO	Nitroglycerin	0.0988	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3018-SO	PETN	0.494	1.48	0.494	mg/kg	U		L09100553
LL1SS-517M-3018-SO	RDX	0.0988	0.247	0.0988	mg/kg	U		L09100553
LL1SS-517M-3018-SO	RDX	0.0988	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3018-SO	Tetryl	0.0988	0.247	0.0988	mg/kg	R	C	L09100553
LL1SS-517M-3018-SO	Tetryl	0.0988	0.247	0.0988	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	1,3,5-Trinitrobenzene	0.0977	0.244	0.0977	mg/kg	U		L09100553
LL1SS-517M-3020-SO	1,3,5-Trinitrobenzene	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	1,3-Dinitrobenzene	0.0977	0.244	0.0977	mg/kg	U		L09100553
LL1SS-517M-3020-SO	1,3-Dinitrobenzene	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	2,4,6-Trinitrotoluene	0.327	0.244	0.0977	mg/kg			L09100553
LL1SS-517M-3020-SO	2,4,6-Trinitrotoluene	0.384	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	2,4-Dinitrotoluene	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	2,4-Dinitrotoluene	0.0977	0.244	0.0977	mg/kg	U		L09100553
LL1SS-517M-3020-SO	2,6-Dinitrotoluene	0.0977	0.244	0.0977	mg/kg	U		L09100553
LL1SS-517M-3020-SO	2,6-Dinitrotoluene	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	2-Amino-4,6-dinitrotoluene	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	2-Amino-4,6-dinitrotoluene	0.0977	0.244	0.0977	mg/kg	U		L09100553
LL1SS-517M-3020-SO	2-Nitrotoluene	0.0977	0.244	0.0977	mg/kg	U		L09100553
LL1SS-517M-3020-SO	2-Nitrotoluene	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	3-Nitrotoluene	0.0977	0.244	0.0977	mg/kg	U		L09100553
LL1SS-517M-3020-SO	3-Nitrotoluene	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	4-Amino-2,6-dinitrotoluene	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	4-Amino-2,6-dinitrotoluene	0.0977	0.244	0.0977	mg/kg	U		L09100553
LL1SS-517M-3020-SO	4-Nitrotoluene	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	4-Nitrotoluene	0.0977	0.244	0.0977	mg/kg	U		L09100553
LL1SS-517M-3020-SO	HMX	0.0977	0.244	0.0977	mg/kg	U		L09100553
LL1SS-517M-3020-SO	HMX	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	Nitrobenzene	0.0977	0.244	0.0977	mg/kg	U		L09100553
LL1SS-517M-3020-SO	Nitrobenzene	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	Nitroglycerin	0.0977	0.244	0.0977	mg/kg	U		L09100553
LL1SS-517M-3020-SO	Nitroglycerin	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	PETN	0.488	1.46	0.488	mg/kg	U		L09100553
LL1SS-517M-3020-SO	RDX	0.0977	0.244	0.0977	mg/kg	U		L09100553
LL1SS-517M-3020-SO	RDX	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	Tetryl	0.0977	0.244	0.0977	mg/kg	R	D	L09100553
LL1SS-517M-3020-SO	Tetryl	0.0977	0.244	0.0977	mg/kg	R	C	L09100553
LL1SS-517M-3021-SO	1,3,5-Trinitrobenzene	0.0989	0.247	0.0989	mg/kg	U		L09100553
LL1SS-517M-3021-SO	1,3-Dinitrobenzene	0.0989	0.247	0.0989	mg/kg	U		L09100553
LL1SS-517M-3021-SO	2,4,6-Trinitrotoluene	0.0989	0.247	0.0989	mg/kg	U		L09100553
LL1SS-517M-3021-SO	2,4-Dinitrotoluene	0.0989	0.247	0.0989	mg/kg	U		L09100553
LL1SS-517M-3021-SO	2,6-Dinitrotoluene	0.0989	0.247	0.0989	mg/kg	U		L09100553

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LL1SS-517M-3021-SO	2-Amino-4,6-dinitrotoluene	0.0989	0.247	0.0989	mg/kg	U		L09100553
LL1SS-517M-3021-SO	2-Nitrotoluene	0.0989	0.247	0.0989	mg/kg	U		L09100553
LL1SS-517M-3021-SO	3-Nitrotoluene	0.0989	0.247	0.0989	mg/kg	U		L09100553
LL1SS-517M-3021-SO	4-Amino-2,6-dinitrotoluene	0.0989	0.247	0.0989	mg/kg	U		L09100553
LL1SS-517M-3021-SO	4-Nitrotoluene	0.0989	0.247	0.0989	mg/kg	U		L09100553
LL1SS-517M-3021-SO	HMX	0.0989	0.247	0.0989	mg/kg	U		L09100553
LL1SS-517M-3021-SO	Nitrobenzene	0.0989	0.247	0.0989	mg/kg	U		L09100553
LL1SS-517M-3021-SO	Nitroglycerin	0.0989	0.247	0.0989	mg/kg	U		L09100553
LL1SS-517M-3021-SO	PETN	0.495	1.48	0.495	mg/kg	U		L09100553
LL1SS-517M-3021-SO	RDX	0.0989	0.247	0.0989	mg/kg	U		L09100553
LL1SS-517M-3021-SO	Tetryl	0.0989	0.247	0.0989	mg/kg	R	C	L09100553
LL1SS-537M-3050-SO	1,3,5-Trinitrobenzene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	1,3-Dinitrobenzene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	2,4,6-Trinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	2,4-Dinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	2,6-Dinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	2-Amino-4,6-dinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	2-Nitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	3-Nitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	4-Amino-2,6-dinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	4-Nitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	HMX	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	Nitrobenzene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	Nitroglycerin	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	PETN	0.5	1.5	0.5	mg/kg	U		L09110136
LL1SS-537M-3050-SO	RDX	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3050-SO	Tetryl	0.1	0.25	0.1	mg/kg	R	C	L09110136
LL1SS-537M-3052-SO	1,3,5-Trinitrobenzene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	1,3-Dinitrobenzene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	2,4,6-Trinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	2,4-Dinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	2,6-Dinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	2-Amino-4,6-dinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	2-Nitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	3-Nitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	4-Amino-2,6-dinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	4-Nitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	HMX	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	Nitrobenzene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	Nitroglycerin	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	PETN	0.5	1.5	0.5	mg/kg	U		L09110136
LL1SS-537M-3052-SO	RDX	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3052-SO	Tetryl	0.1	0.25	0.1	mg/kg	R	C	L09110136
LL1SS-537M-3053-SO	1,3,5-Trinitrobenzene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3053-SO	1,3-Dinitrobenzene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3053-SO	2,4,6-Trinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3053-SO	2,4-Dinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3053-SO	2,6-Dinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3053-SO	2-Amino-4,6-dinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LL1SS-537M-3053-SO	2-Nitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3053-SO	3-Nitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3053-SO	4-Amino-2,6-dinitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3053-SO	4-Nitrotoluene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3053-SO	HMX	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3053-SO	Nitrobenzene	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3053-SO	Nitroglycerin	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3053-SO	PETN	0.5	1.5	0.5	mg/kg	U		L09110136
LL1SS-537M-3053-SO	RDX	0.1	0.25	0.1	mg/kg	U		L09110136
LL1SS-537M-3053-SO	Tetryl	0.1	0.25	0.1	mg/kg	R	C	L09110136
LL4SS-280M-2000-SO	1,3,5-Trinitrobenzene	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	1,3-Dinitrobenzene	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	2,4,6-Trinitrotoluene	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	2,4-Dinitrotoluene	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	2,6-Dinitrotoluene	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	2-Amino-4,6-dinitrotoluene	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	2-Nitrotoluene	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	3-Nitrotoluene	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	4-Amino-2,6-dinitrotoluene	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	4-Nitrotoluene	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	HMX	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	Nitrobenzene	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	Nitroglycerin	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	PETN	0.488	1.46	0.488	mg/kg	U		L09100553
LL4SS-280M-2000-SO	RDX	0.0976	0.244	0.0976	mg/kg	U		L09100553
LL4SS-280M-2000-SO	Tetryl	0.0976	0.244	0.0976	mg/kg	R	C	L09100553
LL4SS-280M-2002-SO	1,3,5-Trinitrobenzene	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	1,3-Dinitrobenzene	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	2,4,6-Trinitrotoluene	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	2,4-Dinitrotoluene	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	2,6-Dinitrotoluene	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	2-Amino-4,6-dinitrotoluene	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	2-Nitrotoluene	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	3-Nitrotoluene	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	4-Amino-2,6-dinitrotoluene	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	4-Nitrotoluene	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	HMX	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	Nitrobenzene	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	Nitroglycerin	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	PETN	0.486	1.46	0.486	mg/kg	U		L09100553
LL4SS-280M-2002-SO	RDX	0.0972	0.243	0.0972	mg/kg	U		L09100553
LL4SS-280M-2002-SO	Tetryl	0.0972	0.243	0.0972	mg/kg	R	C	L09100553
LL4SS-280M-2003-SO	1,3,5-Trinitrobenzene	0.0986	0.247	0.0986	mg/kg	U		L09100553
LL4SS-280M-2003-SO	1,3-Dinitrobenzene	0.0986	0.247	0.0986	mg/kg	U		L09100553
LL4SS-280M-2003-SO	2,4,6-Trinitrotoluene	0.0986	0.247	0.0986	mg/kg	U		L09100553
LL4SS-280M-2003-SO	2,4-Dinitrotoluene	0.0986	0.247	0.0986	mg/kg	U		L09100553
LL4SS-280M-2003-SO	2,6-Dinitrotoluene	0.0986	0.247	0.0986	mg/kg	U		L09100553
LL4SS-280M-2003-SO	2-Amino-4,6-dinitrotoluene	0.0986	0.247	0.0986	mg/kg	U		L09100553
LL4SS-280M-2003-SO	2-Nitrotoluene	0.0986	0.247	0.0986	mg/kg	U		L09100553

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LL4SS-280M-2003-SO	3-Nitrotoluene	0.0986	0.247	0.0986	mg/kg	U		L09100553
LL4SS-280M-2003-SO	4-Amino-2,6-dinitrotoluene	0.0986	0.247	0.0986	mg/kg	U		L09100553
LL4SS-280M-2003-SO	4-Nitrotoluene	0.0986	0.247	0.0986	mg/kg	U		L09100553
LL4SS-280M-2003-SO	HMX	0.0986	0.247	0.0986	mg/kg	U		L09100553
LL4SS-280M-2003-SO	Nitrobenzene	0.0986	0.247	0.0986	mg/kg	U		L09100553
LL4SS-280M-2003-SO	Nitroglycerin	0.0986	0.247	0.0986	mg/kg	U		L09100553
LL4SS-280M-2003-SO	PETN	0.493	1.48	0.493	mg/kg	U		L09100553
LL4SS-280M-2003-SO	RDX	0.0986	0.247	0.0986	mg/kg	U		L09100553
LL4SS-280M-2003-SO	Tetryl	0.0986	0.247	0.0986	mg/kg	R	C	L09100553
LLISS-523M-3027-SO	1,3,5-Trinitrobenzene	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	1,3-Dinitrobenzene	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	2,4,6-Trinitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	2,4-Dinitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	2,6-Dinitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	2-Amino-4,6-dinitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	2-Nitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	3-Nitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	4-Amino-2,6-dinitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	4-Nitrotoluene	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	HMX	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	Nitrobenzene	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	Nitroglycerin	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	PETN	0.494	1.48	0.494	mg/kg	U		L09100645
LLISS-523M-3027-SO	RDX	0.0988	0.247	0.0988	mg/kg	U		L09100645
LLISS-523M-3027-SO	Tetryl	0.0988	0.247	0.0988	mg/kg	R	C	L09100645
LLISS-523M-3029-SO	1,3,5-Trinitrobenzene	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	1,3-Dinitrobenzene	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	2,4,6-Trinitrotoluene	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	2,4-Dinitrotoluene	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	2,6-Dinitrotoluene	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	2-Amino-4,6-dinitrotoluene	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	2-Nitrotoluene	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	3-Nitrotoluene	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	4-Amino-2,6-dinitrotoluene	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	4-Nitrotoluene	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	HMX	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	Nitrobenzene	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	Nitroglycerin	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	PETN	0.496	1.49	0.496	mg/kg	U		L09100645
LLISS-523M-3029-SO	RDX	0.0992	0.248	0.0992	mg/kg	U		L09100645
LLISS-523M-3029-SO	Tetryl	0.0992	0.248	0.0992	mg/kg	R	C	L09100645
LLISS-523M-3030-SO	1,3,5-Trinitrobenzene	0.0987	0.247	0.0987	mg/kg	U		L09100645
LLISS-523M-3030-SO	1,3-Dinitrobenzene	0.0987	0.247	0.0987	mg/kg	U		L09100645
LLISS-523M-3030-SO	2,4,6-Trinitrotoluene	0.0987	0.247	0.0987	mg/kg	U		L09100645
LLISS-523M-3030-SO	2,4-Dinitrotoluene	0.0987	0.247	0.0987	mg/kg	U		L09100645
LLISS-523M-3030-SO	2,6-Dinitrotoluene	0.0987	0.247	0.0987	mg/kg	U		L09100645
LLISS-523M-3030-SO	2-Amino-4,6-dinitrotoluene	0.0987	0.247	0.0987	mg/kg	U		L09100645
LLISS-523M-3030-SO	2-Nitrotoluene	0.0987	0.247	0.0987	mg/kg	U		L09100645
LLISS-523M-3030-SO	3-Nitrotoluene	0.0987	0.247	0.0987	mg/kg	U		L09100645

