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14. ABSTRACT This document describes the screening sampling done after slab removal at the Load Lines 2, 3, and 4 buildings at the Ravenna Army Ammunition Plant.					
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**Final**  
**Sampling and Screening Analysis**  
**of Soils Below Floor Slabs at RVAAP-09 Load Line 2, RVAAP-10**  
**Load Line 3, and RVAAP-11 Load Line 4**

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

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



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July 15, 2009

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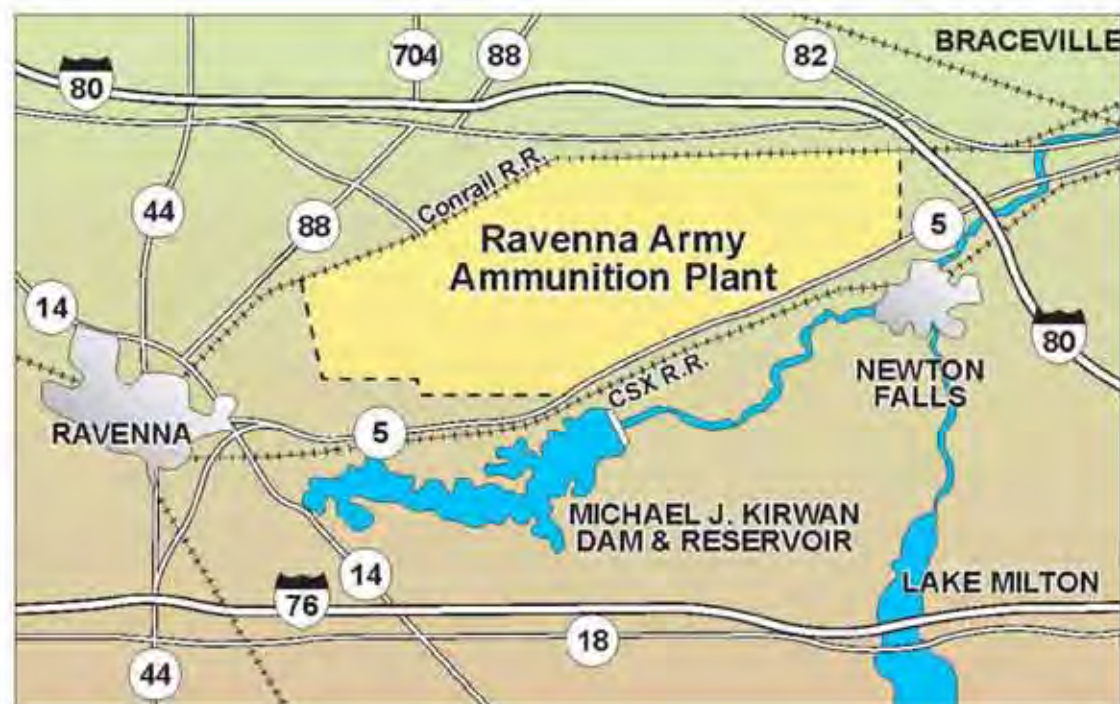
**Acronyms and Abbreviations**

bgs	Below ground surface
BRACD	Base Realignment and Closure Division
CLIN	Contract Line Item
DNT	Dinitrotoluene
GPS	Global Positioning System
IROD	Interim Record of Decision
MARC	Multiple Award Remediation Contract
MI	Multi-increment
MKM	MKM Engineers, Inc.
Ohio EPA	Ohio Environmental Protection Agency
RCRA	Resource Conservation and Recovery Act
RDX	Royal Demolition Explosive, also hexahydro-1,3,5-trinitro-1,3,5-triazine
RVAAP	Ravenna Army Ammunition Plant
SOW	Scope of Work
TCLP	Toxicity Characteristic Leaching Procedure
TNT	Trinitrotoluene, also 2,4,6-trinitrotoluene
URS	URS Group, Inc.
USACE	United States Army Corps of Engineers

The U.S. Army Corps of Engineers (USACE) Louisville District has awarded URS Group, Inc. (URS) a Firm Fixed-Price contract for sampling of soils below floor slabs of demolished buildings at Load Lines 2, 3, and 4, and excavation and transportation of contaminated soils to Load Line 4 (Buildings G-1, G-1A, and G-3) at the Ravenna Army Ammunition Plant, (RVAAP), Ravenna, Ohio. The work is a delivery order under the URS Multiple Award Remediation Contract (MARC) (W912QR-04-D-0025, Delivery Order 0006).

The removal of the buildings down to the floor slabs has been completed by MKM Engineers, Inc. (MKM) under a contract from the Base Realignment and Closure Division (BRACD). The BRACD has exercised a Contract Line Item (CLIN) to remove floor slabs and any associated foundation walls to grade at these buildings. Floor slab removal by the BRACD contractor began in March 2008 and was completed in June 2008. Work was sequenced so that the areas thought to represent the least potential for residual contamination were addressed first. Work began at Load Line 4 and progressed to Load Lines 3 and 2. Within each load line, work was staged in general from one end of the load line to the other. Figures 1-1 and 1-2 show the general location of the RVAAP and the four load line areas within the facility.

URS' Scope of Work (SOW) was to conduct stockpile sampling, pre-slab removal field screening, post-slab removal field screening, and final confirmatory sampling. The objective of the sub-slab sampling was to determine if any areas require excavation and transportation of earth fill from the load lines to buildings at Load Line 4 (i.e., Buildings G-1, G-1A, and G-3). This report addresses the post-slab removal field screening and evaluation at 105 buildings within Load Lines 2, 3, and 4. This work was completed in accordance with the Letter Report Work Plan approved February 7, 2008 (URS, 2008).



ORIENTATION OF RVAAP

SCALE IN MILE



**URS**

**RAVENNA ARMY AMMUNITION PLANT**  
RAVENNA, OHIO

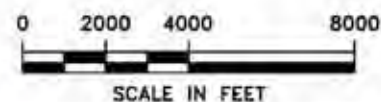
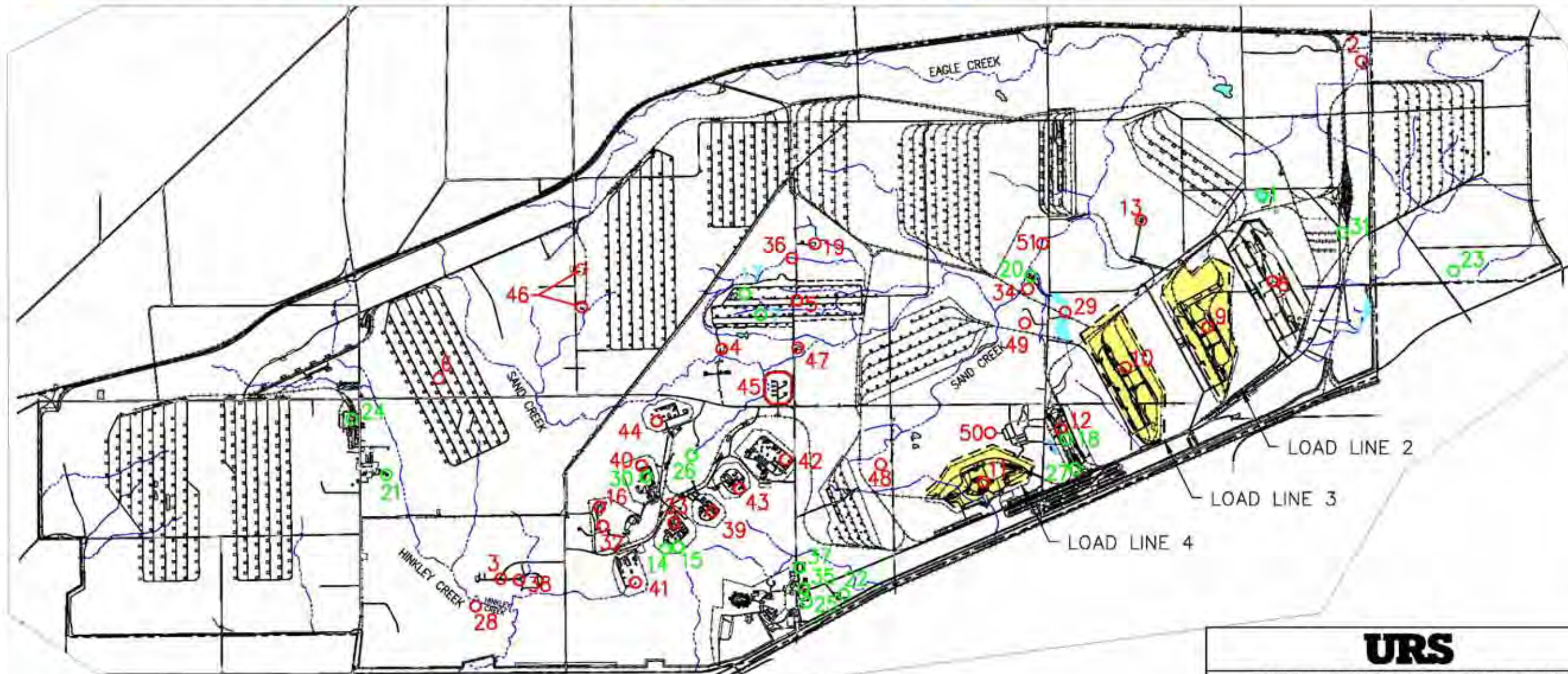
**RVAAP LOCATION MAP**

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# Legend

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



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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Field screening for 2,4,6-trinitrotoluene (TNT) and hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) was conducted at Load Lines 2, 3, and 4 following the slab removal. The purpose of the field screening was to provide data at each load line building to determine if any earth fill materials would require removal. Decisions were made based on a comparison of the field test kit results to the following cleanup goals provided in the SOW:

- TNT: 1,646 mg/kg
- RDX: 838 mg/kg

These levels were determined as acceptable in the Interim Record of Decision (IROD) for Load Lines 2, 3, and 4. If either of these levels was exceeded, the area was covered with plastic. Excavation of contaminated soil will be undertaken in later stages of the project.