Sample	Analyte	Result	RL	MDL	Units	Qualifier	DVQual	SDG
LLISS-523M-3030-SO	4-Amino-2,6-dinitrotoluene	0.0987	0.247	0.0987	mg/kg	U		L09100645
LLISS-523M-3030-SO	4-Nitrotoluene	0.0987	0.247	0.0987	mg/kg	U		L09100645
LLISS-523M-3030-SO	HMX	0.0987	0.247	0.0987	mg/kg	U		L09100645
LLISS-523M-3030-SO	Nitrobenzene	0.0987	0.247	0.0987	mg/kg	U		L09100645
LLISS-523M-3030-SO	Nitroglycerin	0.0987	0.247	0.0987	mg/kg	U		L09100645
LLISS-523M-3030-SO	PETN	0.494	1.48	0.494	mg/kg	U		L09100645
LLISS-523M-3030-SO	RDX	0.0987	0.247	0.0987	mg/kg	U		L09100645
LLISS-523M-3030-SO	Tetryl	0.0987	0.247	0.0987	mg/kg	R	C	L09100645
F15SS-012M-0500-SO	Nitroguanidine	156	312	156	ug/kg	U		L09110136
F15SS-012M-0502-SO	Nitroguanidine	152	305	152	ug/kg	U		L09110136
F15SS-012M-0503-SO	Nitroguanidine	156	311	156	ug/kg	U		L09110136
LL1SS-537M-3050-SO	Nitroguanidine	146	291	146	ug/kg	U		L09110136
LL1SS-537M-3052-SO	Nitroguanidine	143	286	143	ug/kg	U		L09110136
LL1SS-537M-3053-SO	Nitroguanidine	137	274	137	ug/kg	U		L09110136
LLISS-523M-3027-SO	Nitroguanidine	125	250	125	ug/kg	U		L09100645
LLISS-523M-3029-SO	Nitroguanidine	125	250	125	ug/kg	U		L09100645
LLISS-523M-3030-SO	Nitroguanidine	125	250	125	ug/kg	U		L09100645
F15SS-012M-0500-SO	Hexavalent Chromium	0.051	0.102	0.051	mg/kg	U		L09110136
F15SS-012M-0502-SO	Hexavalent Chromium	0.0509	0.102	0.0509	mg/kg	U		L09110136
F15SS-012M-0503-SO	Hexavalent Chromium	0.101	0.201	0.101	mg/kg	U		L09110136
LL1SS-517M-3018-SO	Hexavalent Chromium	0.0504	0.101	0.0504	mg/kg	U		L09100553
LL1SS-517M-3020-SO	Hexavalent Chromium	0.05	0.0999	0.05	mg/kg	U		L09100553
LL1SS-517M-3021-SO	Hexavalent Chromium	0.0498	0.0996	0.0498	mg/kg	U		L09100553
LL1SS-537M-3050-SO	Hexavalent Chromium	0.0989	0.198	0.0989	mg/kg	U		L09110136
LL1SS-537M-3052-SO	Hexavalent Chromium	0.05	0.1	0.05	mg/kg	U		L09110136
LL1SS-537M-3053-SO	Hexavalent Chromium	0.101	0.201	0.101	mg/kg	U		L09110136
LL4SS-280M-2000-SO	Hexavalent Chromium	0.0504	0.101	0.0504	mg/kg	U		L09100553
LL4SS-280M-2002-SO	Hexavalent Chromium	0.05	0.0999	0.05	mg/kg	U		L09100553
LL4SS-280M-2003-SO	Hexavalent Chromium	0.0624	0.125	0.0624	mg/kg	U		L09100553
LLISS-523M-3027-SO	Hexavalent Chromium	0.0493	0.0987	0.0493	mg/kg	U		L09100645
LLISS-523M-3029-SO	Hexavalent Chromium	0.0497	0.0994	0.0497	mg/kg	U		L09100645
LLISS-523M-3030-SO	Hexavalent Chromium	0.0498	0.0997	0.0498	mg/kg	U		L09100645
F15SS-012M-0500-SO	Nitrocellulose	2.5	5	2.5	mg/kg	UJ	C	L09110136
F15SS-012M-0502-SO	Nitrocellulose	2.65	4.99	2.49	mg/kg	J	C	L09110136
F15SS-012M-0503-SO	Nitrocellulose	2.87	4.99	2.49	mg/kg	J	C	L09110136
LL1SS-537M-3050-SO	Nitrocellulose	2.49	4.97	2.49	mg/kg	UJ	C	L09110136
LL1SS-537M-3052-SO	Nitrocellulose	2.5	4.99	2.5	mg/kg	UJ	C	L09110136
LL1SS-537M-3053-SO	Nitrocellulose	2.5	4.99	2.5	mg/kg	UJ	C	L09110136
LLISS-523M-3027-SO	Nitrocellulose	2.48	4.97	2.48	mg/kg	UJ	C	L09100645
LLISS-523M-3029-SO	Nitrocellulose	2.48	4.96	2.48	mg/kg	UJ	C	L09100645
LLISS-523M-3030-SO	Nitrocellulose	2.49	4.97	2.49	mg/kg	UJ	C	L09100645

APPENDIX C

Primary/Field Duplicate Sample Comparisons

Sample	Analyte	Result	Units	Qualifier	ClientSampleID	Result	Units	Qualifier	RPD	RPD >50%?
F15SS-012M-0500-SO	Aluminum	12200	mg/kg	J	F15SS-012M-0502-SO	11600	mg/kg	J	5.0	
F15SS-012M-0500-SO	Barium	76.1	mg/kg	J+	F15SS-012M-0502-SO	76.7	mg/kg	J+	-0.8	
F15SS-012M-0500-SO	Beryllium	0.588	mg/kg		F15SS-012M-0502-SO	0.578	mg/kg		1.7	
F15SS-012M-0500-SO	Cadmium	1.03	mg/kg		F15SS-012M-0502-SO	1.06	mg/kg		-2.9	
F15SS-012M-0500-SO	Calcium	5690	mg/kg		F15SS-012M-0502-SO	5760	mg/kg		-1.2	
F15SS-012M-0500-SO	Chromium	21.9	mg/kg	J+	F15SS-012M-0502-SO	19.8	mg/kg	J+	10.1	
F15SS-012M-0500-SO	Cobalt	6.83	mg/kg		F15SS-012M-0502-SO	6.33	mg/kg		7.6	
F15SS-012M-0500-SO	Copper	16.9	mg/kg		F15SS-012M-0502-SO	16.3	mg/kg		3.6	
F15SS-012M-0500-SO	Iron	22800	mg/kg		F15SS-012M-0502-SO	22600	mg/kg		0.9	
F15SS-012M-0500-SO	Magnesium	3300	mg/kg		F15SS-012M-0502-SO	3190	mg/kg		3.4	
F15SS-012M-0500-SO	Manganese	330	mg/kg	J	F15SS-012M-0502-SO	340	mg/kg	J	-3.0	
F15SS-012M-0500-SO	Potassium	981	mg/kg	J	F15SS-012M-0502-SO	859	mg/kg	J	13.3	
F15SS-012M-0500-SO	Sodium	102	mg/kg		F15SS-012M-0502-SO	85.9	mg/kg		17.1	
F15SS-012M-0500-SO	Vanadium	22	mg/kg	J+	F15SS-012M-0502-SO	21.8	mg/kg	J+	0.9	
F15SS-012M-0500-SO	Zinc	56	mg/kg	J	F15SS-012M-0502-SO	56.5	mg/kg	J	-0.9	
LL1SS-517M-3018-SO	Aluminum	5220	mg/kg		LL1SS-517M-3020-SO	5830	mg/kg		-11.0	
LL1SS-517M-3018-SO	Barium	32	mg/kg	J+	LL1SS-517M-3020-SO	38	mg/kg	J+	-17.1	
LL1SS-517M-3018-SO	Beryllium	0.308	mg/kg		LL1SS-517M-3020-SO	0.352	mg/kg		-13.3	
LL1SS-517M-3018-SO	Cadmium	0.831	mg/kg		LL1SS-517M-3020-SO	0.904	mg/kg		-8.4	
LL1SS-517M-3018-SO	Calcium	3980	mg/kg	J	LL1SS-517M-3020-SO	3830	mg/kg	J	3.8	
LL1SS-517M-3018-SO	Chromium	16.9	mg/kg	J-	LL1SS-517M-3020-SO	14.2	mg/kg	J-	17.4	
LL1SS-517M-3018-SO	Cobalt	4.43	mg/kg	J-	LL1SS-517M-3020-SO	4.9	mg/kg	J-	-10.1	
LL1SS-517M-3018-SO	Copper	16.3	mg/kg		LL1SS-517M-3020-SO	16.4	mg/kg		-0.6	
LL1SS-517M-3018-SO	Iron	15600	mg/kg	J	LL1SS-517M-3020-SO	16300	mg/kg	J	-4.4	
LL1SS-517M-3018-SO	Magnesium	2090	mg/kg		LL1SS-517M-3020-SO	2180	mg/kg		-4.2	
LL1SS-517M-3018-SO	Manganese	353	mg/kg	J-	LL1SS-517M-3020-SO	386	mg/kg	J-	-8.9	
LL1SS-517M-3018-SO	Potassium	406	mg/kg	J+	LL1SS-517M-3020-SO	453	mg/kg	J+	-10.9	
LL1SS-517M-3018-SO	Sodium	23.1	mg/kg		LL1SS-517M-3020-SO	28.5	mg/kg		-20.9	
LL1SS-517M-3018-SO	Vanadium	11.1	mg/kg		LL1SS-517M-3020-SO	12	mg/kg		-7.8	
LL1SS-517M-3018-SO	Zinc	68.3	mg/kg		LL1SS-517M-3020-SO	70.6	mg/kg		-3.3	
LL1SS-537M-3050-SO	Aluminum	5070	mg/kg	J	LL1SS-537M-3052-SO	5450	mg/kg	J	-7.2	
LL1SS-537M-3050-SO	Barium	31	mg/kg	J+	LL1SS-537M-3052-SO	30.8	mg/kg	J+	0.6	

Sample	Analyte	Result	Units	Qualifier	ClientSampleID	Result	Units	Qualifier	RPD	RPD >50%?
LL1SS-537M-3050-SO	Beryllium	0.293	mg/kg		LL1SS-537M-3052-SO	0.3	mg/kg		-2.4	
LL1SS-537M-3050-SO	Cadmium	0.917	mg/kg		LL1SS-537M-3052-SO	0.947	mg/kg		-3.2	
LL1SS-537M-3050-SO	Calcium	3100	mg/kg		LL1SS-537M-3052-SO	3100	mg/kg		0.0	
LL1SS-537M-3050-SO	Chromium	14.5	mg/kg	J+	LL1SS-537M-3052-SO	15.8	mg/kg	J+	-8.6	
LL1SS-537M-3050-SO	Cobalt	4.26	mg/kg		LL1SS-537M-3052-SO	4.05	mg/kg		5.1	
LL1SS-537M-3050-SO	Copper	18	mg/kg		LL1SS-537M-3052-SO	17.8	mg/kg		1.1	
LL1SS-537M-3050-SO	Iron	16300	mg/kg		LL1SS-537M-3052-SO	17000	mg/kg		-4.2	
LL1SS-537M-3050-SO	Magnesium	1880	mg/kg		LL1SS-537M-3052-SO	1830	mg/kg		2.7	
LL1SS-537M-3050-SO	Manganese	356	mg/kg	J	LL1SS-537M-3052-SO	332	mg/kg	J	7.0	
LL1SS-537M-3050-SO	Potassium	415	mg/kg	J	LL1SS-537M-3052-SO	523	mg/kg	J	-23.0	
LL1SS-537M-3050-SO	Sodium	20.2	mg/kg		LL1SS-537M-3052-SO	26.2	mg/kg		-25.9	
LL1SS-537M-3050-SO	Vanadium	11	mg/kg	J+	LL1SS-537M-3052-SO	11.6	mg/kg	J+	-5.3	
LL1SS-537M-3050-SO	Zinc	59.7	mg/kg	J	LL1SS-537M-3052-SO	60.4	mg/kg	J	-1.2	
LL4SS-280M-2000-SO	Aluminum	10200	mg/kg		LL4SS-280M-2002-SO	10400	mg/kg		-1.9	
LL4SS-280M-2000-SO	Barium	46.4	mg/kg	J+	LL4SS-280M-2002-SO	49.6	mg/kg	J+	-6.7	
LL4SS-280M-2000-SO	Beryllium	0.448	mg/kg		LL4SS-280M-2002-SO	0.471	mg/kg		-5.0	
LL4SS-280M-2000-SO	Cadmium	1.09	mg/kg		LL4SS-280M-2002-SO	1.06	mg/kg		2.8	
LL4SS-280M-2000-SO	Calcium	4130	mg/kg	J	LL4SS-280M-2002-SO	5700	mg/kg	J	-31.9	
LL4SS-280M-2000-SO	Chromium	20.5	mg/kg	J-	LL4SS-280M-2002-SO	20.9	mg/kg	J-	-1.9	
LL4SS-280M-2000-SO	Cobalt	5.41	mg/kg	J-	LL4SS-280M-2002-SO	5.27	mg/kg	J-	2.6	
LL4SS-280M-2000-SO	Copper	22.3	mg/kg		LL4SS-280M-2002-SO	21	mg/kg		6.0	
LL4SS-280M-2000-SO	Iron	21600	mg/kg	J-	LL4SS-280M-2002-SO	21600	mg/kg	J-	0.0	
LL4SS-280M-2000-SO	Magnesium	3250	mg/kg		LL4SS-280M-2002-SO	3220	mg/kg		0.9	
LL4SS-280M-2000-SO	Manganese	363	mg/kg	J-	LL4SS-280M-2002-SO	387	mg/kg	J-	-6.4	
LL4SS-280M-2000-SO	Potassium	1280	mg/kg	J+	LL4SS-280M-2002-SO	1250	mg/kg	J+	2.4	
LL4SS-280M-2000-SO	Sodium	64.8	mg/kg		LL4SS-280M-2002-SO	74	mg/kg		-13.3	
LL4SS-280M-2000-SO	Vanadium	18.9	mg/kg		LL4SS-280M-2002-SO	18.7	mg/kg		1.1	
LL4SS-280M-2000-SO	Zinc	79.9	mg/kg		LL4SS-280M-2002-SO	76	mg/kg		5.0	
LLISS-523M-3027-SO	Aluminum	2940	mg/kg		LLISS-523M-3029-SO	3010	mg/kg		-2.4	
LLISS-523M-3027-SO	Barium	22.7	mg/kg		LLISS-523M-3029-SO	23.9	mg/kg		-5.2	
LLISS-523M-3027-SO	Beryllium	0.198	mg/kg		LLISS-523M-3029-SO	0.198	mg/kg		0.0	
LLISS-523M-3027-SO	Cadmium	0.729	mg/kg		LLISS-523M-3029-SO	0.691	mg/kg		5.4	

Sample	Analyte	Result	Units	Qualifier	ClientSampleID	Result	Units	Qualifier	RPD	RPD >50%?
LLISS-523M-3027-SO	Calcium	4390	mg/kg		LLISS-523M-3029-SO	4950	mg/kg		-12.0	
LLISS-523M-3027-SO	Chromium	17.9	mg/kg		LLISS-523M-3029-SO	14.1	mg/kg		23.8	
LLISS-523M-3027-SO	Cobalt	2.58	mg/kg		LLISS-523M-3029-SO	2.57	mg/kg		0.4	
LLISS-523M-3027-SO	Copper	11.1	mg/kg		LLISS-523M-3029-SO	9.71	mg/kg		13.4	
LLISS-523M-3027-SO	Iron	12900	mg/kg		LLISS-523M-3029-SO	12800	mg/kg		0.8	
LLISS-523M-3027-SO	Magnesium	1090	mg/kg		LLISS-523M-3029-SO	1230	mg/kg		-12.1	
LLISS-523M-3027-SO	Manganese	431	mg/kg		LLISS-523M-3029-SO	431	mg/kg		0.0	
LLISS-523M-3027-SO	Potassium	424	mg/kg		LLISS-523M-3029-SO	420	mg/kg		0.9	
LLISS-523M-3027-SO	Sodium	25.7	mg/kg		LLISS-523M-3029-SO	26.9	mg/kg		-4.6	
LLISS-523M-3027-SO	Vanadium	8.25	mg/kg		LLISS-523M-3029-SO	8.04	mg/kg		2.6	
LLISS-523M-3027-SO	Zinc	51.7	mg/kg		LLISS-523M-3029-SO	57.2	mg/kg		-10.1	
F15SS-012M-0500-SO	Antimony	0.444	mg/kg		F15SS-012M-0502-SO	0.278	mg/kg		46.0	
F15SS-012M-0500-SO	Arsenic	10	mg/kg	J-	F15SS-012M-0502-SO	9.18	mg/kg	J-	8.6	
F15SS-012M-0500-SO	Lead	16.9	mg/kg		F15SS-012M-0502-SO	18	mg/kg		-6.3	
F15SS-012M-0500-SO	Nickel	30.6	mg/kg	J-	F15SS-012M-0502-SO	35.5	mg/kg	J-	-14.8	
F15SS-012M-0500-SO	Selenium	0.367	mg/kg	J	F15SS-012M-0502-SO	0.307	mg/kg	J	17.8	
F15SS-012M-0500-SO	Thallium	0.143	mg/kg	J	F15SS-012M-0502-SO	0.143	mg/kg	J	0.0	
LL1SS-517M-3018-SO	Antimony	0.363	mg/kg		LL1SS-517M-3020-SO	0.284	mg/kg		24.4	
LL1SS-517M-3018-SO	Arsenic	9.51	mg/kg	J-	LL1SS-517M-3020-SO	12.9	mg/kg	J-	-30.3	
LL1SS-517M-3018-SO	Lead	15.6	mg/kg	J	LL1SS-517M-3020-SO	16.6	mg/kg	J	-6.2	
LL1SS-517M-3018-SO	Nickel	14.7	mg/kg		LL1SS-517M-3020-SO	15.4	mg/kg		-4.7	
LL1SS-517M-3018-SO	Selenium	0.25	mg/kg	J-	LL1SS-517M-3020-SO	0.223	mg/kg	J-	11.4	
LL1SS-517M-3018-SO	Thallium	0.164	mg/kg		LL1SS-517M-3020-SO	0.123	mg/kg		28.6	
LL1SS-537M-3050-SO	Antimony	0.455	mg/kg		LL1SS-537M-3052-SO	0.232	mg/kg		64.9	YES
LL1SS-537M-3050-SO	Arsenic	10.4	mg/kg	J-	LL1SS-537M-3052-SO	10.8	mg/kg	J-	-3.8	
LL1SS-537M-3050-SO	Lead	13.6	mg/kg		LL1SS-537M-3052-SO	13.7	mg/kg		-0.7	
LL1SS-537M-3050-SO	Nickel	15.2	mg/kg	J-	LL1SS-537M-3052-SO	20.6	mg/kg	J-	-30.2	
LL1SS-537M-3050-SO	Selenium	0.267	mg/kg	J	LL1SS-537M-3052-SO	0.255	mg/kg	J	4.6	
LL1SS-537M-3050-SO	Thallium	0.0954	mg/kg	J	LL1SS-537M-3052-SO	0.0923	mg/kg	J	3.3	
LL4SS-280M-2000-SO	Antimony	0.321	mg/kg		LL4SS-280M-2002-SO	0.323	mg/kg		-0.6	
LL4SS-280M-2000-SO	Arsenic	14.4	mg/kg	J-	LL4SS-280M-2002-SO	12.9	mg/kg	J-	11.0	
LL4SS-280M-2000-SO	Lead	23.4	mg/kg	J	LL4SS-280M-2002-SO	19.5	mg/kg	J	18.2	

Sample	Analyte	Result	Units	Qualifier	ClientSampleID	Result	Units	Qualifier	RPD	RPD >50%?
LL4SS-280M-2000-SO	Nickel	21.5	mg/kg	J-	LL4SS-280M-2002-SO	24.2	mg/kg		-11.8	
LL4SS-280M-2000-SO	Selenium	0.295	mg/kg	J-	LL4SS-280M-2002-SO	0.288	mg/kg	J-	2.4	
LL4SS-280M-2000-SO	Thallium	0.146	mg/kg		LL4SS-280M-2002-SO	0.154	mg/kg		-5.3	
LLISS-523M-3027-SO	Antimony	0.136	mg/kg		LLISS-523M-3029-SO	0.151	mg/kg		-10.5	
LLISS-523M-3027-SO	Arsenic	5.4	mg/kg	J	LLISS-523M-3029-SO	6.64	mg/kg	J	-20.6	
LLISS-523M-3027-SO	Lead	19.7	mg/kg	J	LLISS-523M-3029-SO	22.6	mg/kg	J	-13.7	
LLISS-523M-3027-SO	Nickel	10.2	mg/kg	J	LLISS-523M-3029-SO	11.8	mg/kg	J	-14.5	
LLISS-523M-3027-SO	Selenium	0.0986	mg/kg	UJ	LLISS-523M-3029-SO	0.0926	mg/kg	UJ	6.3	
LLISS-523M-3027-SO	Thallium	0.106	mg/kg	J	LLISS-523M-3029-SO	0.0704	mg/kg	J	40.4	
F15SS-012M-0500-SO	Mercury	0.03	mg/kg	J	F15SS-012M-0502-SO	0.0361	mg/kg	J	-18.5	
LL1SS-517M-3018-SO	Mercury	0.0162	mg/kg	J	LL1SS-517M-3020-SO	0.0131	mg/kg	J	21.2	
LL1SS-537M-3050-SO	Mercury	0.0166	mg/kg	J	LL1SS-537M-3052-SO	0.0148	mg/kg	J	11.5	
LL4SS-280M-2000-SO	Mercury	0.0234	mg/kg	J	LL4SS-280M-2002-SO	0.0378	mg/kg	J	-47.1	
LLISS-523M-3027-SO	Mercury	0.025	mg/kg	J	LLISS-523M-3029-SO	0.0179	mg/kg	J	33.1	
LLISS-523M-3027-SO	4,4'-DDD	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	4,4'-DDE	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	4,4'-DDT	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	Aldrin	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	alpha Chlordane	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	alpha-BHC	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	beta-BHC	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	delta-BHC	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	Dieldrin	0.345	ug/kg	NJ	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	Endosulfan I	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	Endosulfan II	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	Endosulfan sulfate	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	Endrin	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	Endrin aldehyde	0.345	ug/kg	J	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	Endrin ketone	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	gamma Chlordane	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	gamma-BHC (Lindane)	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	Heptachlor	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	

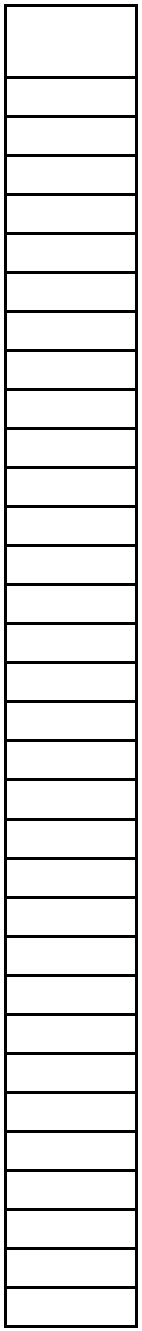
Sample	Analyte	Result	Units	Qualifier	ClientSampleID	Result	Units	Qualifier	RPD	RPD >50%?
LLISS-523M-3027-SO	Heptachlor epoxide	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	Methoxychlor	0.345	ug/kg	U	LLISS-523M-3029-SO	0.315	ug/kg	U	9.1	
LLISS-523M-3027-SO	Toxaphene	17.5	ug/kg	U	LLISS-523M-3029-SO	15.9	ug/kg	U	9.6	
LLISS-523M-3027-SO	Aroclor-1016	8.62	ug/kg	U	LLISS-523M-3029-SO	7.88	ug/kg	U	9.0	
LLISS-523M-3027-SO	Aroclor-1221	8.62	ug/kg	U	LLISS-523M-3029-SO	7.88	ug/kg	U	9.0	
LLISS-523M-3027-SO	Aroclor-1232	8.62	ug/kg	U	LLISS-523M-3029-SO	7.88	ug/kg	U	9.0	
LLISS-523M-3027-SO	Aroclor-1242	8.62	ug/kg	U	LLISS-523M-3029-SO	7.88	ug/kg	U	9.0	
LLISS-523M-3027-SO	Aroclor-1248	8.62	ug/kg	U	LLISS-523M-3029-SO	7.88	ug/kg	U	9.0	
LLISS-523M-3027-SO	Aroclor-1254	1220	ug/kg		LLISS-523M-3029-SO	1280	ug/kg		-4.8	
LLISS-523M-3027-SO	Aroclor-1260	8.62	ug/kg	U	LLISS-523M-3029-SO	7.88	ug/kg	U	9.0	
LLISS-523M-3027-SO	1,2,4-Trichlorobenzene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	1,2-Dichlorobenzene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	1,3-Dichlorobenzene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	1,4-Dichlorobenzene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	2,4,5-Trichlorophenol	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	2,4,6-Trichlorophenol	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	2,4-Dichlorophenol	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	2,4-Dimethylphenol	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	2,4-Dinitrophenol	2140	ug/kg	UJ	LLISS-523M-3029-SO	2160	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	2,4-Dinitrotoluene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	2,6-Dinitrotoluene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	2-Chloronaphthalene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	2-Chlorophenol	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	2-Methylnaphthalene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	2-Methylphenol	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	2-Nitroaniline	2140	ug/kg	UJ	LLISS-523M-3029-SO	2160	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	2-Nitrophenol	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	3-,4-Methylphenol	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	3-Nitroaniline	2140	ug/kg	UJ	LLISS-523M-3029-SO	2160	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	4,6-Dinitro-2-methylphenol	2140	ug/kg	UJ	LLISS-523M-3029-SO	2160	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	4-Bromophenyl-phenylether	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	4-Chloro-3-methylphenol	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	

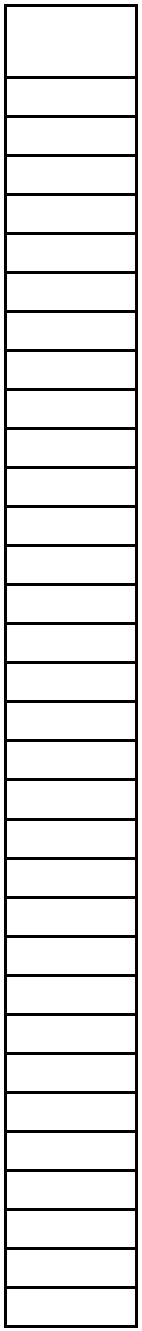
Sample	Analyte	Result	Units	Qualifier	ClientSampleID	Result	Units	Qualifier	RPD	RPD >50%?
LLISS-523M-3027-SO	4-Chloroaniline	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	4-Chlorophenyl-phenyl ether	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	4-Nitroaniline	2140	ug/kg	UJ	LLISS-523M-3029-SO	2160	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	4-Nitrophenol	2140	ug/kg	UJ	LLISS-523M-3029-SO	2160	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Acenaphthene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Acenaphthylene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Anthracene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Benzo(a)anthracene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Benzo(a)pyrene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Benzo(b)fluoranthene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Benzo(g,h,i)Perylene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Benzo(k)fluoranthene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Benzoic acid	1710	ug/kg	UJ	LLISS-523M-3029-SO	1730	ug/kg	UJ	-1.2	
LLISS-523M-3027-SO	Benzyl alcohol	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Bis(2-Chloroethoxy)Methane	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Bis(2-Chloroethyl)ether	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	bis(2-Chloroisopropyl)ether	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	bis(2-Ethylhexyl)phthalate	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Butylbenzylphthalate	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Carbazole	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Chrysene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Dibenzo(a,h)Anthracene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Dibenzofuran	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Diethylphthalate	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Dimethylphthalate	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Di-N-Butylphthalate	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Di-n-octylphthalate	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Fluoranthene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Fluorene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Hexachlorobenzene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Hexachlorobutadiene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Hexachloroethane	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	

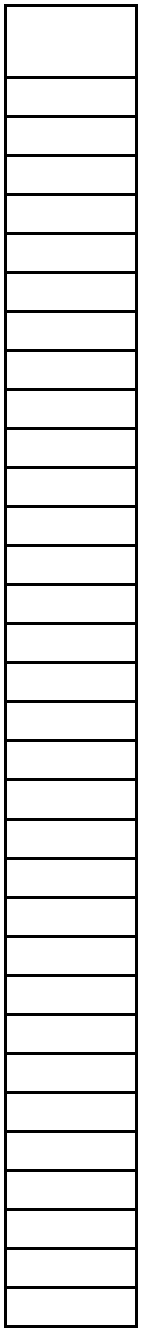
Sample	Analyte	Result	Units	Qualifier	ClientSampleID	Result	Units	Qualifier	RPD	RPD >50%?
LLISS-523M-3027-SO	Indeno(1,2,3-cd)pyrene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Isophorone	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Naphthalene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Nitrobenzene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	N-Nitrosodiphenylamine	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	N-Nitrosodipropylamine	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Pentachlorophenol	2140	ug/kg	UJ	LLISS-523M-3029-SO	2160	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Phenanthrene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Phenol	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
LLISS-523M-3027-SO	Pyrene	428	ug/kg	UJ	LLISS-523M-3029-SO	432	ug/kg	UJ	-0.9	
F15SS-012M-0500-SO	1,3,5-Trinitrobenzene	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
F15SS-012M-0500-SO	1,3-Dinitrobenzene	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
F15SS-012M-0500-SO	2,4,6-Trinitrotoluene	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
F15SS-012M-0500-SO	2,4-Dinitrotoluene	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
F15SS-012M-0500-SO	2,6-Dinitrotoluene	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
F15SS-012M-0500-SO	2-Amino-4,6-dinitrotoluene	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
F15SS-012M-0500-SO	2-Nitrotoluene	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
F15SS-012M-0500-SO	3-Nitrotoluene	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
F15SS-012M-0500-SO	4-Amino-2,6-dinitrotoluene	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
F15SS-012M-0500-SO	4-Nitrotoluene	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
F15SS-012M-0500-SO	HMX	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
F15SS-012M-0500-SO	Nitrobenzene	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
F15SS-012M-0500-SO	Nitroglycerin	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
F15SS-012M-0500-SO	PETN	0.499	mg/kg	U	F15SS-012M-0502-SO	0.499	mg/kg	U	0.0	
F15SS-012M-0500-SO	RDX	0.0997	mg/kg	U	F15SS-012M-0502-SO	0.0998	mg/kg	U	-0.1	
LL1SS-517M-3018-SO	1,3,5-Trinitrobenzene	0.0988	mg/kg	U	LL1SS-517M-3020-SO	0.0977	mg/kg	U	1.1	
LL1SS-517M-3018-SO	1,3-Dinitrobenzene	0.0988	mg/kg	U	LL1SS-517M-3020-SO	0.0977	mg/kg	U	1.1	
LL1SS-517M-3018-SO	2,4,6-Trinitrotoluene	4.71	mg/kg		LL1SS-517M-3020-SO	0.327	mg/kg		174.0	YES
LL1SS-517M-3018-SO	2,4-Dinitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3020-SO	0.0977	mg/kg	U	1.1	
LL1SS-517M-3018-SO	2,6-Dinitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3020-SO	0.0977	mg/kg	U	1.1	
LL1SS-517M-3018-SO	2-Amino-4,6-dinitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3020-SO	0.0977	mg/kg	U	1.1	
LL1SS-517M-3018-SO	2-Nitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3020-SO	0.0977	mg/kg	U	1.1	