## 2.1 SAMPLE COLLECTION

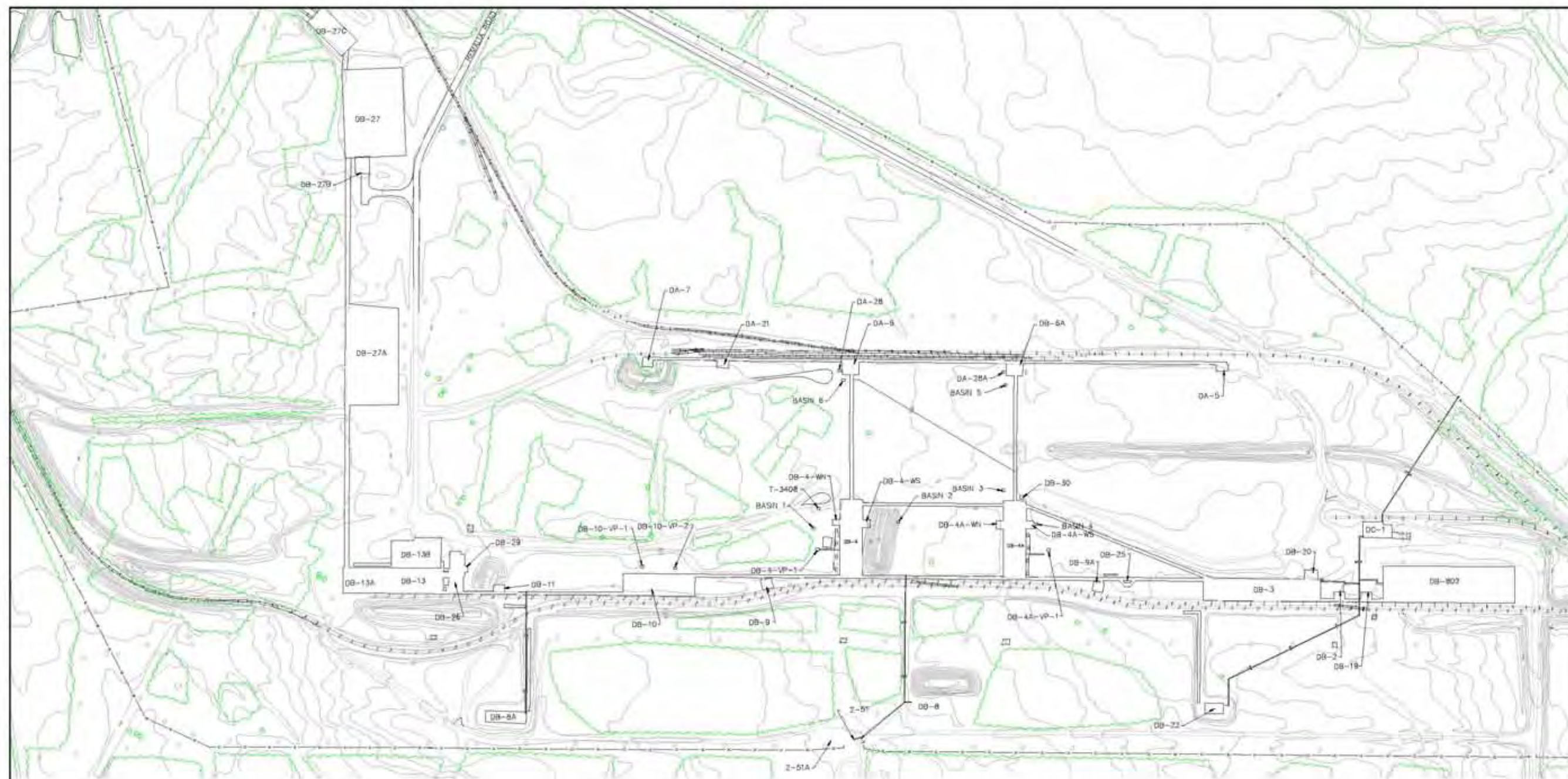
The sampling was conducted in accordance with the *Facility-Wide Sampling and Analysis Plan* for the RVAAP (SAIC, 2001) and the approved Work Plan (URS, 2008). The load line buildings were grouped into three categories based on their potential for the presence of contamination in earth fill beneath the 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. Figures 2-1 through 2-3 show building locations throughout each load line.

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. Thirteen high potential buildings were identified at the three load lines. Table 2-1 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 demolition debris within the desired depth range or refusal. 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 2-4 through 2-12. Coordinates for the core locations are detailed in Appendix G.

Additional sampling was also conducted at high potential buildings at Load Lines 2 and 3 due to visibly contaminated areas. Some of these areas extended beyond the footprints of the buildings. These areas were sampled to obtain additional information regarding TNT/RDX concentrations in visibly impacted areas. Some of these samples were also sent to the fixed laboratory for analysis.

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



— **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



**URS**

RAVENNA ARMY AMMUNITION PLANT  
RAVENNA, OHIO

SOIL SAMPLING UNDER FLOOR SLABS  
LOAD LINE 2 PLAN VIEW

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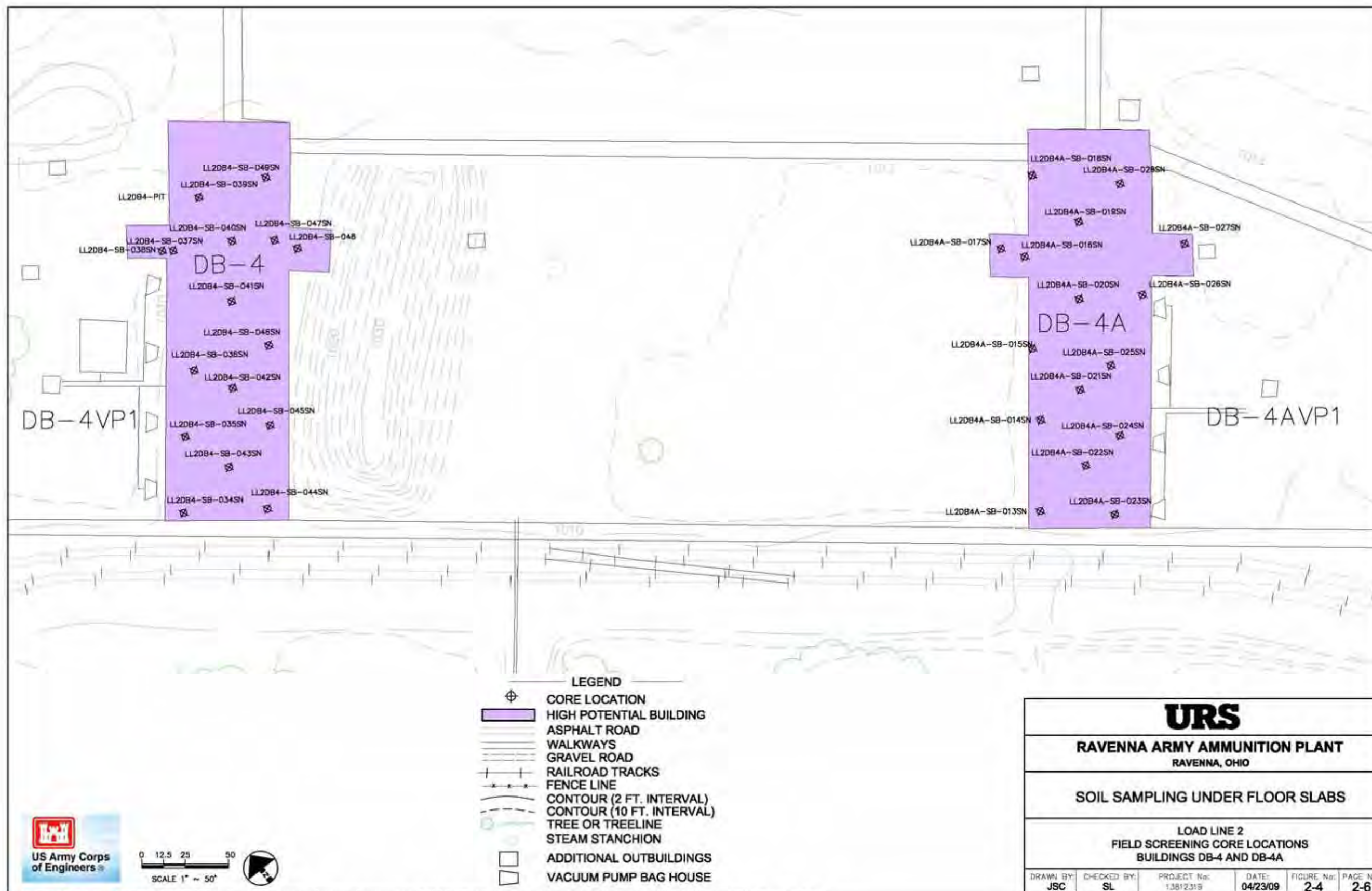