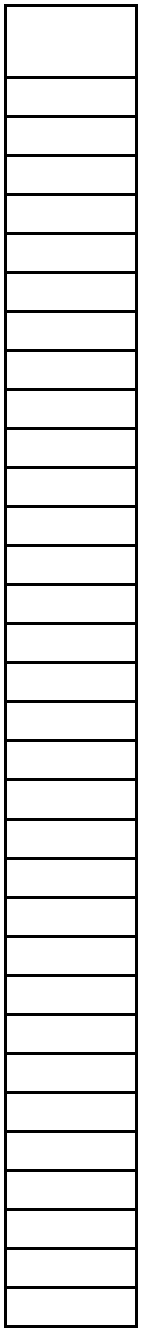
Sample	Analyte	Result	Units	Qualifier	ClientSampleID	Result	Units	Qualifier	RPD	RPD >50%?
LL1SS-517M-3018-SO	3-Nitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3020-SO	0.0977	mg/kg	U	1.1	
LL1SS-517M-3018-SO	4-Amino-2,6-dinitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3020-SO	0.0977	mg/kg	U	1.1	
LL1SS-517M-3018-SO	4-Nitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3020-SO	0.0977	mg/kg	U	1.1	
LL1SS-517M-3018-SO	HMX	0.0988	mg/kg	U	LL1SS-517M-3020-SO	0.0977	mg/kg	U	1.1	
LL1SS-517M-3018-SO	Nitrobenzene	0.0988	mg/kg	U	LL1SS-517M-3020-SO	0.0977	mg/kg	U	1.1	
LL1SS-517M-3018-SO	Nitroglycerin	0.0988	mg/kg	U	LL1SS-517M-3020-SO	0.0977	mg/kg	U	1.1	
LL1SS-517M-3018-SO	PETN	0.494	mg/kg	U	LL1SS-517M-3020-SO	0.488	mg/kg	U	1.2	
LL1SS-517M-3018-SO	RDX	0.0988	mg/kg	U	LL1SS-517M-3020-SO	0.0977	mg/kg	U	1.1	
LL1SS-537M-3050-SO	1,3,5-Trinitrobenzene	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL1SS-537M-3050-SO	1,3-Dinitrobenzene	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL1SS-537M-3050-SO	2,4,6-Trinitrotoluene	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL1SS-537M-3050-SO	2,4-Dinitrotoluene	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL1SS-537M-3050-SO	2,6-Dinitrotoluene	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL1SS-537M-3050-SO	2-Amino-4,6-dinitrotoluene	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL1SS-537M-3050-SO	2-Nitrotoluene	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL1SS-537M-3050-SO	3-Nitrotoluene	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL1SS-537M-3050-SO	4-Amino-2,6-dinitrotoluene	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL1SS-537M-3050-SO	4-Nitrotoluene	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL1SS-537M-3050-SO	HMX	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL1SS-537M-3050-SO	Nitrobenzene	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL1SS-537M-3050-SO	Nitroglycerin	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL1SS-537M-3050-SO	PETN	0.5	mg/kg	U	LL1SS-537M-3052-SO	0.5	mg/kg	U	0.0	
LL1SS-537M-3050-SO	RDX	0.1	mg/kg	U	LL1SS-537M-3052-SO	0.1	mg/kg	U	0.0	
LL4SS-280M-2000-SO	1,3,5-Trinitrobenzene	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	
LL4SS-280M-2000-SO	1,3-Dinitrobenzene	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	
LL4SS-280M-2000-SO	2,4,6-Trinitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	
LL4SS-280M-2000-SO	2,4-Dinitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	
LL4SS-280M-2000-SO	2,6-Dinitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	
LL4SS-280M-2000-SO	2-Amino-4,6-dinitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	
LL4SS-280M-2000-SO	2-Nitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	
LL4SS-280M-2000-SO	3-Nitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	
LL4SS-280M-2000-SO	4-Amino-2,6-dinitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	

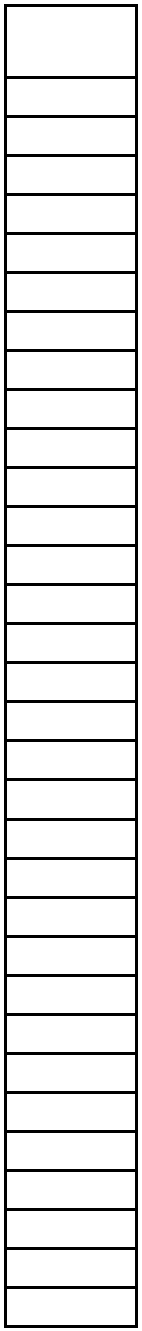
Sample	Analyte	Result	Units	Qualifier	ClientSampleID	Result	Units	Qualifier	RPD	RPD >50%?
LL4SS-280M-2000-SO	4-Nitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	
LL4SS-280M-2000-SO	HMX	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	
LL4SS-280M-2000-SO	Nitrobenzene	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	
LL4SS-280M-2000-SO	Nitroglycerin	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	
LL4SS-280M-2000-SO	PETN	0.488	mg/kg	U	LL4SS-280M-2002-SO	0.486	mg/kg	U	0.4	
LL4SS-280M-2000-SO	RDX	0.0976	mg/kg	U	LL4SS-280M-2002-SO	0.0972	mg/kg	U	0.4	
LLISS-523M-3027-SO	1,3,5-Trinitrobenzene	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
LLISS-523M-3027-SO	1,3-Dinitrobenzene	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
LLISS-523M-3027-SO	2,4,6-Trinitrotoluene	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
LLISS-523M-3027-SO	2,4-Dinitrotoluene	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
LLISS-523M-3027-SO	2,6-Dinitrotoluene	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
LLISS-523M-3027-SO	2-Amino-4,6-dinitrotoluene	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
LLISS-523M-3027-SO	2-Nitrotoluene	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
LLISS-523M-3027-SO	3-Nitrotoluene	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
LLISS-523M-3027-SO	4-Amino-2,6-dinitrotoluene	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
LLISS-523M-3027-SO	4-Nitrotoluene	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
LLISS-523M-3027-SO	HMX	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
LLISS-523M-3027-SO	Nitrobenzene	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
LLISS-523M-3027-SO	Nitroglycerin	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
LLISS-523M-3027-SO	PETN	0.494	mg/kg	U	LLISS-523M-3029-SO	0.496	mg/kg	U	-0.4	
LLISS-523M-3027-SO	RDX	0.0988	mg/kg	U	LLISS-523M-3029-SO	0.0992	mg/kg	U	-0.4	
F15SS-012M-0500-SO	Nitroguanidine	156	ug/kg	U	F15SS-012M-0502-SO	152	ug/kg	U	2.6	
LL1SS-537M-3050-SO	Nitroguanidine	146	ug/kg	U	LL1SS-537M-3052-SO	143	ug/kg	U	2.1	
LLISS-523M-3027-SO	Nitroguanidine	125	ug/kg	U	LLISS-523M-3029-SO	125	ug/kg	U	0.0	
F15SS-012M-0500-SO	Hexavalent Chromium	0.051	mg/kg	U	F15SS-012M-0502-SO	0.0509	mg/kg	U	0.2	
LL1SS-517M-3018-SO	Hexavalent Chromium	0.0504	mg/kg	U	LL1SS-517M-3020-SO	0.05	mg/kg	U	0.8	
LL1SS-537M-3050-SO	Hexavalent Chromium	0.0989	mg/kg	U	LL1SS-537M-3052-SO	0.05	mg/kg	U	65.7	YES
LL4SS-280M-2000-SO	Hexavalent Chromium	0.0504	mg/kg	U	LL4SS-280M-2002-SO	0.05	mg/kg	U	0.8	
LLISS-523M-3027-SO	Hexavalent Chromium	0.0493	mg/kg	U	LLISS-523M-3029-SO	0.0497	mg/kg	U	-0.8	
F15SS-012M-0500-SO	Nitrocellulose	2.5	mg/kg	UJ	F15SS-012M-0502-SO	2.65	mg/kg	J	-5.8	
LL1SS-537M-3050-SO	Nitrocellulose	2.49	mg/kg	UJ	LL1SS-537M-3052-SO	2.5	mg/kg	UJ	-0.4	
LLISS-523M-3027-SO	Nitrocellulose	2.48	mg/kg	UJ	LLISS-523M-3029-SO	2.48	mg/kg	UJ	0.0	

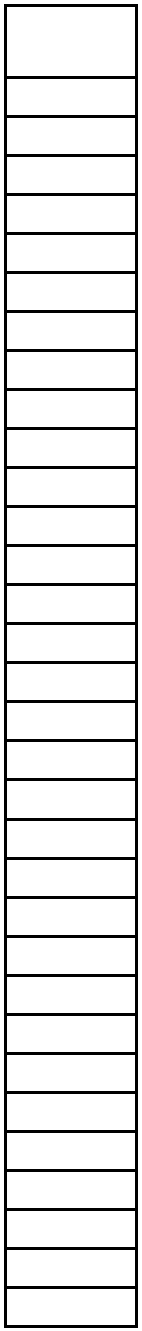


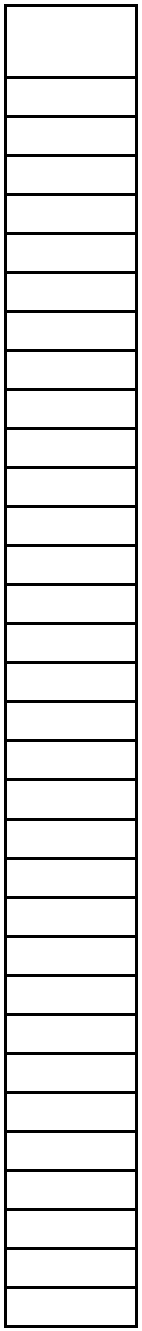


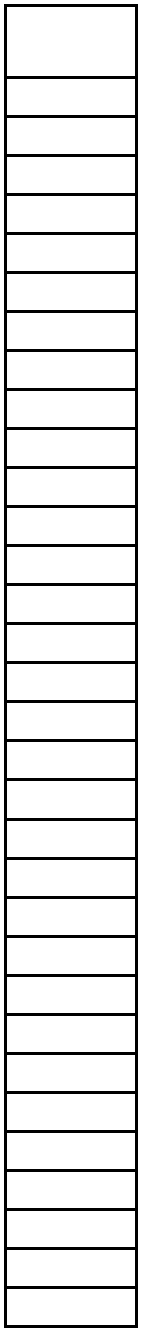


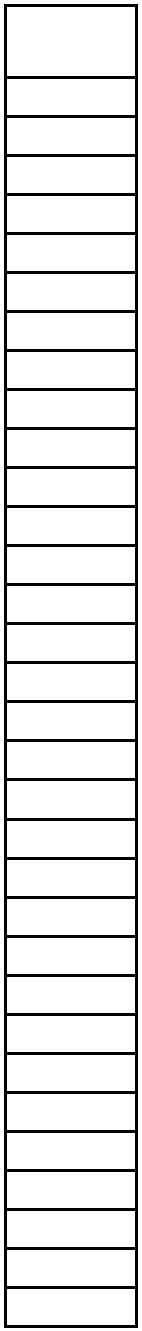












Sample	Analyte	Result	Units	Qualifier	Sample	Result	Units	Qualifier	RPD	RPD >50%?	W/In +/- RL?
F15SS-012M-0500-SO	Aluminum	12200	mg/kg	J	F15SS-012M-0503-SO	11600	mg/kg	J	5.042017		
F15SS-012M-0500-SO	Barium	76.1	mg/kg	J+	F15SS-012M-0503-SO	80	mg/kg	J+	-4.9968		
F15SS-012M-0500-SO	Beryllium	0.588	mg/kg		F15SS-012M-0503-SO	0.592	mg/kg		-0.67797		
F15SS-012M-0500-SO	Cadmium	1.03	mg/kg		F15SS-012M-0503-SO	1.09	mg/kg		-5.66038		
F15SS-012M-0500-SO	Calcium	5690	mg/kg		F15SS-012M-0503-SO	6150	mg/kg		-7.77027		
F15SS-012M-0500-SO	Chromium	21.9	mg/kg	J+	F15SS-012M-0503-SO	18.5	mg/kg	J+	16.83168		
F15SS-012M-0500-SO	Cobalt	6.83	mg/kg		F15SS-012M-0503-SO	6.58	mg/kg		3.728561		
F15SS-012M-0500-SO	Copper	16.9	mg/kg		F15SS-012M-0503-SO	17.2	mg/kg		-1.75953		
F15SS-012M-0500-SO	Iron	22800	mg/kg		F15SS-012M-0503-SO	23200	mg/kg		-1.73913		
F15SS-012M-0500-SO	Magnesium	3300	mg/kg		F15SS-012M-0503-SO	3410	mg/kg		-3.27869		
F15SS-012M-0500-SO	Manganese	330	mg/kg	J	F15SS-012M-0503-SO	366	mg/kg	J	-10.3448		
F15SS-012M-0500-SO	Potassium	981	mg/kg	J	F15SS-012M-0503-SO	848	mg/kg	J	14.54347		
F15SS-012M-0500-SO	Sodium	102	mg/kg		F15SS-012M-0503-SO	91.8	mg/kg		10.52632		
F15SS-012M-0500-SO	Vanadium	22	mg/kg	J+	F15SS-012M-0503-SO	21.6	mg/kg	J+	1.834862		
F15SS-012M-0500-SO	Zinc	56	mg/kg	J	F15SS-012M-0503-SO	58.9	mg/kg	J	-5.04787		
LL1SS-517M-3018-SO	Aluminum	5220	mg/kg		LL1SS-517M-3021-SO	5370	mg/kg		-2.83286		
LL1SS-517M-3018-SO	Barium	32	mg/kg	J+	LL1SS-517M-3021-SO	35	mg/kg	J+	-8.95522		
LL1SS-517M-3018-SO	Beryllium	0.308	mg/kg		LL1SS-517M-3021-SO	0.381	mg/kg		-21.1901		
LL1SS-517M-3018-SO	Cadmium	0.831	mg/kg		LL1SS-517M-3021-SO	0.83	mg/kg		0.120409		
LL1SS-517M-3018-SO	Calcium	3980	mg/kg	J	LL1SS-517M-3021-SO	6230	mg/kg	J	-44.0744		
LL1SS-517M-3018-SO	Chromium	16.9	mg/kg	J-	LL1SS-517M-3021-SO	14.5	mg/kg	J-	15.28662		
LL1SS-517M-3018-SO	Cobalt	4.43	mg/kg	J-	LL1SS-517M-3021-SO	4.95	mg/kg	J-	-11.0874		
LL1SS-517M-3018-SO	Copper	16.3	mg/kg		LL1SS-517M-3021-SO	16	mg/kg		1.857585		
LL1SS-517M-3018-SO	Iron	15600	mg/kg	J	LL1SS-517M-3021-SO	14700	mg/kg	J	5.940594		
LL1SS-517M-3018-SO	Magnesium	2090	mg/kg		LL1SS-517M-3021-SO	2300	mg/kg		-9.5672		
LL1SS-517M-3018-SO	Manganese	353	mg/kg	J-	LL1SS-517M-3021-SO	392	mg/kg	J-	-10.4698		
LL1SS-517M-3018-SO	Potassium	406	mg/kg	J+	LL1SS-517M-3021-SO	410	mg/kg	J+	-0.98039		
LL1SS-517M-3018-SO	Sodium	23.1	mg/kg		LL1SS-517M-3021-SO	34.1	mg/kg		-38.4615		
LL1SS-517M-3018-SO	Vanadium	11.1	mg/kg		LL1SS-517M-3021-SO	10.6	mg/kg		4.608295		
LL1SS-517M-3018-SO	Zinc	68.3	mg/kg		LL1SS-517M-3021-SO	65.7	mg/kg		3.880597		
LL1SS-537M-3050-SO	Aluminum	5070	mg/kg	J	LL1SS-537M-3053-SO	5160	mg/kg	J	-1.75953		
LL1SS-537M-3050-SO	Barium	31	mg/kg	J+	LL1SS-537M-3053-SO	30.9	mg/kg	J+	0.323102		

Sample	Analyte	Result	Units	Qualifier	Sample	Result	Units	Qualifier	RPD	RPD >50%?	W/In +/- RL?
LL1SS-537M-3050-SO	Beryllium	0.293	mg/kg		LL1SS-537M-3053-SO	0.295	mg/kg		-0.68027		
LL1SS-537M-3050-SO	Cadmium	0.917	mg/kg		LL1SS-537M-3053-SO	0.883	mg/kg		3.777778		
LL1SS-537M-3050-SO	Calcium	3100	mg/kg		LL1SS-537M-3053-SO	3680	mg/kg		-17.1091		
LL1SS-537M-3050-SO	Chromium	14.5	mg/kg	J+	LL1SS-537M-3053-SO	15.2	mg/kg	J+	-4.7138		
LL1SS-537M-3050-SO	Cobalt	4.26	mg/kg		LL1SS-537M-3053-SO	3.96	mg/kg		7.29927		
LL1SS-537M-3050-SO	Copper	18	mg/kg		LL1SS-537M-3053-SO	17.2	mg/kg		4.545455		
LL1SS-537M-3050-SO	Iron	16300	mg/kg		LL1SS-537M-3053-SO	15800	mg/kg		3.115265		
LL1SS-537M-3050-SO	Magnesium	1880	mg/kg		LL1SS-537M-3053-SO	1900	mg/kg		-1.0582		
LL1SS-537M-3050-SO	Manganese	356	mg/kg	J	LL1SS-537M-3053-SO	338	mg/kg	J	5.18732		
LL1SS-537M-3050-SO	Potassium	415	mg/kg	J	LL1SS-537M-3053-SO	477	mg/kg	J	-13.9013		
LL1SS-537M-3050-SO	Sodium	20.2	mg/kg		LL1SS-537M-3053-SO	28.6	mg/kg		-34.4262		
LL1SS-537M-3050-SO	Vanadium	11	mg/kg	J+	LL1SS-537M-3053-SO	10.7	mg/kg	J+	2.764977		
LL1SS-537M-3050-SO	Zinc	59.7	mg/kg	J	LL1SS-537M-3053-SO	60.9	mg/kg	J	-1.99005		
LL4SS-280M-2000-SO	Aluminum	10200	mg/kg		LL4SS-280M-2003-SO	9150	mg/kg		10.85271		
LL4SS-280M-2000-SO	Barium	46.4	mg/kg	J+	LL4SS-280M-2003-SO	44.8	mg/kg	J+	3.508772		
LL4SS-280M-2000-SO	Beryllium	0.448	mg/kg		LL4SS-280M-2003-SO	0.436	mg/kg		2.714932		
LL4SS-280M-2000-SO	Cadmium	1.09	mg/kg		LL4SS-280M-2003-SO	1.07	mg/kg		1.851852		
LL4SS-280M-2000-SO	Calcium	4130	mg/kg	J	LL4SS-280M-2003-SO	4300	mg/kg	J	-4.03321		
LL4SS-280M-2000-SO	Chromium	20.5	mg/kg	J-	LL4SS-280M-2003-SO	22.1	mg/kg	J-	-7.51174		
LL4SS-280M-2000-SO	Cobalt	5.41	mg/kg	J-	LL4SS-280M-2003-SO	5.67	mg/kg	J-	-4.69314		
LL4SS-280M-2000-SO	Copper	22.3	mg/kg		LL4SS-280M-2003-SO	22.9	mg/kg		-2.65487		
LL4SS-280M-2000-SO	Iron	21600	mg/kg	J-	LL4SS-280M-2003-SO	21300	mg/kg	J-	1.398601		
LL4SS-280M-2000-SO	Magnesium	3250	mg/kg		LL4SS-280M-2003-SO	3100	mg/kg		4.724409		
LL4SS-280M-2000-SO	Manganese	363	mg/kg	J-	LL4SS-280M-2003-SO	420	mg/kg	J-	-14.5594		
LL4SS-280M-2000-SO	Potassium	1280	mg/kg	J+	LL4SS-280M-2003-SO	1090	mg/kg	J+	16.03376		
LL4SS-280M-2000-SO	Sodium	64.8	mg/kg		LL4SS-280M-2003-SO	60	mg/kg		7.692308		
LL4SS-280M-2000-SO	Vanadium	18.9	mg/kg		LL4SS-280M-2003-SO	17.2	mg/kg		9.418283		
LL4SS-280M-2000-SO	Zinc	79.9	mg/kg		LL4SS-280M-2003-SO	82.3	mg/kg		-2.95931		
LLISS-523M-3027-SO	Aluminum	2940	mg/kg		LLISS-523M-3030-SO	2770	mg/kg		5.954466		
LLISS-523M-3027-SO	Barium	22.7	mg/kg		LLISS-523M-3030-SO	21.7	mg/kg		4.504505		
LLISS-523M-3027-SO	Beryllium	0.198	mg/kg		LLISS-523M-3030-SO	0.183	mg/kg		7.874016		
LLISS-523M-3027-SO	Cadmium	0.729	mg/kg		LLISS-523M-3030-SO	0.611	mg/kg		17.61194		

Sample	Analyte	Result	Units	Qualifier	Sample	Result	Units	Qualifier	RPD	RPD >50%?	W/In +/- RL?
LLISS-523M-3027-SO	Calcium	4390	mg/kg		LLISS-523M-3030-SO	4610	mg/kg		-4.88889		
LLISS-523M-3027-SO	Chromium	17.9	mg/kg		LLISS-523M-3030-SO	13	mg/kg		31.71521		
LLISS-523M-3027-SO	Cobalt	2.58	mg/kg		LLISS-523M-3030-SO	2.49	mg/kg		3.550296		
LLISS-523M-3027-SO	Copper	11.1	mg/kg		LLISS-523M-3030-SO	9.3	mg/kg		17.64706		
LLISS-523M-3027-SO	Iron	12900	mg/kg		LLISS-523M-3030-SO	11300	mg/kg		13.22314		
LLISS-523M-3027-SO	Magnesium	1090	mg/kg		LLISS-523M-3030-SO	1060	mg/kg		2.790698		
LLISS-523M-3027-SO	Manganese	431	mg/kg		LLISS-523M-3030-SO	401	mg/kg		7.211538		
LLISS-523M-3027-SO	Potassium	424	mg/kg		LLISS-523M-3030-SO	418	mg/kg		1.425178		
LLISS-523M-3027-SO	Sodium	25.7	mg/kg		LLISS-523M-3030-SO	27.1	mg/kg		-5.30303		
LLISS-523M-3027-SO	Vanadium	8.25	mg/kg		LLISS-523M-3030-SO	7.5	mg/kg		9.52381		
LLISS-523M-3027-SO	Zinc	51.7	mg/kg		LLISS-523M-3030-SO	54.8	mg/kg		-5.8216		
F15SS-012M-0500-SO	Antimony	0.444	mg/kg		F15SS-012M-0503-SO	0.441	mg/kg		0.677966		
F15SS-012M-0500-SO	Arsenic	10	mg/kg	J-	F15SS-012M-0503-SO	10	mg/kg	J-	0		
F15SS-012M-0500-SO	Lead	16.9	mg/kg		F15SS-012M-0503-SO	19.8	mg/kg		-15.8038		
F15SS-012M-0500-SO	Nickel	30.6	mg/kg	J-	F15SS-012M-0503-SO	35.3	mg/kg	J-	-14.264		
F15SS-012M-0500-SO	Selenium	0.367	mg/kg	J	F15SS-012M-0503-SO	0.36	mg/kg	J	1.925722		
F15SS-012M-0500-SO	Thallium	0.143	mg/kg	J	F15SS-012M-0503-SO	0.155	mg/kg	J	-8.05369		
LL1SS-517M-3018-SO	Antimony	0.363	mg/kg		LL1SS-517M-3021-SO	0.281	mg/kg		25.46584		
LL1SS-517M-3018-SO	Arsenic	9.51	mg/kg	J-	LL1SS-517M-3021-SO	10.5	mg/kg	J-	-9.89505		
LL1SS-517M-3018-SO	Lead	15.6	mg/kg	J	LL1SS-517M-3021-SO	17.2	mg/kg	J	-9.7561		
LL1SS-517M-3018-SO	Nickel	14.7	mg/kg		LL1SS-517M-3021-SO	13.8	mg/kg		6.315789		
LL1SS-517M-3018-SO	Selenium	0.25	mg/kg	J-	LL1SS-517M-3021-SO	0.252	mg/kg	J-	-0.79681		
LL1SS-517M-3018-SO	Thallium	0.164	mg/kg		LL1SS-517M-3021-SO	0.122	mg/kg		29.37063		
LL1SS-537M-3050-SO	Antimony	0.455	mg/kg		LL1SS-537M-3053-SO	0.249	mg/kg		58.52273	YES	
LL1SS-537M-3050-SO	Arsenic	10.4	mg/kg	J-	LL1SS-537M-3053-SO	8.78	mg/kg	J-	16.8926		
LL1SS-537M-3050-SO	Lead	13.6	mg/kg		LL1SS-537M-3053-SO	12.2	mg/kg		10.85271		
LL1SS-537M-3050-SO	Nickel	15.2	mg/kg	J-	LL1SS-537M-3053-SO	16.5	mg/kg	J-	-8.20189		
LL1SS-537M-3050-SO	Selenium	0.267	mg/kg	J	LL1SS-537M-3053-SO	0.299	mg/kg	J	-11.3074		
LL1SS-537M-3050-SO	Thallium	0.0954	mg/kg	J	LL1SS-537M-3053-SO	0.081	mg/kg	J	16.32653		
LL4SS-280M-2000-SO	Antimony	0.321	mg/kg		LL4SS-280M-2003-SO	0.307	mg/kg		4.458599		
LL4SS-280M-2000-SO	Arsenic	14.4	mg/kg	J-	LL4SS-280M-2003-SO	11.5	mg/kg	J-	22.39382		
LL4SS-280M-2000-SO	Lead	23.4	mg/kg	J	LL4SS-280M-2003-SO	19.7	mg/kg	J	17.16937		

Sample	Analyte	Result	Units	Qualifier	Sample	Result	Units	Qualifier	RPD	RPD >50%?	W/In +/- RL?
LL4SS-280M-2000-SO	Nickel	21.5	mg/kg	J-	LL4SS-280M-2003-SO	18.1	mg/kg		17.17172		
LL4SS-280M-2000-SO	Selenium	0.295	mg/kg	J-	LL4SS-280M-2003-SO	0.21	mg/kg	J-	33.66337		
LL4SS-280M-2000-SO	Thallium	0.146	mg/kg		LL4SS-280M-2003-SO	0.128	mg/kg		13.13869		
LLISS-523M-3027-SO	Antimony	0.136	mg/kg		LLISS-523M-3030-SO	0.164	mg/kg		-18.6667		
LLISS-523M-3027-SO	Arsenic	5.4	mg/kg	J	LLISS-523M-3030-SO	6.04	mg/kg	J	-11.1888		
LLISS-523M-3027-SO	Lead	19.7	mg/kg	J	LLISS-523M-3030-SO	20.4	mg/kg	J	-3.49127		
LLISS-523M-3027-SO	Nickel	10.2	mg/kg	J	LLISS-523M-3030-SO	13.8	mg/kg	J	-30		
LLISS-523M-3027-SO	Selenium	0.0986	mg/kg	UJ	LLISS-523M-3030-SO	0.0968	mg/kg	UJ	1.842375		
LLISS-523M-3027-SO	Thallium	0.106	mg/kg	J	LLISS-523M-3030-SO	0.0585	mg/kg	J	57.75076	YES	
F15SS-012M-0500-SO	Mercury	0.03	mg/kg	J	F15SS-012M-0503-SO	0.0366	mg/kg	J	-19.8198		
LL1SS-517M-3018-SO	Mercury	0.0162	mg/kg	J	LL1SS-517M-3021-SO	0.0203	mg/kg	J	-22.4658		
LL1SS-537M-3050-SO	Mercury	0.0166	mg/kg	J	LL1SS-537M-3053-SO	0.0175	mg/kg	J	-5.27859		
LL4SS-280M-2000-SO	Mercury	0.0234	mg/kg	J	LL4SS-280M-2003-SO	0.0222	mg/kg	J	5.263158		
LLISS-523M-3027-SO	Mercury	0.025	mg/kg	J	LLISS-523M-3030-SO	0.0202	mg/kg	J	21.23894		
LLISS-523M-3027-SO	4,4'-DDD	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	4,4'-DDE	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	4,4'-DDT	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	Aldrin	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	alpha Chlordane	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	alpha-BHC	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	beta-BHC	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	delta-BHC	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	Dieldrin	0.345	ug/kg	NJ	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	Endosulfan I	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	Endosulfan II	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	Endosulfan sulfate	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	Endrin	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	Endrin aldehyde	0.345	ug/kg	J	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	Endrin ketone	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	gamma Chlordane	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	gamma-BHC (Lindane)	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	Heptachlor	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		

Sample	Analyte	Result	Units	Qualifier	Sample	Result	Units	Qualifier	RPD	RPD >50%?	W/In +/- RL?
LLISS-523M-3027-SO	Heptachlor epoxide	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	Methoxychlor	0.345	ug/kg	U	LLISS-523M-3030-SO	0.329	ug/kg	U	4.747774		
LLISS-523M-3027-SO	Toxaphene	17.5	ug/kg	U	LLISS-523M-3030-SO	16.7	ug/kg	U	4.678363		
LLISS-523M-3027-SO	Aroclor-1016	8.62	ug/kg	U	LLISS-523M-3030-SO	8.23	ug/kg	U	4.62908		
LLISS-523M-3027-SO	Aroclor-1221	8.62	ug/kg	U	LLISS-523M-3030-SO	8.23	ug/kg	U	4.62908		
LLISS-523M-3027-SO	Aroclor-1232	8.62	ug/kg	U	LLISS-523M-3030-SO	8.23	ug/kg	U	4.62908		
LLISS-523M-3027-SO	Aroclor-1242	8.62	ug/kg	U	LLISS-523M-3030-SO	8.23	ug/kg	U	4.62908		
LLISS-523M-3027-SO	Aroclor-1248	8.62	ug/kg	U	LLISS-523M-3030-SO	8.23	ug/kg	U	4.62908		
LLISS-523M-3027-SO	Aroclor-1254	1220	ug/kg		LLISS-523M-3030-SO	1200	ug/kg		1.652893		
LLISS-523M-3027-SO	Aroclor-1260	8.62	ug/kg	U	LLISS-523M-3030-SO	8.23	ug/kg	U	4.62908		
LLISS-523D-3031-SO	1,1,1-Trichloroethane	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	1,1,2,2-Tetrachloroethane	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	1,1,2-Trichloroethane	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	1,1-Dichloroethane	0.885	ug/kg	U	LLISS-523D-3033-SO	0.979	ug/kg	U	-10.0858		
LLISS-523D-3031-SO	1,1-Dichloroethene	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	1,2-Dibromoethane	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	1,2-Dichloroethane	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	1,2-Dichloroethene (total)	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	1,2-Dichloropropane	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	2-Butanone	2.21	ug/kg	U	LLISS-523D-3033-SO	2.45	ug/kg	U	-10.3004		
LLISS-523D-3031-SO	2-Hexanone	2.21	ug/kg	U	LLISS-523D-3033-SO	2.45	ug/kg	U	-10.3004		
LLISS-523D-3031-SO	4-Methyl-2-pentanone	2.21	ug/kg	U	LLISS-523D-3033-SO	2.45	ug/kg	U	-10.3004		
LLISS-523D-3031-SO	Acetone	4.42	ug/kg	U	LLISS-523D-3033-SO	12	ug/kg	U	-92.3264	YES	within
LLISS-523D-3031-SO	Benzene	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Bromochloromethane	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Bromodichloromethane	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Bromoform	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Bromomethane	0.885	ug/kg	U	LLISS-523D-3033-SO	0.979	ug/kg	U	-10.0858		
LLISS-523D-3031-SO	Carbon disulfide	0.496	ug/kg	J	LLISS-523D-3033-SO	0.907	ug/kg	J	-58.5887	YES	within
LLISS-523D-3031-SO	Carbon tetrachloride	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Chlorobenzene	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Chloroethane	0.885	ug/kg	U	LLISS-523D-3033-SO	0.979	ug/kg	U	-10.0858		