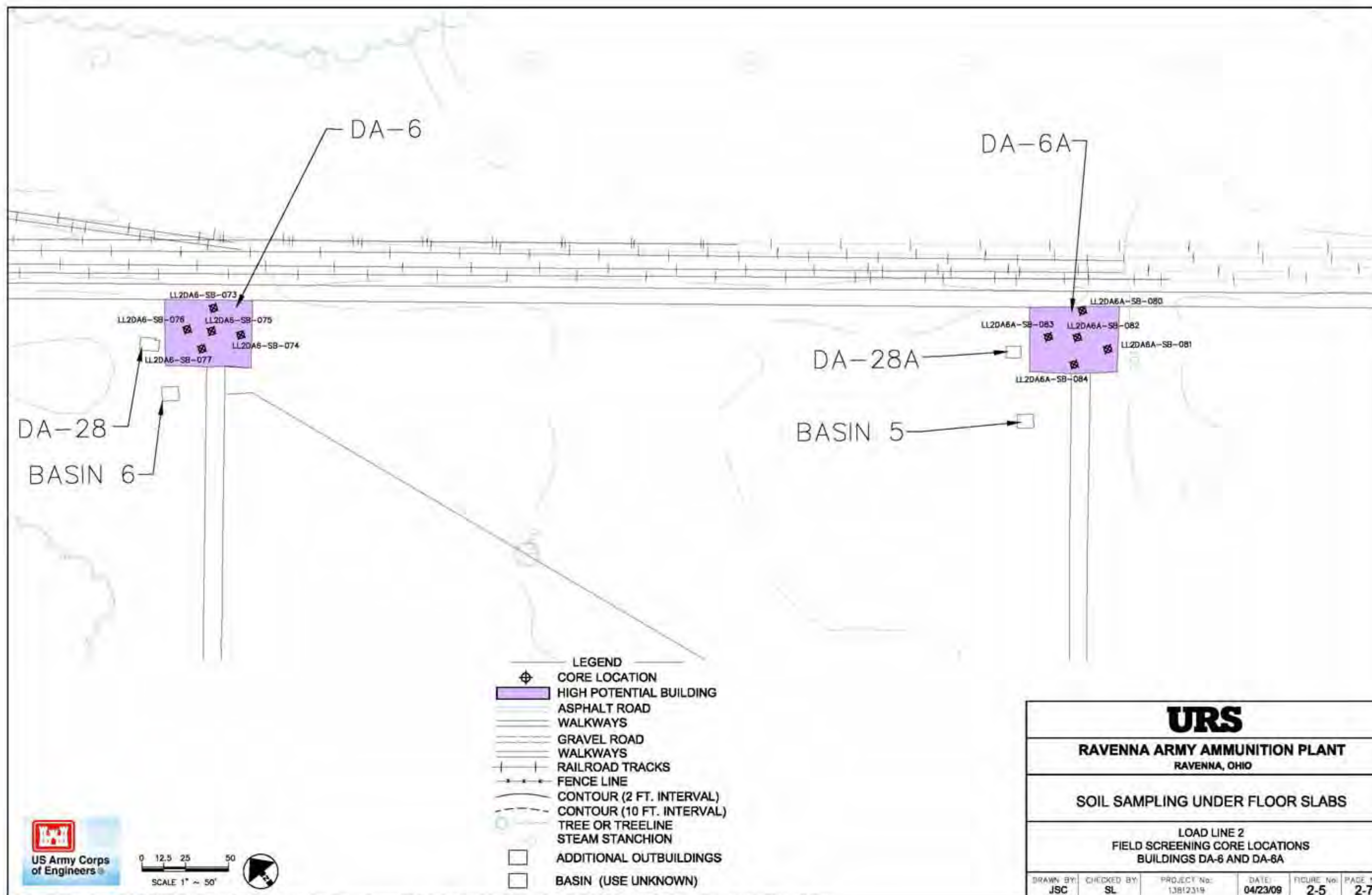
**Table 2-1**  
**High Potential Load Line Buildings Planned for 4-Foot Core Sampling**  
**Ravenna Army Ammunition Plant**  
**Ravenna, Ohio**

<b>Load Line</b>	<b>Bldg. Number</b>	<b>Building Type</b>	<b>Slab Length, ft.</b>	<b>Slab Width, ft.</b>	<b>Number of Core Locations</b>
Load Line 2	DB-4	Melt Pour	210	50	16
	DB-4A	Melt Pour	210	50	16
	DA-6	Explosives Preparation	40	40	5
	DA-6A	Explosives Preparation	40	40	5
	DB-10	Drill Assembly	300	50	14
Load Line 3	EB-4	Melt Pour	210	50	16
	EB-4A	Melt Pour	210	50	16
	EA-6	Explosives Preparation	40	40	5
	EA-6A	Explosives Preparation	40	40	5
	EB-10	Drill Assembly	300	50	14
Load Line 4	G-8	Melt Pour	170	70	12
	G-9	Explosives Screening	25	25	2
	G-15	Explosives Preparation	36	36	2

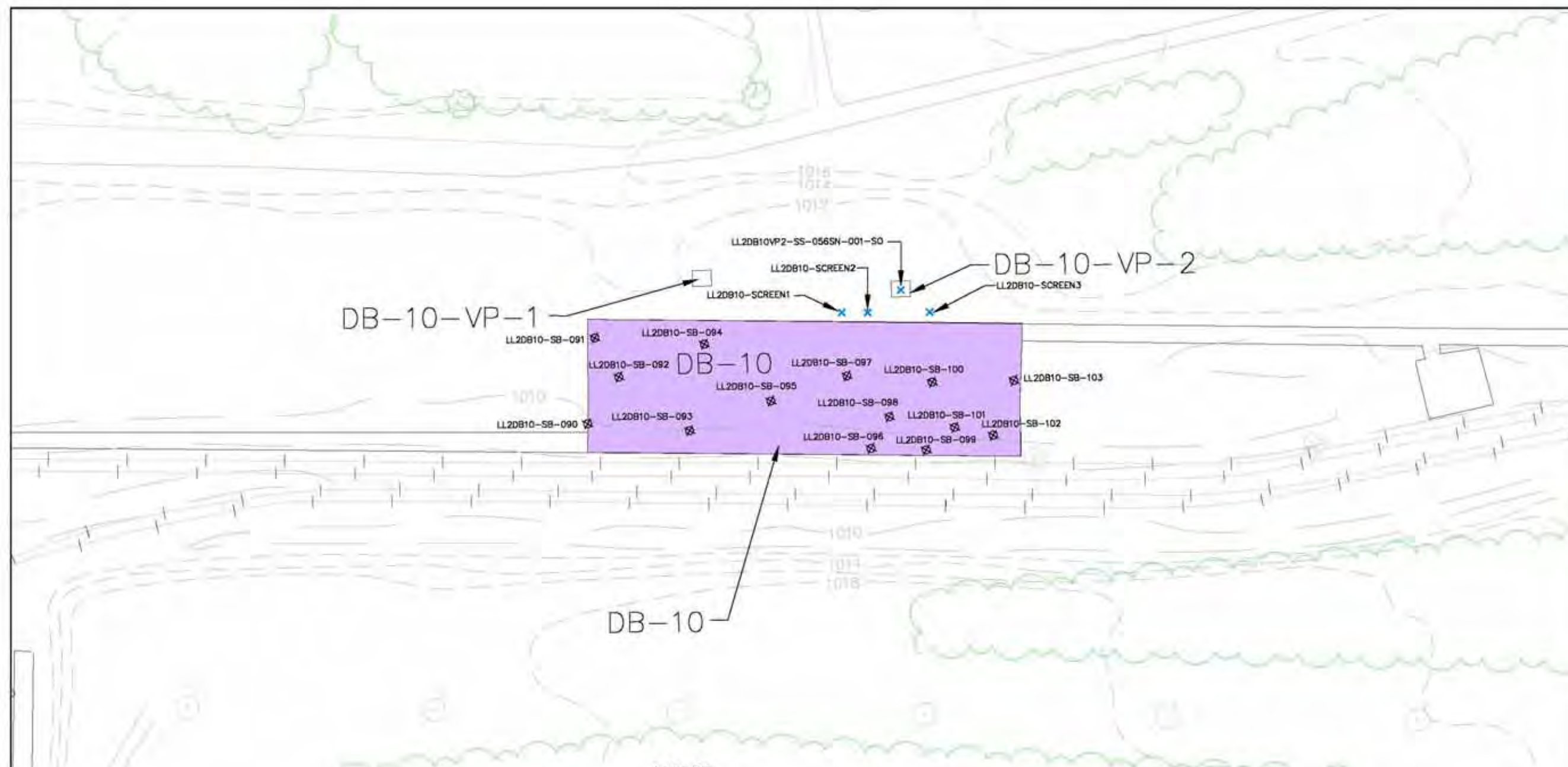
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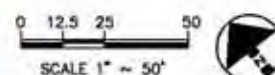




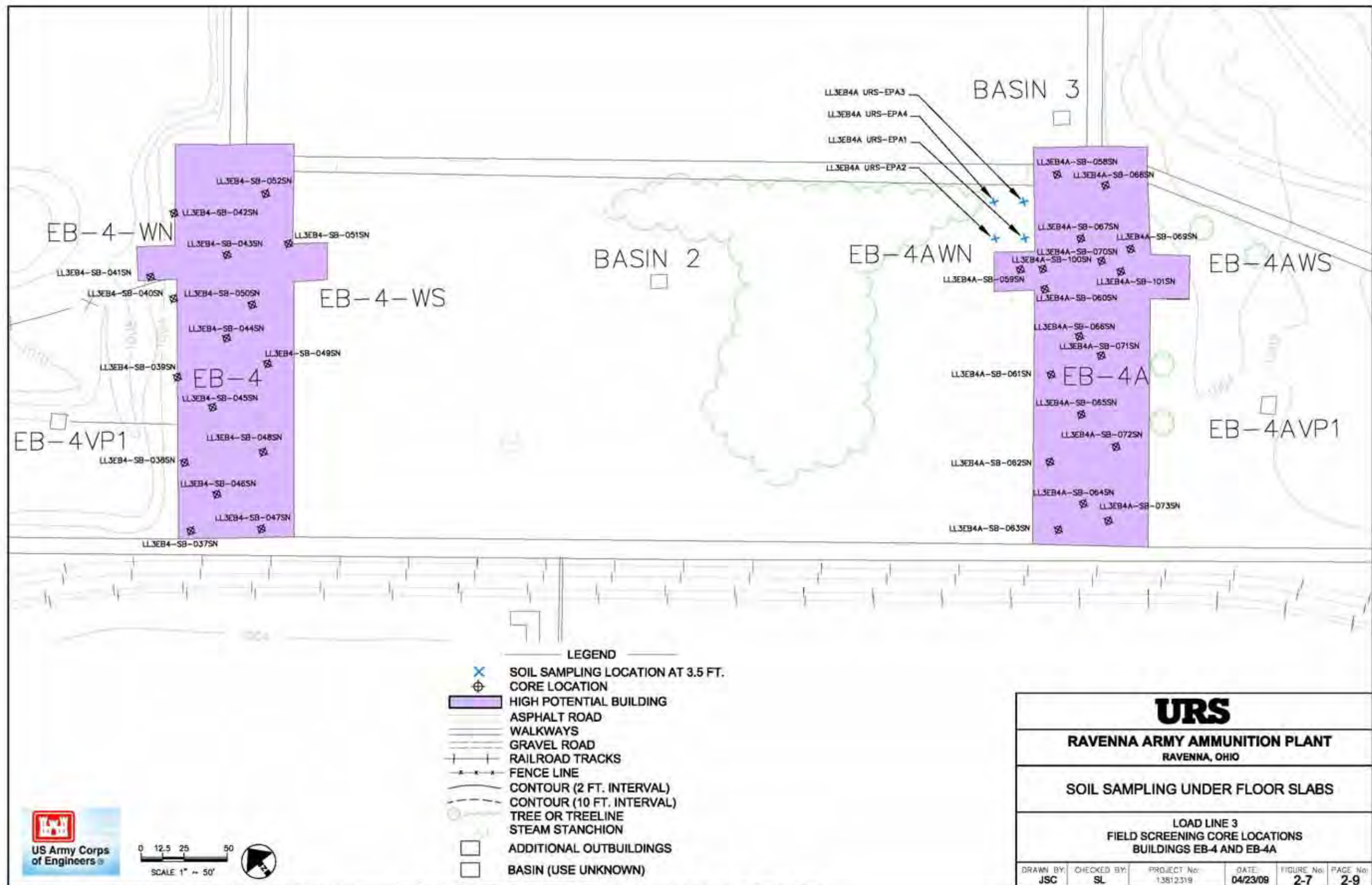




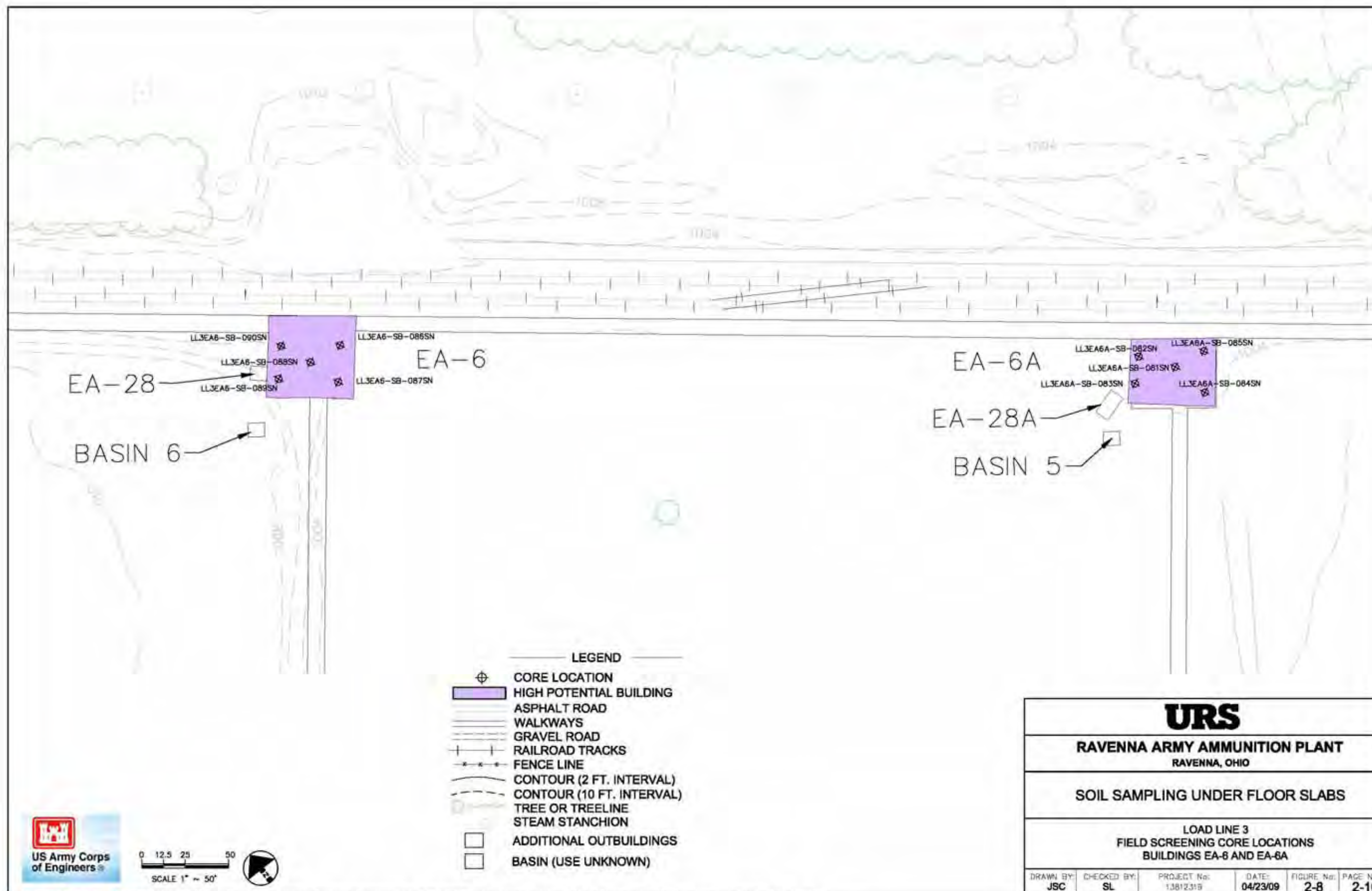
- LEGEND**
- SOIL SAMPLING LOCATION AT 3.5 FT.
  - CORE LOCATION
  - HIGH POTENTIAL BUILDING
  - ASPHALT ROAD
  - WALKWAYS
  - GRAVEL ROAD
  - RAILROAD TRACKS
  - FENCE LINE
  - CONTOUR (2 FT. INTERVAL)
  - CONTOUR (10 FT. INTERVAL)
  - TREE OR TREELINE
  - STEAM STANCHION
  - ADDITIONAL OUTBUILDINGS



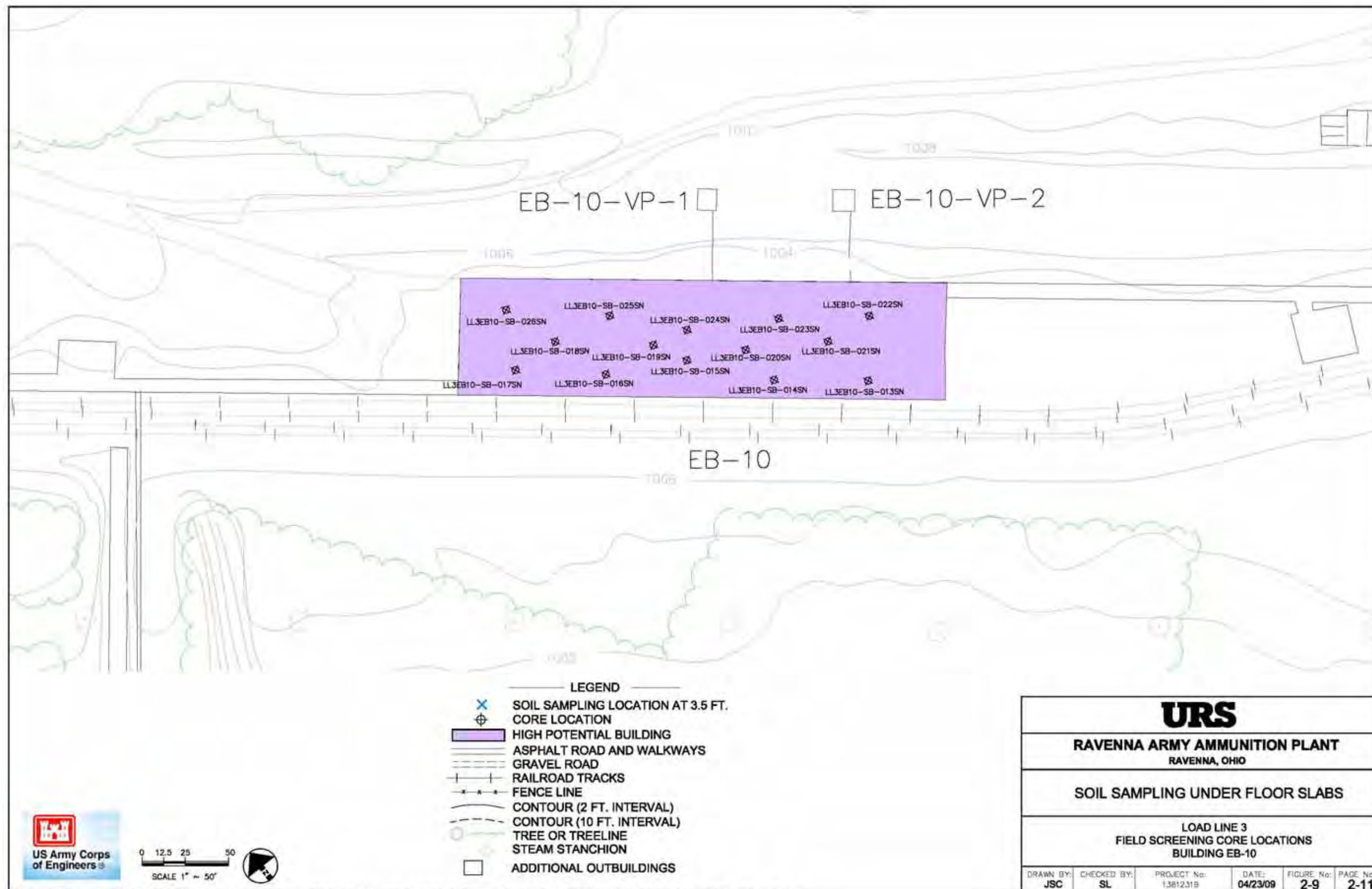
<b>URS</b>					
<b>RAVENNA ARMY AMMUNITION PLANT</b> RAVENNA, OHIO					
<b>SOIL SAMPLING UNDER FLOOR SLABS</b>					
<b>LOAD LINE 2</b> <b>FIELD SCREENING CORE LOCATIONS</b> <b>BUILDING DB-10</b>					
DRAWN BY: <b>JSC</b>	CHECKED BY: <b>SL</b>	PROJECT No: 13812318	DATE: <b>04/23/09</b>	FIGURE No: <b>2-6</b>	PAGE No: <b>2-8</b>