Sample	Analyte	Result	Units	Qualifier	Sample	Result	Units	Qualifier	RPD	RPD >50%?	W/In +/- RL?
LLISS-523D-3031-SO	Chloroform	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Chloromethane	1.77	ug/kg	U	LLISS-523D-3033-SO	1.96	ug/kg	U	-10.1877		
LLISS-523D-3031-SO	cis-1,3-Dichloropropene	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Dibromochloromethane	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Ethyl benzene	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Methylene chloride	1.83	ug/kg	J	LLISS-523D-3033-SO	6.09	ug/kg		-107.576	YES	within
LLISS-523D-3031-SO	Styrene	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Tetrachloroethene	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Toluene	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	trans-1,3-Dichloropropene	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Trichloroethene	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523D-3031-SO	Vinyl chloride	0.885	ug/kg	U	LLISS-523D-3033-SO	0.979	ug/kg	U	-10.0858		
LLISS-523D-3031-SO	Xylenes, Total	0.442	ug/kg	U	LLISS-523D-3033-SO	0.489	ug/kg	U	-10.0967		
LLISS-523M-3027-SO	1,2,4-Trichlorobenzene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	1,2-Dichlorobenzene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	1,3-Dichlorobenzene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	1,4-Dichlorobenzene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	2,4,5-Trichlorophenol	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	2,4,6-Trichlorophenol	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	2,4-Dichlorophenol	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	2,4-Dimethylphenol	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	2,4-Dinitrophenol	2140	ug/kg	UJ	LLISS-523M-3030-SO	2000	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	2,4-Dinitrotoluene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	2,6-Dinitrotoluene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	2-Chloronaphthalene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	2-Chlorophenol	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	2-Methylnaphthalene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	2-Methylphenol	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	2-Nitroaniline	2140	ug/kg	UJ	LLISS-523M-3030-SO	2000	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	2-Nitrophenol	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	3-,4-Methylphenol	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	3-Nitroaniline	2140	ug/kg	UJ	LLISS-523M-3030-SO	2000	ug/kg	UJ	6.763285		

Sample	Analyte	Result	Units	Qualifier	Sample	Result	Units	Qualifier	RPD	RPD >50%?	W/In +/- RL?
LLISS-523M-3027-SO	4,6-Dinitro-2-methylphenol	2140	ug/kg	UJ	LLISS-523M-3030-SO	2000	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	4-Bromophenyl-phenylether	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	4-Chloro-3-methylphenol	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	4-Chloroaniline	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	4-Chlorophenyl-phenyl ether	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	4-Nitroaniline	2140	ug/kg	UJ	LLISS-523M-3030-SO	2000	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	4-Nitrophenol	2140	ug/kg	UJ	LLISS-523M-3030-SO	2000	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Acenaphthene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Acenaphthylene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Anthracene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Benzo(a)anthracene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Benzo(a)pyrene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Benzo(b)fluoranthene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Benzo(g,h,i)Perylene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Benzo(k)fluoranthene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Benzoic acid	1710	ug/kg	UJ	LLISS-523M-3030-SO	1600	ug/kg	UJ	6.646526		
LLISS-523M-3027-SO	Benzyl alcohol	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Bis(2-Chloroethoxy)Methane	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Bis(2-Chloroethyl)ether	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	bis(2-Chloroisopropyl)ether	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	bis(2-Ethylhexyl)phthalate	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Butylbenzylphthalate	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Carbazole	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Chrysene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Dibenzo(a,h)Anthracene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Dibenzofuran	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Diethylphthalate	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Dimethylphthalate	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Di-N-Butylphthalate	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Di-n-octylphthalate	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Fluoranthene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Fluorene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		

Sample	Analyte	Result	Units	Qualifier	Sample	Result	Units	Qualifier	RPD	RPD >50%?	W/In +/- RL?
LLISS-523M-3027-SO	Hexachlorobenzene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Hexachlorobutadiene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Hexachloroethane	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Indeno(1,2,3-cd)pyrene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Isophorone	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Naphthalene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Nitrobenzene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	N-Nitrosodiphenylamine	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	N-Nitrosodipropylamine	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Pentachlorophenol	2140	ug/kg	UJ	LLISS-523M-3030-SO	2000	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Phenanthrene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Phenol	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
LLISS-523M-3027-SO	Pyrene	428	ug/kg	UJ	LLISS-523M-3030-SO	400	ug/kg	UJ	6.763285		
F15SS-012M-0500-SO	1,3,5-Trinitrobenzene	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
F15SS-012M-0500-SO	1,3-Dinitrobenzene	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
F15SS-012M-0500-SO	2,4,6-Trinitrotoluene	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
F15SS-012M-0500-SO	2,4-Dinitrotoluene	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
F15SS-012M-0500-SO	2,6-Dinitrotoluene	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
F15SS-012M-0500-SO	2-Amino-4,6-dinitrotoluene	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
F15SS-012M-0500-SO	2-Nitrotoluene	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
F15SS-012M-0500-SO	3-Nitrotoluene	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
F15SS-012M-0500-SO	4-Amino-2,6-dinitrotoluene	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
F15SS-012M-0500-SO	4-Nitrotoluene	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
F15SS-012M-0500-SO	HMX	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
F15SS-012M-0500-SO	Nitrobenzene	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
F15SS-012M-0500-SO	Nitroglycerin	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
F15SS-012M-0500-SO	PETN	0.499	mg/kg	U	F15SS-012M-0503-SO	0.5	mg/kg	U	-0.2002		
F15SS-012M-0500-SO	RDX	0.0997	mg/kg	U	F15SS-012M-0503-SO	0.0999	mg/kg	U	-0.2004		
LL1SS-517M-3018-SO	1,3,5-Trinitrobenzene	0.0988	mg/kg	U	LL1SS-517M-3021-SO	0.0989	mg/kg	U	-0.10116		
LL1SS-517M-3018-SO	1,3-Dinitrobenzene	0.0988	mg/kg	U	LL1SS-517M-3021-SO	0.0989	mg/kg	U	-0.10116		
LL1SS-517M-3018-SO	2,4,6-Trinitrotoluene	4.71	mg/kg		LL1SS-517M-3021-SO	0.0989	mg/kg	U	191.7736	YES	
LL1SS-517M-3018-SO	2,4-Dinitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3021-SO	0.0989	mg/kg	U	-0.10116		

Sample	Analyte	Result	Units	Qualifier	Sample	Result	Units	Qualifier	RPD	RPD >50%?	W/In +/- RL?
LL1SS-517M-3018-SO	2,6-Dinitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3021-SO	0.0989	mg/kg	U	-0.10116		
LL1SS-517M-3018-SO	2-Amino-4,6-dinitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3021-SO	0.0989	mg/kg	U	-0.10116		
LL1SS-517M-3018-SO	2-Nitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3021-SO	0.0989	mg/kg	U	-0.10116		
LL1SS-517M-3018-SO	3-Nitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3021-SO	0.0989	mg/kg	U	-0.10116		
LL1SS-517M-3018-SO	4-Amino-2,6-dinitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3021-SO	0.0989	mg/kg	U	-0.10116		
LL1SS-517M-3018-SO	4-Nitrotoluene	0.0988	mg/kg	U	LL1SS-517M-3021-SO	0.0989	mg/kg	U	-0.10116		
LL1SS-517M-3018-SO	HMX	0.0988	mg/kg	U	LL1SS-517M-3021-SO	0.0989	mg/kg	U	-0.10116		
LL1SS-517M-3018-SO	Nitrobenzene	0.0988	mg/kg	U	LL1SS-517M-3021-SO	0.0989	mg/kg	U	-0.10116		
LL1SS-517M-3018-SO	Nitroglycerin	0.0988	mg/kg	U	LL1SS-517M-3021-SO	0.0989	mg/kg	U	-0.10116		
LL1SS-517M-3018-SO	PETN	0.494	mg/kg	U	LL1SS-517M-3021-SO	0.495	mg/kg	U	-0.20222		
LL1SS-517M-3018-SO	RDX	0.0988	mg/kg	U	LL1SS-517M-3021-SO	0.0989	mg/kg	U	-0.10116		
LL1SS-537M-3050-SO	1,3,5-Trinitrobenzene	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL1SS-537M-3050-SO	1,3-Dinitrobenzene	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL1SS-537M-3050-SO	2,4,6-Trinitrotoluene	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL1SS-537M-3050-SO	2,4-Dinitrotoluene	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL1SS-537M-3050-SO	2,6-Dinitrotoluene	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL1SS-537M-3050-SO	2-Amino-4,6-dinitrotoluene	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL1SS-537M-3050-SO	2-Nitrotoluene	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL1SS-537M-3050-SO	3-Nitrotoluene	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL1SS-537M-3050-SO	4-Amino-2,6-dinitrotoluene	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL1SS-537M-3050-SO	4-Nitrotoluene	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL1SS-537M-3050-SO	HMX	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL1SS-537M-3050-SO	Nitrobenzene	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL1SS-537M-3050-SO	Nitroglycerin	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL1SS-537M-3050-SO	PETN	0.5	mg/kg	U	LL1SS-537M-3053-SO	0.5	mg/kg	U	0		
LL1SS-537M-3050-SO	RDX	0.1	mg/kg	U	LL1SS-537M-3053-SO	0.1	mg/kg	U	0		
LL4SS-280M-2000-SO	1,3,5-Trinitrobenzene	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		
LL4SS-280M-2000-SO	1,3-Dinitrobenzene	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		
LL4SS-280M-2000-SO	2,4,6-Trinitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		
LL4SS-280M-2000-SO	2,4-Dinitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		
LL4SS-280M-2000-SO	2,6-Dinitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		
LL4SS-280M-2000-SO	2-Amino-4,6-dinitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		

Sample	Analyte	Result	Units	Qualifier	Sample	Result	Units	Qualifier	RPD	RPD >50%?	W/In +/- RL?
LL4SS-280M-2000-SO	2-Nitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		
LL4SS-280M-2000-SO	3-Nitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		
LL4SS-280M-2000-SO	4-Amino-2,6-dinitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		
LL4SS-280M-2000-SO	4-Nitrotoluene	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		
LL4SS-280M-2000-SO	HMX	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		
LL4SS-280M-2000-SO	Nitrobenzene	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		
LL4SS-280M-2000-SO	Nitroglycerin	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		
LL4SS-280M-2000-SO	PETN	0.488	mg/kg	U	LL4SS-280M-2003-SO	0.493	mg/kg	U	-1.01937		
LL4SS-280M-2000-SO	RDX	0.0976	mg/kg	U	LL4SS-280M-2003-SO	0.0986	mg/kg	U	-1.01937		
LLISS-523M-3027-SO	1,3,5-Trinitrobenzene	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
LLISS-523M-3027-SO	1,3-Dinitrobenzene	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
LLISS-523M-3027-SO	2,4,6-Trinitrotoluene	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
LLISS-523M-3027-SO	2,4-Dinitrotoluene	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
LLISS-523M-3027-SO	2,6-Dinitrotoluene	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
LLISS-523M-3027-SO	2-Amino-4,6-dinitrotoluene	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
LLISS-523M-3027-SO	2-Nitrotoluene	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
LLISS-523M-3027-SO	3-Nitrotoluene	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
LLISS-523M-3027-SO	4-Amino-2,6-dinitrotoluene	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
LLISS-523M-3027-SO	4-Nitrotoluene	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
LLISS-523M-3027-SO	HMX	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
LLISS-523M-3027-SO	Nitrobenzene	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
LLISS-523M-3027-SO	Nitroglycerin	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
LLISS-523M-3027-SO	PETN	0.494	mg/kg	U	LLISS-523M-3030-SO	0.494	mg/kg	U	0		
LLISS-523M-3027-SO	RDX	0.0988	mg/kg	U	LLISS-523M-3030-SO	0.0987	mg/kg	U	0.101266		
F15SS-012M-0500-SO	Nitroguanidine	156	ug/kg	U	F15SS-012M-0503-SO	156	ug/kg	U	0		
LL1SS-537M-3050-SO	Nitroguanidine	146	ug/kg	U	LL1SS-537M-3053-SO	137	ug/kg	U	6.360424		
LLISS-523M-3027-SO	Nitroguanidine	125	ug/kg	U	LLISS-523M-3030-SO	125	ug/kg	U	0		
F15SS-012M-0500-SO	Hexavalent Chromium	0.051	mg/kg	U	F15SS-012M-0503-SO	0.101	mg/kg	U	-65.7895	YES	
LL1SS-517M-3018-SO	Hexavalent Chromium	0.0504	mg/kg	U	LL1SS-517M-3021-SO	0.0498	mg/kg	U	1.197605		
LL1SS-537M-3050-SO	Hexavalent Chromium	0.0989	mg/kg	U	LL1SS-537M-3053-SO	0.101	mg/kg	U	-2.10105		
LL4SS-280M-2000-SO	Hexavalent Chromium	0.0504	mg/kg	U	LL4SS-280M-2003-SO	0.0624	mg/kg	U	-21.2766		
LLISS-523M-3027-SO	Hexavalent Chromium	0.0493	mg/kg	U	LLISS-523M-3030-SO	0.0498	mg/kg	U	-1.00908		

Sample	Analyte	Result	Units	Qualifier	Sample	Result	Units	Qualifier	RPD	RPD >50%?	W/In +/- RL?
F15SS-012M-0500-SO	Nitrocellulose	2.5	mg/kg	UJ	F15SS-012M-0503-SO	2.87	mg/kg	J	-13.7803		
LL1SS-537M-3050-SO	Nitrocellulose	2.49	mg/kg	UJ	LL1SS-537M-3053-SO	2.5	mg/kg	UJ	-0.4008		
LLISS-523M-3027-SO	Nitrocellulose	2.48	mg/kg	UJ	LLISS-523M-3030-SO	2.49	mg/kg	UJ	-0.40241		

APPENDIX D

Validator Checklists

NITROAROMATICS & NITRAMINE DATA ANALYSIS (EXPLOSIVE RESIDUES) CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: Microbac

Batch Number(s): _____

Sample Delivery Group: L0910055 3

IV
LL155-517M -3018-30
-21

LL455-280M -2000
-28

III
-3026 (-22
-3021 (-23

-2002 (-29)
-2003 (-30)

	Yes	No
1. Holding Time: Were samples analyzed within holding time?	[N]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of ~~five~~ 6 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.	[ ]	[ ]
• 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?	[X]	[ ]
• 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?	[X]	[ ]
• Was midpoint calibration standard conducted every ten samples or every twelve hours?	[X]	[ ]
• Was midpoint calibration standard conducted after the last sample of the day?	[X]	[ ]
• Did the CCV meet the minimum requirements (D ≤ 15% with a maximum D ≤ 20% for a specific compound if the mean D ≤ 15%)?	[X] validated on 1°	[X] bracketed by acceptable
7. Sample Analysis:		
• Was the RRT of an identified component within the retention time window created as SW-846 requires?	[X]	[ ]
• Were all identified hits, above the initial calibration curve, diluted and reanalyzed? N/A	[ ]	[ ]
• Were all identified hits confirmed on a second column?	[X]	[ ]
• Was RPD of target analyte confirmation ≤ 40?	[X]	[ ]
• Was there a shoulder on the 2,4,6-TNT peak?	[N/A]	[X]
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:	[X]	[ ]
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[X]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?		