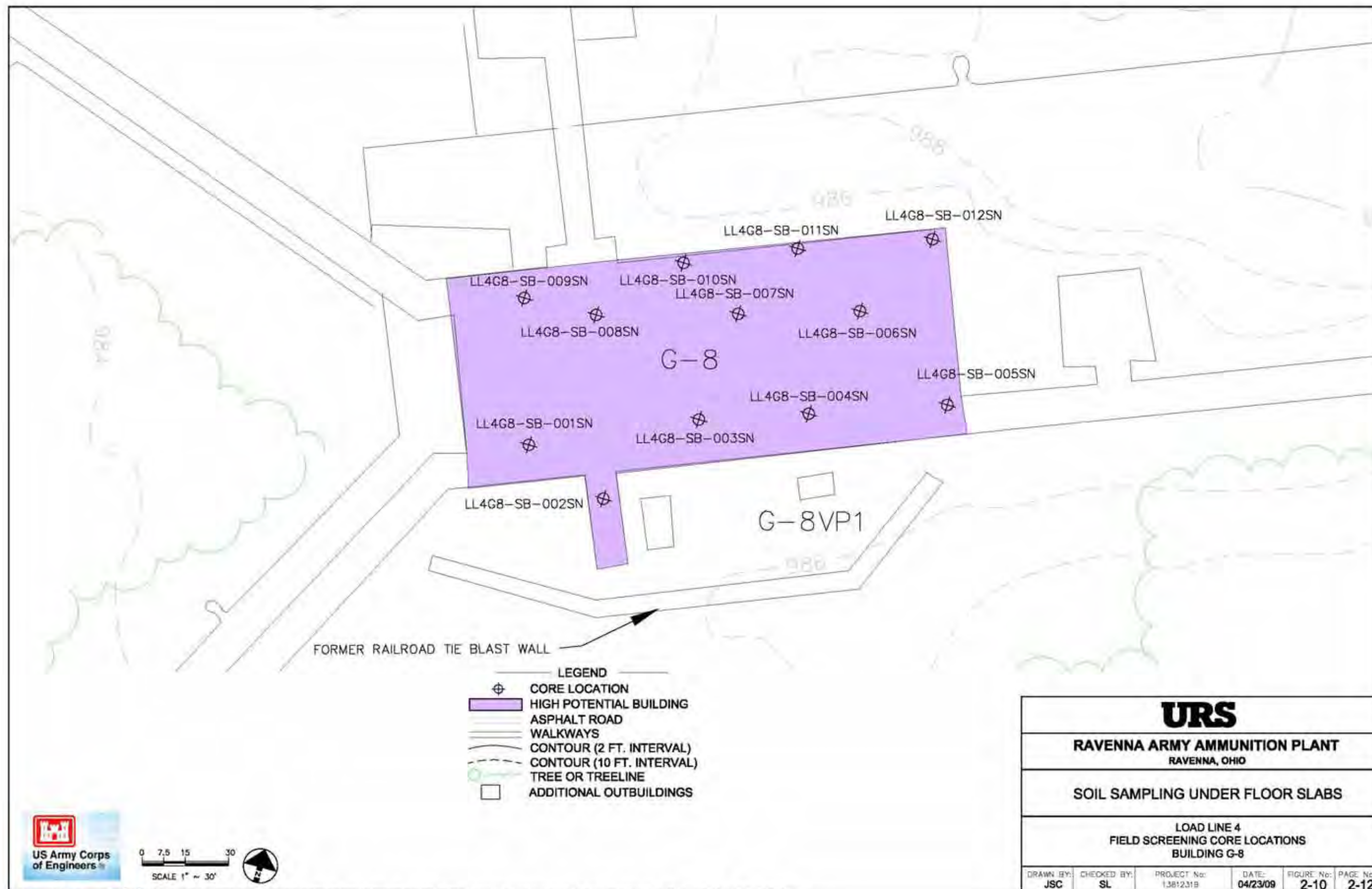


















there were none, was collected from the approximate middle of the building footprint. The soil samples were collected using a stainless steel step probe.

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 March 21 to May 22, 2008. The slab removal process was tracked and coordinated daily in conjunction with both BRACD and the demolition contractor (MKM) to meet the Work Plan requirement for sampling within 7 days of slab and debris removal. The summary spreadsheets in Appendix A provide the detail of when each slab was cleared and sampled. Appendix B contains copies of the slab removal clearance by BRACD. Field sampling reports are included in Appendix C.

During the field investigation, three technical change memoranda were issued to deal with changes in field procedures or field conditions. Copies of the approved memoranda are included in Appendix D. At Load Line 4, the pre-established sampling locations were adjusted because of standing water (Technical Change #1). At Load Line 3 several buildings could not be sampled until debris was removed (Technical Change #2). No sample was collected from Building G-14, since it was determined the building was replaced by newer construction at Building G-13A (Technical Change #3).

## **2.2 FIELD ANALYSES**

EnSys soil test kits were used to determine TNT and RDX concentrations in the collected samples. Analysis was in accordance with the procedures provided by the manufacturer (Strategic Diagnostics Inc.) with the kits.

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 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.

Early in the field screening effort (March 28, 2008), Dr. Thomas F. Jenkins observed the field screening laboratory operations. Based on his observations, several procedural modifications were made on March 28, 2008. The modifications included the following:

- Decontamination of the knife used to slice open cores between core samples,
- Maintenance of acetone and test material at room temperature or warmed to room temperature before tests were run,
- The addition of water to acetone for the control samples, and

- Documentation of all control sample results on a daily basis.

Dr. Jenkins concluded that results obtained prior to his audit may have been biased low. However, at that time none of the results obtained for either RDX or TNT were near the established action levels (Jenkins, 2008). A copy of Dr. Jenkins' report is included in Appendix I.

Analyses were conducted from March 21, 2008 through May 22, 2008. Field screening calculations are included in Appendix E. The results of these analyses are discussed in Section 3.1 through 3.4.

### **2.3 COLLECTION OF CORRELATION SAMPLES**

On April 4, 2008, ten samples from the screening laboratory were also shipped to the fixed laboratory (Microbac) for explosives analyses. The ten samples selected on that day represented a range of TNT/RDX concentrations measured by the field test kits. The samples were from two buildings at Load Line 3 (EB-4 and EA-6A). The purpose of these additional analyses was to provide a correlation of the field test results with fixed lab results in order to evaluate the accuracy and precision of the field screening methodology. The results of these analyses are in Tables 3-5 and 3-6 and are discussed in Section 3.5.

Each field screening sample was received at the screening laboratory in a plastic bag. The bag contents were mixed in the bag, and an aliquot was drawn for the RDX/TNT field screening test. The remaining soil was transferred to a glass sampling jar and transported to the fixed laboratory.

### **2.4 ADDITIONAL FIELD INVESTIGATIVE ACTIVITIES**

On March 21, 2008, one screening sample was collected from an area of red dust outside the footprint of Building G-13VP1 at Load Line 4. This sample was collected to determine whether the material was explosive residue.

On April 10-11, 2008, samples (four soil and one water) were collected from an area near EB-4A on Load Line 3 where pink water was collecting. The sampling locations were selected based on locations where the Ohio Environmental Protection Agency (Ohio EPA) had previously collected samples. These samples were transported to Microbac for explosives analyses. Soil for field screening was also collected from these locations. For the field screening analyses, these samples were identified as LL3EB4A URS-EPA 1 through 4.

On April 18, 2008, a field screening sample designated at LL2DB4-PIT was collected at Load Line 2, Building DB-4. The sample was collected to evaluate a visually impacted zone noted in the former building north elevator sump pit. The zone sampled was approximately 3.5 feet bgs.

On April 21, 2008, additional soil and water samples (one each) were collected from an area outside the DB-4A building footprint that appeared impacted with explosives. These two samples were transported to Microbac for explosives analyses. The soil sample was also analyzed for metals. Four soil samples were also collected for field screening at that time. The screening samples were designated as Pink Water 1 through 4.

On May 16, 2008, approximately one pound of product was noted by MKM outside the footprint of DB-10 on Load Line 2. The material was removed by the facility operating contractor (PIKA) and three field screening samples were collected by URS in the vicinity before the area was covered with plastic. These samples were assigned sample identification numbers (LL2DB10-SCREEN 1 through 3) and were field screened for TNT and RDX. The samples were collected from the surface and at 0 to 1.0 foot bgs.

The results of this additional of sampling are presented in Tables 3-7 through 3-9 and are discussed in Section 3.6 and 3.7.

After the screening sample collection, it was observed that some areas within the footprints of the melt pour buildings at Load Lines 2 and 3 became stained and/or collected pink ponded surface water. The stained areas were the result of a photo-reaction of the TNT with sunlight. These areas were re-sampled and covered, if necessary (e.g., Building EB-4A and the elevator sump at DB-4).

This section provides details of the field screening results at the three load lines, the correlation samples, and the additional samples analyzed by the fixed laboratory. The field screening test results are presented in chronological order in Appendix E. Appendix F contains the data verification reports for the fixed laboratory analyses.

### 3.1 LOW POTENTIAL BUILDINGS

The two explosives analyzed via field screening were detected at twelve low potential buildings at Load Lines 2 and 3. There were no detections of either TNT or RDX at any of the low potential buildings at Load Line 4. The detected TNT concentrations ranged from 1.1 mg/kg to 296 mg/kg. The RDX concentrations ranged from 0.8 mg/kg to 18.5 mg/kg. Table 3-1 summarizes field screening explosives detections at the low potential buildings.

### 3.2 MEDIUM POTENTIAL BUILDINGS

Table 3-2 summarizes field screening explosives detections at five medium potential buildings at Load Lines 2 and 3. There were no detections of either TNT or RDX at Load Line 4. The TNT concentrations ranged from 0.8 mg/kg to 143.3 mg/kg. The RDX concentrations ranged from 0.8 mg/kg to 48 mg/kg.

### 3.3 HIGH POTENTIAL BUILDINGS

Explosives were detected at 12 of the 13 buildings designated as high potential buildings. Building G-15 at Load Line 4 was the only high potential building with no explosive detections. The detected TNT concentrations ranged from 0.8 to 4,860 mg/kg; RDX concentrations ranged from 0.8 mg/kg to 217 mg/kg. The highest concentrations were detected at the melt pour buildings at Load Lines 2 and 3. Table 3-3 summarizes field screening explosives results for the high potential buildings.

### 3.4 CLEANUP GOAL EXCEEDANCES

Table 3-4 summarizes all the locations within the building footprints where TNT screening concentrations were above the cleanup goal of 1,646 mg/kg. All sample results collected within building footprints and exceeding the cleanup levels were from Load Line 3 buildings. These building footprints are shown on Figure 3-1. No exceedances of the RDX cleanup level were observed.

Any areas exceeding the TNT cleanup goal, including the areas described in Sections 3.6 and 3.7, were covered with plastic.

### 3.5 CORRELATION SAMPLING RESULTS AND EVALUATION

Table 3-5 provides the analytical data for the ten correlation samples analyzed by the fixed laboratory. The data verification report for these data is included in Appendix F. The analytical data indicate that TNT was detected in nine of the ten samples at concentrations ranging from 0.948 mg/kg to 2,620 mg/kg. Thus, the objective of selecting samples ranging from nondetect up to levels above the cleanup goal (1,646 mg/kg) was met. RDX was detected in six of the ten samples, at much lower levels (0.203 mg/kg to 1.52 mg/kg) and not at a concentration approaching the cleanup goal (838 mg/kg). Six other explosives compounds were detected, but



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

Building/Description	Sample ID	TNT, mg/kg (Cleanup Goal: 1,646 mg/kg)	RDX, mg/kg (Cleanup Goal: 838 mg/kg)
<b>Load Line 2</b>			
DB-802/Inert Storage	LL2DB802-SS-001SN-0001-SO	ND	11.6
DB-802/Inert Storage	LL2DB802-SS-001SN-0001-SO-DUP	ND	16.2
2-51A/Line Office	LL2-2-51A-SS-033SN-0001-SO	1.9	ND
DB-10VP2/Vacuum Pump House	LL2DB10VP2-SS-056SN-0001-SO	26.6	18.5
DB-27C/Shipping Building	LL2DB27C-SS-069SN-0001-SO	ND	0.8
DA-28 Elevator Machine House	LL2DA28-SS-072SN-0001-SO	ND	1.1
DA-28 Elevator Machine House	LL2DA28A-SS-079SN-0001-SO	0.9	ND
<b>Load Line 3</b>			
EB-22/Change House	LL3EB22-SS-003SN-0001-SO	ND	0.9
EA-28/Elevator Machine House	LL3EA28-SS-034SN-0001-SO	198	0.9
EA-28A/Elevator Machine House	LL3EA28A-SS-054SN-0001-SO	296	ND
3-51A/Line Office	LL351A-SS-055SN-0001-SO	1.1	ND
EB-4AVP1/Vacuum Pump House	LL3EB4AVP1-SS-075SN-0001-SO	ND	0.8

<sup>(1)</sup> ND: Nondetect result. The test kit detection limit for TNT is 0.7 mg/kg; the detection limit for RDX is 0.8 mg/kg.

<sup>(2)</sup> All samples collected from approximately 0 to 12 inches bgs.

<sup>(3)</sup> Any remediation at low potential buildings will be based on the results of the MI samples.

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

Building/Description	Sample ID	TNT, mg/kg (Cleanup Goal: 1,646 mg/kg)	RDX, mg/kg (Cleanup Goal: 838 mg/kg)
<b>Load Line 2</b>			
DB-3/Shell Receiving	LL2DB3-SS-005SN-0001-SO	ND	0.9
DB-25/Washout for Composition B and TNT	LL2DB25-SS-007SN-0001-SO	0.8	ND
DB-26/Radiographic	LL2DB26-SS-063SN-0001-SO	ND	1.9
DA-5/Ammonium Nitrate Service	LL2DA5-SS-085SN-0001-SO	ND	0.8
<b>Load Line 3</b>			
EB-25/Washout	LL3EB25-SS-077SN-0001-SO	143.3	48.0

<sup>(1)</sup> ND: Nondetect result. The test kit detection limit for TNT is 0.7 mg/kg; the detection limit for RDX is 0.8 mg/kg.

<sup>(2)</sup> All samples collected from approximately 0 to 12 inches bgs.

<sup>(3)</sup> Any remediation at medium potential buildings will be based on the results of the MI samples.

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

Sample ID	TNT, mg/kg (Cleanup Goal: 1,646 mg/kg)	RDX, mg/kg (Cleanup Goal: 838 mg/kg)
<b>Load Line 2</b>		
<u>Building DB-4A (Melt Pour):</u>		
LL2DB4A-SB-014SN-0001-SO	ND	1.5
LL2DB4A-SB-014SN-0002-SO	ND	1.0
LL2DB4A-SB-014SN-0003-SO	ND	2.6
LL2DB4A-SB-014SN-0005-SO	ND	0.9
LL2DB4A-SB-015SN-0001-SO	ND	2.9
LL2DB4A-SB-016SN-0001-SO	147	7.3
LL2DB4A-SB-016SN-0002-SO	200	4.3
LL2DB4A-SB-016SN-0003-SO	ND	1.7
LL2DB4A-SB-016SN-0004-SO	1.3	ND
LL2DB4A-SB-016SN-0005-SO	1.0	1.0
LL2DB4A-SB-017SN-0001-SO	2.3	ND
LL2DB4A-SB-017SN-0002-SO	8.2	ND
LL2DB4A-SB-017SN-0003-SO	6.6	1.6
LL2DB4A-SB-017SN-0004-SO	2.4	ND
LL2DB4A-SB-017SN-0005-SO	0.8	ND
LL2DB4A-SB-018SN-0001-SO	35.3	ND
LL2DB4A-SB-018SN-0002-SO	393	1.2
LL2DB4A-SB-018SN-0003-SO	440	1.6
LL2DB4A-SB-018SN-0004-SO	12.1	ND
LL2DB4A-SB-020SN-0001-SO	1.9	ND
LL2DB4A-SB-020SN-0002-SO	23.1	ND
LL2DB4A-SB-020SN-0003-SO	3.8	1.1
LL2DB4A-SB-020SN-0005-SO	ND	0.9
LL2DB4A-SB-021SN-0001-SO	ND	0.8
LL2DB4A-SB-022SN-0003-SO	ND	1.5
LL2DB4A-SB-022SN-0004-SO	ND	1.2
LL2DB4A-SB-022SN-0005-SO	ND	0.9

**Table 3-3 (Continued)**

<b>Sample ID</b>	<b>TNT, mg/kg (Cleanup Goal: 1,646 mg/kg)</b>	<b>RDX, mg/kg (Cleanup Goal: 838 mg/kg)</b>
LL2DB4A-SB-024SN-0002-SO	ND	1.2
LL2DB4A-SB-025SN-0001-SO	ND	1.0
LL2DB4A-SB-025SN-0005-SO	ND	1.4
LL2DB4A-SB-026SN-0001-SO	ND	1.3
LL2DB4A-SB-026SN-0001-SO DUP	9.7	1.1
LL2DB4A-SB-027SN-0001-SO	ND	1.0
LL2DB4A-SB-027SN-0004-SO	ND	1.2
LL2DB4A-SB-027SN-0005-SO	ND	1.8
LL2DB4A-SB-028SN-0001-SO	72.4	1.4
LL2DB4A-SB-028SN-0002-SO	16.2	3.7
LL2DB4A-SB-028SN-0003-SO	25.1	2.2
LL2DB4A-SB-028SN-0004-SO	5.5	1.3
LL2DB4A-SB-028SN-0005-SO	ND	3.2
<u>Building DB-4 (Melt Pour):</u>		
LL2DB4-SB-034SN-0002-SO	0.8	ND
LL2DB4-SB-035SN-0004-SO	ND	1.6
LL2DB4-SB-035SN-0005-SO	ND	0.9
LL2DB4-SB-037SN-0002-SO	ND	1.6
LL2DB4-SB-037SN-0004-SO	ND	2.3
LL2DB4-SB-037SN-0005-SO	ND	2.2
LL2DB4-SB-038SN-0001-SO	ND	1.1
LL2DB4-SB-038SN-0005-SO	1.9	0.9
LL2DB4-SB-039SN-0002-SO	0.9	ND
LL2DB4-SB-039SN-0004-SO	ND	0.8
LL2DB4-SB-040SN-0004-SO	0.8	ND
LL2DB4-SB-042SN-0005-SO	ND	3.2
LL2DB4-SB-044SN-0001-SO	ND	1.6
LL2DB4-SB-044SN-0003-SO	ND	0.8
LL2DB4-SB-044SN-0003-SO DUP	ND	1.8
LL2DB4-SB-044SN-0005-SO	1.1	2.3
LL2DB4-SB-045SN-0001-SO	ND	2.4
LL2DB4-SB-046SN-0005-SO	ND	1.4
LL2DB4-SB-047SN-0002-SO	48.7	1.5

**Table 3-3 (Continued)**

<b>Sample ID</b>	<b>TNT, mg/kg (Cleanup Goal: 1,646 mg/kg)</b>	<b>RDX, mg/kg (Cleanup Goal: 838 mg/kg)</b>
LL2DB4-SB-047SN-0003-SO	48.7	6.2
LL2DB4-SB-047SN-0004-SO	44.7	ND
LL2DB4-SB-047SN-0005-SO	ND	1.6
LL2DB4-SB-048SN-0001-SO	5.0	ND
LL2DB4-SB-048SN-0004-SO	243	15.7
LL2DB4-SB-048SN-0005-SO	858	30.4
LL2DB4-SB-049SN-0003-SO	10.6	1.5
LL2DB4-SB-049SN-0004-SO	200	3.6
LL2DB4-SB-049SN-0005-SO	437	2.2
<u>Building DA-6 (Explosives Preparation):</u>		
LL2DA6-SB-073SN-0002-SO	155	ND
LL2DA6-SB-073SN-0004-SO	1.2	ND
LL2DA6-SB-073SN-0005-SO	61.3	1.0
LL2DA6-SB-074SN-0001-SO	ND	1.2
LL2DA6-SB-074SN-0003-SO	ND	1.2
LL2DA6-SB-075SN-0002-SO	1.3	ND
LL2DA6-SB-075SN-0003-SO	483	3.5
LL2DA6-SB-075SN-0004-SO	337	2.0
LL2DA6-SB-076SN-0001-SO	ND	1.3
LL2DA6-SB-076SN-0002-SO	ND	1.5
LL2DA6-SB-076SN-0003-SO	783	3.2
LL2DA6-SB-076SN-0004-SO	0.9	ND
LL2DA6-SB-076SN-0005-SO	10.5	0.8
LL2DA6-SB-077SN-0003-SO	0.9	2.7
LL2DA6-SB-077SN-0005-SO	0.9	ND
<u>Building DA-6A (Explosives Preparation):</u>		
LL2DA6A-SB-080SN-0001-SO	7.4	1.5
LL2DA6A-SB-080SN-0002-SO	ND	1.7
LL2DA6A-SB-080SN-0003-SO	ND	4.1
LL2DA6A-SB-080SN-0004-SO	3.2	3.8
LL2DA6A-SB-080SN-0005-SO	ND	3.4
LL2DA6A-SB-081SN-0001-SO	ND	2.4
LL2DA6A-SB-081SN-0003-SO	2.0	0.8