	Yes	No	
• MS/MSD: Were the percent recoveries within limits? ~~LCSS~~ LUSS-515M-3016-S0	[ ]	[X]	%R + RPD outlier parent not validated
Were the RPDs within control limits?			
• System Monitoring Compounds (Surrogates): Were surrogate recoveries within QC limits?	[ ]	[X]	517M surr = 168% on conf

9. Comments (attach additional sheets if necessary):

~~Conf not 2nd col but same inst + col wf new ICAL~~
ICV : tetryl 39 ~~33~~% on 1° + 23% on conf
~~CCV : tetryl (15:25) 15.7% (00:34) OK~~
CCV conf 1/1 (03:41) 3-NT (42%), 4-NT (16%) - not detected no conf nec.
MRL : 10/30 ~~NG = 66%~~ tetryl = 55% 10/31 05:15

Validated/Reviewed by:

Signature: Patt Meeks Date: 6/29/10

Name: Patt. Meeks

NITROAROMATICS & NITRAMINE DATA ANALYSIS (EXPLOSIVE RESIDUES) CHECKLIST

IV
LL155-523m-3027 (-01)
TH
3029
3030
~~LL55-5230-3031~~ ~~303~~

Project Name: Ravenna Oct/Nov 2009

Laboratory: Microbac

Batch Number(s): _____

Sample Delivery Group: L09100645

	Yes	No
1. Holding Time: Were samples analyzed within holding time?	[N]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of 6 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: Level IV only		
• Was the RRT of an identified component within the retention time window created as SW-846 requires? No detects in validated	[ ]	[ ]
• Were all identified hits, above the initial calibration curve, diluted and reanalyzed? N/A	[ ]	[ ]
• Were all identified hits confirmed on a second column? N/A	[ ]	[ ]
• 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:	[N]	[ ]
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[N]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?		

	Yes	No
• MS/MSD: Were the percent recoveries within limits? LCS -525M -3036 parent not validated	[ ]	[X]
Were the RPDs within control limits?		
• System Monitoring Compounds (Surrogates): Were surrogate recoveries within QC limits?	[X]	[ ]

9. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti MD Date: 6/29/10

Name: Patti Meeks

NITROAROMATICS & NITRAMINE DATA ANALYSIS (EXPLOSIVE RESIDUES) CHECKLIST

IV

LL155-537M-3050 (-08)

F1555-012M-0500 (-14)

III

-3052 (-09)
-3053 (-10)
-0502 (-15)
-0503 (-16)

Project Name: Ravenna Oct/Nov 2009

Laboratory: Microbac

Batch Number(s): _____

Sample Delivery Group: L09110136

	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/A to validated	[ ]	[ ]
• Were all identified hits, above the initial calibration curve, diluted and reanalyzed? N/A to validated	[ ]	[ ]
• Were all identified hits confirmed on a second column? N/A to validated	[ ]	[ ]
• Was RPD of target analyte confirmation ≤ 40? N/A to validated	[ ]	[ ]
• Was there a shoulder on the 2,4,6-TNT peak? N/A to validated	[ ]	[ ]
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?	[N]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?		

	Yes	No
• MS/MSD: Were the percent recoveries within limits? None analyzed	[ ]	[ ]
Were the RPDs within control limits?		
• System Monitoring Compounds (Surrogates): Were surrogate recoveries within QC limits?	[ ]	[ ]

9. Comments (attach additional sheets if necessary):

ICV tetryl = 39%
CCV tetryl = 16.3 (11/11 2316) + 21.5 (11/12 0739)

Validated/Reviewed by:

Signature: Patt Meeks Date: 6/29/10

Name: Patt. Meeks

POLY CHLORINATED BIPHENYLS (PCB/AROCLORS) CHECKLIST

Project Name: Ravenna LL1

Laboratory: Microbac

Batch Number(s): ~~3116461~~ 3162252

Sample Delivery Group: L09100645

	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%?	[✓]	[ ]

	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?	[✓]	[ ]
• 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?	[✓]	[ ]
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):

- MS/MSD (not validated) Aroclor 1260 ↑ @ 251%/213% (limits 40-140) Validated in ADR
- Samples required 10X dilutions for Aroclor 1254 rest of Aroclors reported from 1X / duplicate data R/D

Validated/Reviewed by:

Signature: Lynn A Calvin Date: 06.22.2010

Name: Lynn S. Calvin

VERSION 5
June 2002

U.S. Army Corps of Engineers Louisville District - LCG

ORGANOCHLORINE PESTICIDES ANALYSIS CHECKLIST

Project Name: Ravenna LL

Laboratory: Microbac

Batch Number(s): 316251

Sample Delivery Group: 209100645

	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	[ ]	[✓]

↑ outliers for heptachlor and DDT - both ND in samples

	Yes	No
6. Initial Calibration Verification (ICV):		
• Is the mid level (2nd source) recovery within 85 - 115%? one outlier endrin aldehyde +19.3% (ND in samples)	[ ]	[✓]
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? endrin + DDT +18.0 and +18.1 respectively (ND in samples)	[✓]	[✗] NC
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? N/A	[ ]	[ ]
• Were identified compounds confirmed on a second GC column?	[✓]	[ ]
• Was RPD of target analyte confirmation ≤ 40? N/A	[ ]	[ ]
9. 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?	[✓]	[ ]

10. Comments (attach additional sheets if necessary):

- MRL, ICV, and CCV outliers had a positive bias for nondetected analytes - no qualifications.
- WS/WSD were not validated / validated in ADR only

Validated/Reviewed by:

Signature: Lynn S. Calvin

Date: 06.23.2010

Name: Lynn S. Calvin

SEMIVOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: Ravenna LL1

Laboratory: Microbac

Batch Number(s): 316249

Sample Delivery Group: 2091006245

		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 (9) [✓] more	[ ] [ ]
If the calibration curve consists of 5-standards, check validity of the calibration model.		
Was the linear model applied?	[✓] for some compounds	[ ]

- 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? routine	[✓]	[ ]
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	[ ]	[✓]
• For the non-contaminants of concern was the QC/MRL between 50-150% (Sporadic Marginal Failure)?	[ ]	[✓]

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)? one outlier: 3,3'-dichlorobenzidine	[ ]	[✓]

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%. [✓] [ ]

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? (N/A for Level III – no sample detects → QC) [✓] [ ]
- 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? (two outliers – validated by ADR)	[ ]	[✓]
Were the RPD within control limits? (One outlier – ADR)	[ ]	[ ]
• System Monitoring Compounds (Surrogates): are surrogate recoveries within QC limits? (spike mix or sample prep problems indicated)	[ ]	[✓]

12. Comments (attach additional sheets if necessary):

- Hexachlorocyclopentadiene not recovered in ending MRL. nondetects qual'd R/C
- 3,3'-dichlorobenzidine recovered < 70% in ICV/nondetects R/C
- all samples, including method blank had low surrogate recoveries all retained results (all nondetects) qual'd J/UJ
- All samples analyzed at 5X and were very clean - should have been reanalyzed @ 1X.

Validated/Reviewed by:

Signature: LSCalvin Date: 06.24.10

Name: Lynn S. Calvin

VOLATILE ORGANIC ANALYSIS CHECKLIST

Project Name: Ravenna 22-1

Laboratory: Microbac MC 04.24.10

Batch Number(s): ~~315608 (aqueous)~~, 315695 (soil)

Sample Delivery Group (SDG): L09100625

	Yes	No
1. Holding Time:		
(a) Were samples preserved? (Frozen)	[✓]	[ ]
(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? (ten)/(nine) 06.24.10	[✓]	[ ]
• 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%? N/A	[ ]	[ ]
• 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**.	[ ]	[ ]
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 outliers > limits for nondetects in samples	[ ]	[✓]
• 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%?	[✓]	[ ]

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? ~~2 outliers above limits.~~ (validated by ADR only)	[✓]	[ ]
• MS/MSD: Were the percent recoveries within limits? (validated by ADR – 2 outliers > upper limit)	[ ]	[✓]
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):

MRL outliers above 130% – nondetects in samples
MS/MSD outliers/validated by ADR only
Acetone in

Validated/Reviewed by:
Signature: LMCalvin

Date: 10.24.2010

Name: Lynn S. Calvin

VERSION 5
June 2002

U.S. Army Corps of Engineers Louisville District - LCG

ICP METALS ANALYSIS (6010) + 6020 As, Pb, Ni, Se, Th, Sb
CHECKLIST

Project Name: ~~L0910064~~ Ravenna Oct/Nov 2009

Laboratory: Microbac

Batch Number(s): Level III
523m-3029 -02 11/4@ 11:32
-3030 -03 11:38

Sample Delivery Group: L0910645

~~5230~~
LL155-523m-3027-50 (-01) } IV run 11/4 @11:08, 11/7 @23:35, 11/9 11:09
1.378g : 50ml 99.8% solids

	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?	[ ]	[ ]
5 ~~three~~ calibration standards and a blank?	N	[ ]
• 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)	[ ]	[ ]
	N	[ ]
4. Initial Calibration Verification (ICV):		
• Is the mid level (2nd source) recovery within 90 - 110%?		
5. Initial Calibration Blank (ICB):		

	Yes	No
• Were analytes in the blank ≤ 1/2 MRL?	N	[ ]

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? or insufficient to qualify	N	[ ]

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?	N	[ ]

9. Sample Analysis:

• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[ ]	[ ]

10. Sample Quality Control:

• Method Blanks: Were target analytes ≤ 1/2 MRL? WG316256-04 11/4 @ 10:56	[ ]	N
• LCS: Were the percent recoveries for LCS within the limits? WG316256-05 11/4 @ 11:02	N	[ ]
• MS: Were the percent recoveries within limits? LL155-525-3036-50 (NV)	[X] ~~for sample~~	N
• MD: Were the RPDs within control limits? LL155-525-3036-50 (NV)	[X]	N

11. Serial Dilution:

• Was serial dilution (1:5) conducted when needed? on validated sample (-02)	N	[ ]

	Yes	No
• Was there an agreement between diluted and undiluted results (<10%)?	[N] for 750x MDL	[ ]

12. Method of Standard Addition (MSA):

• Was MSA performed on samples suspected of matrix effect (R ≥ 0.995)?	[ ] N/A	[ ]

IS – OK but Ni not bracketed by 2 stds

13. Comments (attach additional sheets if necessary):

MB: Fe = 2.45 mg/kg (RL=200) insufficient to qual
Post digest on validated sample OK

QCMRL 11/4 @ 10:50 Ag = 20.8% R, Mg 51.8% (710x RL), V = 133% (710x RL)

QCMRL 11/4 @ 14:00 Ag = 40.5%, Mg = 57.5%, V = 144%, Cu = 53% (710x RL)

MS Se = 72.7%
Dup: As (29%), Pb (67%), Ni (25%), Se (200% or ±), Tl (95% or ±)
Sb – OK w/in ±RL

QCMRL 11/7 14:02 Tl = 148% + 01:44 137% "J"

ICPMS Tune: OK

Validated/Reviewed by:

Signature: Patti Mills Date: 6/23/10

Name: Patti Mills

GFAA METALS ANALYSIS CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: Microbac

Batch Number(s): _____

Sample Delivery Group: L09100 645

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time?	[N]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of		
One calibration standard and a blank?	[ ]	[ ]
5 ~~three~~ calibration standards and a blank?	[N]	[ ]
• Was $R \geq 0.995$	[N]	[ ]
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 80-120%?	[N]	[ ]
6. Initial calibration Blank (ICP):		
• Were analytes in the blank ≤ 1/2 MRL?	[N]	[ ]

	Yes	No
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	[ ]
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 80-120?	N	[ ]
9. Sample Analysis:		
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[ ]	[ ]
10. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	N	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	N	[ ]
• MS: Were the percent recoveries within limits? LL155-523-3036 (NU)	N	[ ]
• MD: Were the RPDs within control limits? w/in ± RL	N	[ ]
11. Serial Dilution:		
• Was serial dilution (1:4) conducted when needed?	[ ]	[ ]
• Was there an agreement between diluted and undiluted results (<10%)?	[ ]	[ ]

12. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meeks Date: 6/23/10

Name: Patti Meeks

ICP METALS ANALYSIS (6010) + 6020 CHECKLIST

LEVEL III
517M-3026
517M-3021
280M-2002
280M-2003

Project Name: Ravenna 2009

Laboratory: Microbac

Batch Number(s): _____

Sample Delivery Group: L0900553
LL155-517M-3018 (-21)
LL455-280M-2000 (-28)

	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?	[ ]	[ ]
5 ~~three~~ calibration standards and a blank?	N	[ ]
• Was R ≥ 0.995	N	[ ]
3. QCMDL:		
• Was MDL Check performed? No summary provided	N	[ ]
QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	N	[ ]
	[ ]	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)	N	[ ]
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	
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?	[ ]	[ ]	
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?	N	N	10/30 19:58 As = 88.8% J-28 Ni = 89.2%
9. Sample Analysis:			
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[ ]	[ ]	
10. Sample Quality Control:			
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[ ]	N	
• LCS: Were the percent recoveries for LCS within the limits?	N	[ ]	
• MS: Were the percent recoveries within limits? LLISS-515M-301650 (NV) & LL4SS-282M-2005 (NV)	N	N	
• MD: Were the RPDs within control limits?	[ ]	N	
11. Serial Dilution:			
• Was serial dilution (1:4) conducted when needed?	[ ]	N	

LLISS - 500M - 3000 (NV) 1:5
Cr(11), Co (43), Fe(13), Mn(16) reported from 5X
5:25 - OK

VALIDATED SAMPLE ICPMS - 517M 192 Pb = 10.3% @ 5:1, OK @ 10:2

LISS - 501M - 3001 (NV)
Cr(12), Fe(15), Mn(19)

LISS - 519M - 3023 (NV) - OK

ICPMS SI)
-19 & -23 OK

	Yes	No
• Was there an agreement between diluted and undiluted results (<10%)?	[ ]	[X]

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):

Fe in MBs - insufficient to qualify

LL1SS ~~MSD~~ Tl = 33%, ~~Dup~~ Se MS = 69%

LL4SS Dup Ca = 29% ~~Tl = 33%~~
MS Ba = 126% ~~Se = 69%~~
K = 135% Pb = 157%, Sc = 62%, As = 68% (710xRL)

MRL 10/29 11:43 Mg = 44% 10/29 15:05 Mg = 69%, V = 52% (710xRL)
11/2 10:20 Ag = 43% Mg = 45% (710xRL) 11/2 12:16 Ag = 27%, Cd = 68%, Fe = 139%, Mg = 41%
-28 only ← R R

ICSA 10/29 11:16 Co = 6.82 (7RL) results 710x RL

QCMRL 10/29 11:43 Pb = 241% } 710x MRL
10/30 19:45 Pb = 187%

Validated/Reviewed by:

Signature: [signature] Date: 6/24/10

Name: Patti Meeks

GFAA METALS ANALYSIS CHECKLIST

Project Name: Ravenna 2009

Laboratory: Microbac

Batch Number(s): _____

Sample Delivery Group: L69100553

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time?	[N]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of		
One calibration standard and a blank?	[ ]	[ ]
≤ ~~three~~ calibration standards and a blank?	[N]	[ ]
• Was R ≥ 0.995	[N]	[ ]
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 80-120%?	[N]	[ ]
6. Initial calibration Blank (ICP):		
• Were analytes in the blank ≤ 1/2 MRL?	[N]	[ ]

	Yes	No
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]	[ ]
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 80-120?	[N]	[ ]
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]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[N]	[ ]
• MS: Were the percent recoveries within limits? LCISS-515M-3016 (NV) + LCISS-519M-3023 (NV)	[N]	[ ]
• MD: Were the RPDs within control limits?	[N]	[ ]
11. Serial Dilution:		
• Was serial dilution (1:4) conducted when needed? N/A	[ ]	[ ]
• Was there an agreement between diluted and undiluted results (<10%)? N/A	[ ]	[ ]

12. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patt Meek

Date: 6/24/10

Name: Patt Meek

ICP METALS ANALYSIS (6010) CHECKLIST

III
LISS-537M-3052
-3053

Project Name: Ravenna 2009

Laboratory: Microbac

FISSS-612M-0502
-0503

Batch Number(s): _____

Sample Delivery Group: L0911036

IV
LLISS-537M-3050 (-08)
FISSS-612M-0500 (-14)