**Table 3-3 (Continued)**

<b>Sample ID</b>	<b>TNT, mg/kg (Cleanup Goal: 1,646 mg/kg)</b>	<b>RDX, mg/kg (Cleanup Goal: 838 mg/kg)</b>
LL2DA6A-SB-081SN-0004-SO	ND	1.7
LL2DA6A-SB-081SN-0005-SO	ND	0.9
LL2DA6A-SB-081SN-0005-SO-DUP	ND	1.1
LL2DA6A-SB-082SN-0001-SO	19.6	ND
LL2DA6A-SB-082SN-0002-SO	ND	1.4
LL2DA6A-SB-082SN-0004-SO	ND	1.1
LL2DA6A-SB-083SN-0001-SO	2.6	1.1
LL2DA6A-SB-083SN-0002-SO	15.1	0.8
LL2DA6A-SB-083SN-0003-SO	99.1	1.9
LL2DA6A-SB-084SN-0001-SO	11.6	ND
LL2DA6A-SB-084SN-0003-SO	ND	1.2
LL2DA6A-SB-084SN-0004-SO	1.5	0.9
<u>Building DB-10 (Drill Assembly):</u>		
LL2DB10-SB-090SN-0002-SO	ND	0.9
LL2DB10-SB-090SN-0003-SO	ND	6.6
LL2DB10-SB-090SN-0004-SO	ND	4.8
LL2DB10-SB-090SN-0005-SO	ND	1.0
LL2DB10-SB-093SN-0001-SO	ND	1.0
LL2DB10-SB-096SN-0003-SO	3.1	ND
LL2DB10-SB-097SN-0001-SO	ND	0.9
LL2DB10-SB-098SN-0005-SO	ND	1.0
LL2DB10-SB-099SN-0003-SO	ND	2.3
LL2DB10-SB-099SN-0004-SO	4.8	2.8
LL2DB10-SB-099SN-0005-SO	2.4	ND
LL2DB10-SB-100SN-0001-SO	6.3	1.5
LL2DB10-SB-101SN-0001-SO	1.1	ND
LL2DB10-SB-103SN-0002-SO	ND	1.4
<b>Load Line 3</b>		
<u>Building EB-10 (Drill Assembly):</u>		
LL3EB10-SB-017SN-0001-SO	ND	1.2
LL3EB10-SB-017SN-0002-SO	ND	1.3
LL3EB10-SB-017SN-0003-SO	ND	1.6
LL3EB10-SB-018SN-0002-SO	ND	0.8

**Table 3-3 (Continued)**

<b>Sample ID</b>	<b>TNT, mg/kg (Cleanup Goal: 1,646 mg/kg)</b>	<b>RDX, mg/kg (Cleanup Goal: 838 mg/kg)</b>
LL3EB10-SB-019SN-0004-SO-DUP	ND	0.8
LL3EB10-SB-019SN-0005-SO	ND	1.3
LL3EB10-SB-021SN-0001-SO	ND	1.6
LL3EB10-SB-021SN-0002-SO	ND	1.2
LL3EB10-SB-021SN-0003-SO	ND	1.5
LL3EB10-SB-021SN-0003-SO-DUP	ND	1.4
LL3EB10-SB-023SN-0001-SO	ND	1.5
LL3EB10-SB-023SN-0002-SO	ND	1.6
LL3EB10-SB-023SN-0003-SO	ND	1.6
LL3EB10-SB-023SN-0004-SO	ND	0.8
LL3EB10-SB-023SN-0005-SO	ND	1.2
LL3EB10-SB-024SN-0005-SO	ND	1.0
<u>Building EB-4 (Melt Pour):</u>		
LL3EB4-SB-037SN-0001-SO	2.3	ND
LL3EB4-SB-037SN-0002-SO	16.5	1.4
LL3EB4-SB-037SN-0003-SO	6.0	ND
LL3EB4-SB-037SN-0004-SO	8.2	ND
LL3EB4-SB-037SN-0005-SO	7.5	ND
LL3EB4-SB-038SN-0001-SO	1.3	ND
LL3EB4-SB-038SN-0002-SO	9.6	ND
LL3EB4-SB-040SN-0001-SO	1.2	ND
LL3EB4-SB-040SN-0002-SO	ND	0.8
LL3EB4-SB-040SN-0003-SO	ND	1.0
LL3EB4-SB-040SN-0005-SO	ND	2.6
LL3EB4-SB-041SN-0002-SO	1.4	ND
LL3EB4-SB-041SN-0003-SO	169	ND
LL3EB4-SB-041SN-0004-SO	1.5	ND
LL3EB4-SB-041SN-0005-SO	1.2	0.8
LL3EB4-SB-042SN-0001-SO	<b>1,760</b>	5.7
LL3EB4-SB-042SN-0001-SO RE	<b>3,700</b>	NA
LL3EB4-SB-042SN-0002-SO	52.8	ND
LL3EB4-SB-042SN-0003-SO	712	3.1
LL3EB4-SB-042SN-0004-SO	1130	5.5

**Table 3-3 (Continued)**

<b>Sample ID</b>	<b>TNT, mg/kg (Cleanup Goal: 1,646 mg/kg)</b>	<b>RDX, mg/kg (Cleanup Goal: 838 mg/kg)</b>
LL3EB4-SB-042SN-0005-SO	115	1.0
LL3EB4-SB-043SN-0001-SO	1.1	ND
LL3EB4-SB-043SN-0004-SO	ND	1.1
LL3EB4-SB-043SN-0004-SO DUP	ND	1.2
LL3EB4-SB-044SN-0001-SO	6.0	1.1
LL3EB4-SB-044SN-0002-SO	6.5	1.5
LL3EB4-SB-044SN-0003-SO	2.8	1.6
LL3EB4-SB-044SN-0004-SO	1.7	3.4
LL3EB4-SB-044SN-0005-SO	ND	1.7
LL3EB4-SB-046SN-0001-SO	1.2	ND
LL3EB4-SB-047SN-0002-SO	ND	3.6
LL3EB4-SB-048SN-0002-SO	ND	0.9
LL3EB4-SB-049SN-0001-SO	3.3	ND
LL3EB4-SB-049SN-0003-SO	3.2	ND
LL3EB4-SB-050SN-0001-SO	2.2	ND
LL3EB4-SB-050SN-0003-SO	3.1	ND
LL3EB4-SB-050SN-0003-SO DUP	2.7	1.0
LL3EB4-SB-050SN-0005-SO	2.9	ND
LL3EB4-SB-051SN-0001-SO	2.0	1.0
LL3EB4-SB-051SN-0002-SO	18.7	ND
LL3EB4-SB-051SN-0003-SO	81.7	1.0
LL3EB4-SB-051SN-0004-SO	2.7	1.2
LL3EB4-SB-052SN-0003-SO	5.2	ND
<u>Building EB-4A (Melt Pour):</u>		
LL3EB4A-SB-058SN-0001-SO	41.5	ND
LL3EB4A-SB-058SN-0002-SO	13.4	ND
LL3EB4A-SB-058SN-0003-SO	272	1.7
LL3EB4A-SB-058SN-0004-SO	368	1.5
LL3EB4A-SB-058SN-0005-SO	712	1.6
LL3EB4A-SB-058SN-0005-SO DUP	43.9	ND
LL3EB4A-SB-059SN-0001-SO	52.0	ND
LL3EB4A-SB-059SN-0002-SO	16.5	1.8
LL3EB4A-SB-061SN-0001-SO	ND	1.3



**Table 3-3 (Continued)**

<b>Sample ID</b>	<b>TNT, mg/kg (Cleanup Goal: 1,646 mg/kg)</b>	<b>RDX, mg/kg (Cleanup Goal: 838 mg/kg)</b>
LL3EB4A-SB-062SN-0002-SO	ND	1.2
LL3EB4A-SB-063SN-0001-SO	ND	3.2
LL3EB4A-SB-063SN-0002-SO	ND	1.5
LL3EB4A-SB-063SN-0003-SO	ND	1.3
LL3EB4A-SB-063SN-0004-SO	ND	1.7
LL3EB4A-SB-064SN-0001-SO	2.5	ND
LL3EB4A-SB-065SN-0001-SO	ND	4.7
LL3EB4A-SB-065SN-0002-SO	ND	2.2
LL3EB4A-SB-065SN-0005-SO	1.0	1.2
LL3EB4A-SB-066SN-0001-SO	15.5	ND
LL3EB4A-SB-067SN-0001-SO	231	5.0
LL3EB4A-SB-067SN-0002-SO	ND	74.5
LL3EB4A-SB-067SN-0003-SO	ND	9.5
LL3EB4A-SB-067SN-0004-SO	ND	1.2
LL3EB4A-SB-067SN-0005-SO	ND	0.9
LL3EB4A-SB-068SN-0004-SO	ND	2.2
LL3EB4A-SB-069SN-0001-SO	3.3	ND
LL3EB4A-SB-069SN-0003-SO	1.1	ND
LL3EB4A-SB-070SN-0001-SO	19.0	1.1
LL3EB4A-SB-070SN-0002-SO	ND	31.3
LL3EB4A-SB-070SN-0003-SO	ND	217
LL3EB4A-SB-070SN-0004-SO	ND	198
LL3EB4A-SB-070SN-0005-SO	ND	36.6
LL3EB4A-SB-071SN-0001-SO	10.9	0.8
LL3EB4A-SB-071SN-0002-SO	0.8	ND
LL3EB4A-SB-072SN-0001-SO	ND	1.3
LL3EB4A-SB-100SN-0001-SO	29.5	12.9
LL3EB4A-SB-100SN-0002-SO	ND	1.6
LL3EB4A-SB-100SN-0003-SO	ND	1.4
LL3EB4A-SB-100SN-0005-SO	ND	1.1
LL3EB4A-SB-101SN-0001-SO	4.0	ND
<u>Building EA-6A (Explosives Preparation):</u>		
LL3EA6A-SB-081SN-0001-SO	2.4	ND