	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?	[ ]	[ ]
5 ~~three~~ calibration standards and a blank?	[N]	[ ]
• Was R ≥ 0.995	[ ]	[ ]
3. QCMDL:		
• Was MDL Check performed? no Summary	[N]	[ ]
QCMRL:		
• Were QC/MRL run at the beginning and end of every daily sequence or every 12 hours??	[N]	[ ]
	[ ]	[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)	[N]	[ ]
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]	[ ]	
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?	[N]	[ ]	
• Was CCB conducted at end of the analytical sequence?	[N]	[ ]	insuff to qual
• Were analytes ≤ 1/2 MRL?	[ ]	[N]	
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?	[N]	[ ]	
9. Sample Analysis:			
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed?	[ ]	[ ]	
10. Sample Quality Control:			
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[N]	[ ]	insuff to qualify
• LCS: Were the percent recoveries for LCS within the limits?	[N]	[ ]	
• MS: Were the percent recoveries within limits? F1455-6049m-6504 (NV)	[ ]	[N]	
• MD: Were the RPDs within control limits? Same as MS	[N]	[N]	
11. Serial Dilution:			
• Was serial dilution (1:4) conducted when needed?	[N]	[ ]	

on ER + LL155-520M-3024 (NV) ICP
LL155-522M-3026 (NV) ICPMS

	Yes	No
• Was there an agreement between diluted and undiluted results (<10%)?	[N]	[ ]

12. Method of Standard Addition (MSA):

• Was MSA performed on samples suspected of matrix effect ($R \geq 0.995$)?	N/A	[ ]	[ ]

13. Comments (attach additional sheets if necessary):

R

Dup ~~Al(22)~~, ~~Be(26)~~, ~~Co(22)~~, Mn (31), K (26), ~~Ag (200)~~, ~~V(22)~~, Zn (63), Se (31)
MS Ba (173), Cr (140), K (155), V (129), Zn (158), As (70), Se (61)

~~QC~~ MRL 11/11 10:45 Al(69), Ag (22), Mg (46)
710xRL R 710x RL
MRL 11/11 13:40 Al(67) Ag (NR), Mg (42), Fe (220) 710xRL

SD Ni (12)

~~QRL~~ MRL 11/16 14:25 Tl (69)
18:03 Se (138)

Validated/Reviewed by:

Signature: Patti Meeks Date: 6/25/10

Name: Patti Meeks

GFAA METALS ANALYSIS CHECKLIST

Project Name: Ravenna

Laboratory: Microbac

Batch Number(s): _____

Sample Delivery Group: L09110136

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time?	[X]	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of		
One calibration standard and a blank?	[ ]	[ ]
≤ ~~three~~ calibration standards and a blank?	[X]	[ ]
• Was R ≥ 0.995	[X]	[ ]
3. QCMDL:		
• Was MDL Check performed?	[ ]	[X]
4. 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]	[ ]
5. Initial Calibration Verification (ICV):		
• Is the mid level (2nd source) recovery within 80-120%?	[X]	[ ]
6. Initial calibration Blank (ICP):		
• Were analytes in the blank ≤ 1/2 MRL?	[X]	[ ]

	Yes	No
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]	[ ]
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 80-120?	[N]	[ ]
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]	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	[Y]	[ ]
• MS: Were the percent recoveries within limits? F1655-608M-0504 SO	[Y]	[ ]
• MD: Were the RPDs within control limits? same as MS	[ ]	[ ]
11. Serial Dilution:		
• Was serial dilution (1:4) conducted when needed? NA	[ ]	[ ]
• Was there an agreement between diluted and undiluted results (<10%)? NA	[ ]	[ ]

12. Comments (attach additional sheets if necessary):

Validated/Reviewed by:

Signature: Patti Meeks

Date: 6/25/10

Name: Patti Meeks

Hexavalent Chromium + nitrocellulose

~~CYANIDE~~ ANALYSIS CHECKLIST

Project Name: Ravenna Oct/Nov 2009 IV III

Laboratory: Microbac LL155-517M-3018 -3020
(-21) -3021

Batch Number(s): LL455-250M-2000 -2002
-(28) -2003

Sample Delivery Group: L0900553

	Yes	No	
1. Holding Time:			
• Were samples analyzed within holding time?	~~[N]~~	[ ]	per Work Plan
2. Initial Calibration:			
• Did the initial calibration consist of One calibration standard and a blank?	[ ]	[ ]	
5 ~~Six~~ calibration standards and a blank?	~~[N]~~	[ ]	
• Was $R \geq 0.995$	~~[N]~~	[ ]	
3. QCMDL:			
• Was MDL Check performed?	~~[N]~~	~~[N]~~	
4. QCMRL:			
• Were QC/MRL run at the beginning of every daily sequence??	~~[N]~~	~~[N]~~	
• Was the ~~QC/MRL~~ not MRL between 70-130% R?	~~[N]~~	[ ]	
5. Initial Calibration Verification (ICV):			
• Is the mid level (2nd source) recovery within ~~80-120~~ 90-110%?	~~[N]~~	[ ]	
7. Initial calibration Blank (ICP):			
• Were analytes in the blank ≤ 1/2 MRL?	~~[N]~~	[ ]	

	Yes	No
7. Continuing calibration Blank (CCB): none ↓	[ ]	[ ]
• 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 5 samples? 1st + last	[ ]	~~[ ]~~
• Was the %R between ~~80-120~~ 90-110%?	~~[ ]~~	[ ]
9. Sample Analysis:		
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed? N/A	[ ]	[ ]
12. 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? LL155-515M-3016 (NV)	~~[ ]~~	[ ]
• MD: Were the RPDs within control limits?	~~[ ]~~	[ ]

13. Comments (attach additional sheets if necessary):

	Yes	No

Validated/Reviewed by:

Signature: Patti Meeks Date: 6/29/10

Name: Patti Meeks

Hexavalent chromium + nitrocellulose (as N/N)

~~CYANIDE~~ ANALYSIS CHECKLIST

Project Name: Ravenna Oct/Nov 2009 IV LL155-523M-3027 (-01) III -3029(-02) -3030(-03)

Laboratory: Microbac

Batch Number(s): _____

Sample Delivery Group: L0910064S

	Yes	No	
1. Holding Time:			
• Were samples analyzed within holding time?	N	[ ]	as per Work Plan
2. Initial Calibration:			
• Did the initial calibration consist of			
One calibration standard and a blank?	[ ]	[ ]	
5 ~~Six~~ calibration standards and a blank?	N	[ ]	
• Was $R \geq 0.995$	[ ]	[ ]	
3. QCMDL:			
• Was MDL Check performed?	~~N~~	N	
4. QCMRL:			
• Were QC/MRL run at the beginning of every daily sequence??	N	N	
• Was the ~~QC/MRL~~ MRL between 70-130% R?	N	[ ]	
5. Initial Calibration Verification (ICV):			
• Is the mid level (2nd source) recovery within ~~80-120~~ 90-110%?	N	[ ]	
7. Initial calibration Blank (ICP):			
• Were analytes in the blank ≤ 1/2 MRL?	N	[ ]	

	Yes	No
7. Continuing calibration Blank (CCB):	[ ]	[X]
• Was CCB conducted every ~~10~~ 5 samples?	[ ]	[X]
• Was CCB conducted at end of the analytical sequence?	[ ]	[X]
• Were analytes ≤ 1/2 MRL?		
8. Continuing Calibration Verification (CCV):		
• Was CCV conducted ~~every 10~~ 5 samples? 1st + last for Cr6+ every 10 for NC	[X]	[ ]
• Was CCV conducted at end of the analytical sequence?	[X]	[ ]
• Was the %R between ~~80-120~~ 90-110%?	[X]	[ ]
9. Sample Analysis:		
• Were samples with levels higher than the calibration range (E), diluted and re-analyzed? N/A	[ ]	[ ]
12. Sample Quality Control:		
• Method Blanks: Were target analytes ≤ 1/2 MRL?	[X]	[ ]
• LCS: Were the percent recoveries for LCS within the limits? 80-120	[X]	[ ]
• MS: Were the percent recoveries within limits? (85-115% LL165-525M-3016-50 (NV)	[X]	[ ]
• MD: Were the RPDs within control limits? MS/MSD	[X]	[ ]

13. Comments (attach additional sheets if necessary):

	Yes	No

Validated/Reviewed by:

Signature: _____ Date: _____

Name: _____

CYANIDE ANALYSIS CHECKLIST

Project Name: Ravenna Oct/Nov 2009

Laboratory: Microbac

Batch Number(s): _____

Sample Delivery Group: L09110136

IV
LL155-537M-3050
(-08)
F155S-012M-0560
(-14)

III
-5052
-5053
-0502
-0503

	Yes	No
1. Holding Time:		
• Were samples analyzed within holding time?	N	[ ]
2. Initial Calibration:		
• Did the initial calibration consist of		
One calibration standard and a blank?	[ ]	[ ]
5 ~~Six~~ calibration standards and a blank?	N	[ ]
• Was R ≥ 0.995	N	[ ]
3. QCMDL:		
• Was MDL Check performed?	[ ]	N
4. QCMRL:		
• Were QC/MRL run at the beginning of every daily sequence??	N	[ ]
• Was the QC/MRL between 70-130% R?	N	[ ]
5. Initial Calibration Verification (ICV):		
• Is the mid level (2nd source) recovery within ~~80-120~~ 70-110%?	N	[ ]
7. Initial calibration Blank (ICP):		
• Were analytes in the blank ≤ 1/2 MRL?	N	[ ]

	Yes	No
7. Continuing calibration Blank (CCB):	[ ]	[ ]
• Was CCB conducted every 10 samples? None ↓	[ ]	[ ]
• Was CCB conducted at end of the analytical sequence?	[ ]	[ ]
• Were analytes ≤ 1/2 MRL?	[ ]	[ ]

8. Continuing Calibration Verification (CCV):

• Was CCV conducted every 10 (5) samples?	~~N~~ for NC	~~N~~ for Cr^{6+}
• Was the %R between ~~80-120~~ 90-110%?	~~N~~	[ ]
• Was CCV conducted at end of the analytical sequence?	~~N~~	[ ]

9. Sample Analysis:

• Were samples with levels higher than the calibration range (E), diluted and re-analyzed? N/A	[ ]	[ ]

12. Sample Quality Control:

• Method Blanks: Were target analytes ≤ 1/2 MRL?	~~N~~	[ ]
• LCS: Were the percent recoveries for LCS within the limits?	~~N~~	~~N/A~~
• MS: Were the percent recoveries within limits? None N/A ↓	[ ]	[ ]
• MD: Were the RPDs within control limits? None	[ ]	[ ]

13. Comments (attach additional sheets if necessary):

~~LCS/D~~ Nitrocellulose ~~34%/21%~~ RPD 48% (H_2O)

	Yes	No

Validated/Reviewed by:

Signature: Patt Mk

Date: 6/29/10

Name: Patt Meeks

APPENDIX G
Ohio EPA Approval Letters

OhioEPA
State of Ohio Environmental Protection Agency
Northeast District Office

2110 East Aurora Rd.
Twinsburg, Ohio 44087

TELE: (330) 963-1200 FAX: (330) 487-0769
www.epa.state.oh.us

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

April 16, 2010

RE: RAVENNA ARMY AMMUNITION PLANT, PORTAGE/TRUMBULL COUNTIES, DRAFT SAMPLING AND ANALYSIS OF SOILS BELOW FLOOR SLABS AT RVAAP-08 LOAD LINE 1 AND OTHER BUILDING LOCATIONS

Mr. Mark Patterson
Environmental Program Manager
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, OH 44266

CERTIFIED MAIL
7008 3230 0003 5419 7679

Dear Mr. Patterson:

The Ohio Environmental Protection Agency (Ohio EPA), Northeast District Office (NEDO), Division of Emergency and Remedial Response (DERR) has received and reviewed the document entitled "Draft Sampling and Analysis of Soils Below Floor Slabs at RVAAP-08 Load Line # 1 and Other Building Locations at the Ravenna Army Ammunition Plant, Ravenna, Ohio." This document, dated and received March 16, 2010 at Ohio EPA, was prepared for the U.S. Army Corps of Engineers, Louisville District, by URS Group, Inc.

Ohio EPA has reviewed this document and has found no deficiencies pending review of Appendix F – Data Validation Report / Chemical Quality Assurance Report. As a result, the "Draft Sampling and Analysis of Soils Below Floor Slabs at RVAAP-08 Load Line # 1 and Other Building Locations" can be finalized with the knowledge that Appendix F must be provided, reviewed, and approved by Ohio EPA prior to conducting any remediation.

If you have any questions or concerns, please do not hesitate to contact me at (330) 963-1249.

Sincerely,

Andrew C. Kocher
Site Coordinator
Division of Emergency and Remedial Response

ACK/kss

cc: Eileen Mohr, Ohio EPA, DERR, NEDO
Glen Beckham, USACE Louisville
Nathaniel Peters, USACE Louisville
Mark Krivansky, USAEC
Derek Kinder, USACE Louisville
Katie Elgin, OHARNG
Jo Ann Bartsch, URS

ec: Mike Eberle, Ohio EPA, DERR, NEDO
Todd Fisher, Ohio EPA, DERR, NEDO

Ohio Environmental Protection Agency

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

September 1, 2010

CERTIFIED MAIL
7008 3230 0003 5419 9840

Mr. Mark Patterson, Facility Manager
Ravenna Army Ammunition Plant
8451 State Route 5
Ravenna, OH 44266

Re: Approval for "Section 3.2.4" and "Appendix F – Data Validation Report and Chemical Quality Assurance Report" for the "Draft Report for the Sampling and Analysis of Soils Below Floor Slabs at RVAAP-08 Load Line 1 and Other Buildings at the Ravenna Army Ammunition Plant, Ravenna, Ohio," Dated July 21, 2010, Work Activity No. 267000859077

Dear Mr. Patterson:

The Ohio Environmental Protection Agency (Ohio EPA), Northeast District Office (NEDO), Division of Emergency and Remedial Response (DERR) has received and reviewed the document entitled, "Draft Report for the Sampling and Analysis of Soils Below Floor Slabs at RVAAP-08 Load Line 1 and Other Buildings at the Ravenna Army Ammunition Plant, Ravenna, Ohio," dated July 21, 2010. This document, received by Ohio EPA's NEDO on July 22, 2010, was prepared for the U.S. Army Corps of Engineers (USACE) Louisville District by URS Group, Inc.

On April 16, 2010, Ohio EPA reviewed this document and found no deficiencies pending review of Appendix F – Data Validation Report (DVR)/Chemical Quality Assurance Report (CQAR). The documentation received on July 22, 2010 completes the obligation to submit added text to Section 3.2.4 of the report and the DVR/CQAR within Appendix F. Ohio EPA has reviewed this additional documentation and has found no significant deficiencies. As a result, URS Group, Inc. can submit the "Final Report for the Sampling and Analysis of Soils Below Floor Slabs at RVAAP-08 Load Line 1 and Other Buildings."

If you have any questions or concerns, please do not hesitate to contact me at (330) 963-1249.

Sincerely,

Andrew C. Kocher, Site Coordinator
Division of Emergency and Remedial Response

ACK/kss

cc: Eileen Mohr, Ohio EPA, DERR, NEDO
Glen Beckham, USACE Louisville
Nathaniel Peters, USACE Louisville
Mark Krivansky, USAEC
Derek Kinder, USACE Louisville
Katie Tait, OHARNG
Jo Ann Bartsch, URS

ec: Mike Eberle, Ohio EPA, DERR, NEDO
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