**Table 3-3 (Continued)**

<b>Sample ID</b>	<b>TNT, mg/kg (Cleanup Goal: 1,646 mg/kg)</b>	<b>RDX, mg/kg (Cleanup Goal: 838 mg/kg)</b>
LL3EA6A-SB-082SN-0001-SO	723	7.3
LL3EA6A-SB-082SN-0001-SO S2	<b>1,730</b>	NA
LL3EA6A-SB-082SN-0003-SO	29.1	ND
LL3EA6A-SB-082SN-0004-SO	<b>4,020</b>	7.2
LL3EA6A-SB-082SN-0004-SO S2	206	NA
LL3EA6A-SB-082SN-0005-SO	<b>3,750</b>	ND
LL3EA6A-SB-082SN-0005-SO S2	<b>3,920</b>	NA
LL3EA6A-SB-083SN-0001-SO	2.5	ND
LL3EA6A-SB-083SN-0003-SO	24.8	ND
LL3EA6A-SB-083SN-0004-SO	25.1	ND
LL3EA6A-SB-083SN-0005-SO	23.2	ND
LL3EA6A-SB-084SN-0001-SO	5.4	ND
LL3EA6A-SB-084SN-0004-SO	ND	1.3
LL3EA6A-SB-084SN-0005-SO	ND	1.7
<u>Building EA-6 (Explosives Preparation):</u>		
LL3EA6-SB-086SN-0002-SO DUP	ND	3.2
LL3EA6-SB-086SN-0003-SO	ND	0.9
LL3EA6-SB-087SN-0001-SO	ND	1.5
LL3EA6-SB-087SN-0004-SO	ND	1.1
LL3EA6-SB-087SN-0005-SO	ND	ND
LL3EA6-SB-088SN-0001-SO	ND	2.4
LL3EA6-SB-090SN-0002-SO	ND	2.6
LL3EA6-SB-087SN-0003-SO	2.0	1.0
LL3EA6-SB-089SN-0001-SO	1.2	ND
LL3EA6-SB-089SN-0002-SO	48.0	ND
LL3EA6-SB-089SN-0003-SO	113	ND
LL3EA6-SB-089SN-0004-SO	25.6	1.6
LL3EA6-SB-089SN-0005-SO	<b>4,860</b>	1.8
<b>Load Line 4</b>		
<u>Building G-8 (Melt Pour):</u>		
LL4G8-SB-004SN-0004-SO	ND	0.8
LL4G8-SB-011SN-0001-SO	ND	2.6
LL4G8-SB-011SN-0002-SO	1.2	ND

**Table 3-3 (Continued)**

<b>Sample ID</b>	<b>TNT, mg/kg (Cleanup Goal: 1,646 mg/kg)</b>	<b>RDX, mg/kg (Cleanup Goal: 838 mg/kg)</b>
LL4G8-SB-012SN-0003-SO	2.0	ND
<u>Building G-9 (Explosives Screening):</u>		
LL4G9-SB-033SN-0002-SO	1.3	ND

**Bold** indicates cleanup goal exceedance.

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

NA: Not analyzed.

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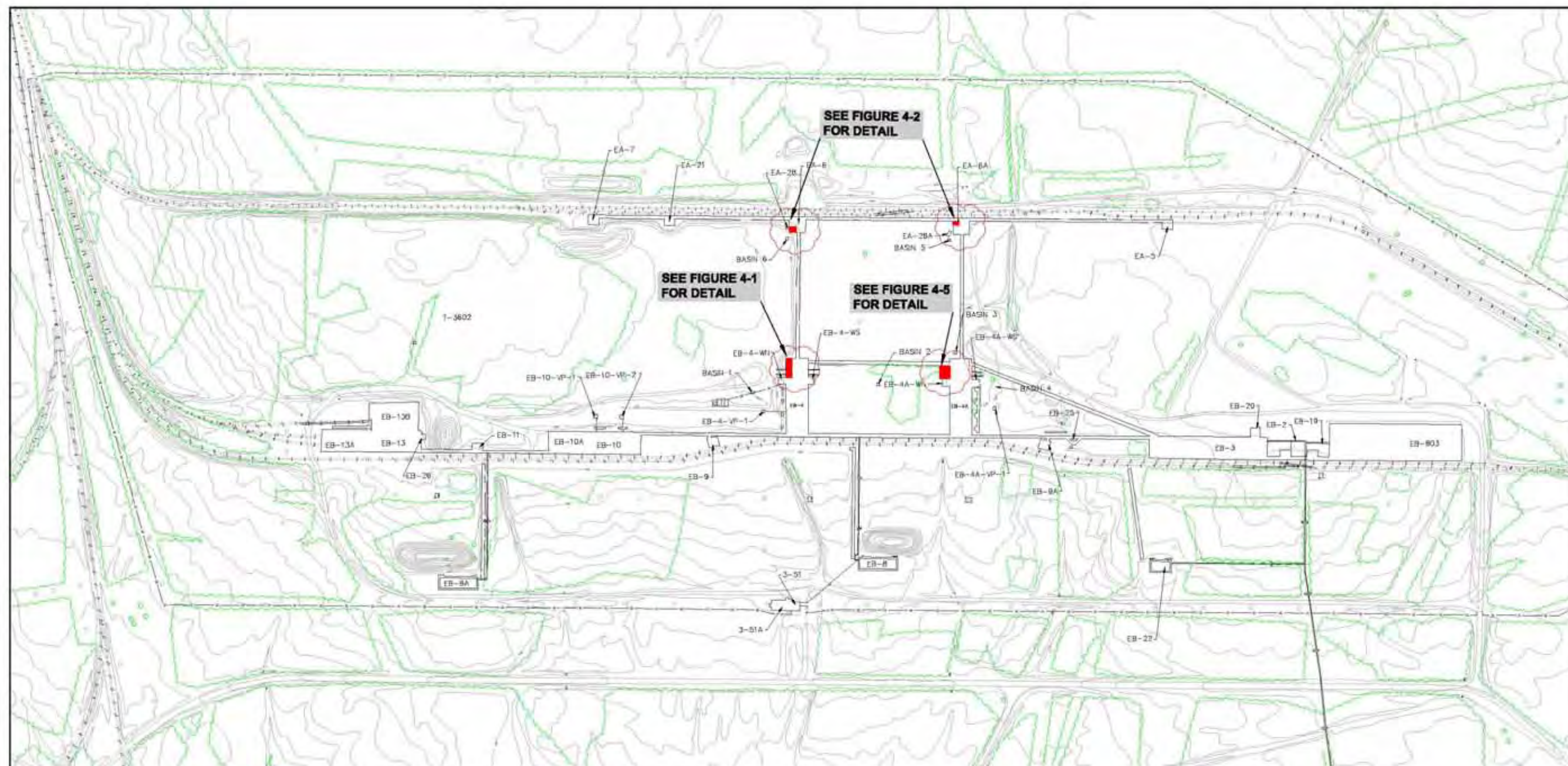
**Table 3-4**  
**Summary of Field Screening Cleanup Level Exceedances**  
**Ravenna Army Ammunition Plant**  
**Ravenna, Ohio**

<b>Building/Description</b>	<b>Sample ID</b>	<b>TNT mg/kg (Cleanup Goal: 1,646 mg/kg)</b>
EB-4/Melt Pour	LL3EB4-SB-042SN-0001-SO	1,760
EB-4/Melt Pour	LL3EB4-SB-042SN-0001-SO RE	3,700
EB-4/Melt Pour	LL3EB4-SB-042SN-0004-SO	1,130 <sup>(1)</sup>
EA-6A/Explosives Preparation	LL3EA6A-SB-082SN-0001-SO S2	1,730
EA-6A/Explosives Preparation	LL3EA6A-SB-082SN-0004-SO	4,020 <sup>(2)</sup>
EA-6A/Explosives Preparation	LL3EA6A-SB-082SN-0005-SO	3,750
EA-6A/Explosives Preparation	LL3EA6A-SB-082SN-0005-SO S2	3,920
EA-6/Explosives Preparation	LL3EA6-SB-089SN-0005-SO	4,860

<sup>(1)</sup> TNT result greater than adjusted cleanup goal of 878 mg/kg (Section 3.5).

<sup>(2)</sup> In addition, the fixed laboratory result for LL3EA6A-SB-082A-0004-SO of 2,040 mg/kg exceeded the cleanup goal of 1,646 mg/kg.

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- LEGEND**
- BUILDING AND WALKWAY
  - SECONDARY BUILDING
  - ASPHALT ROAD
  - GRAVEL ROAD
  - RAILROAD TRACKS
  - FENCE LINE
  - CONTOUR (2 FT. INTERVAL)
  - CONTOUR (10 FT. INTERVAL)
  - TREE OR TREELINE
  - STEAM STANCHION
  - BASINS (USE UNKNOWN)
  - LOAD LINE 3 AOC BOUNDARY
  - AREA REQUIRING EXCAVATION
  - SEE FIGURES 4-1, 4-2, AND 4-5 FOR ADDITIONAL DETAIL



0 75 150 300  
SCALE 1" = 300'



<b>URS</b>				
<b>RAVENNA ARMY AMMUNITION PLANT</b> RAVENNA, OHIO				
<b>LOAD LINE 3</b> <b>AREAS WITH TNT CLEANUP LEVEL</b> <b>EXCEEDANCES</b> <b>(BASED ON A SCREENING LEVEL OF 878 mg/kg TNT)</b>				
DRAWN BY: JSC	CHECKED BY: SL	PROJECT No: 13812319	DATE: 04/23/09	FIGURE No: 3-1 PAGE No: 3-14



**Table 3-5**  
**Analytical Data Summary - Correlation Samples**  
**Ravenna Army Ammunition Plant**  
**Ravenna, Ohio**

Analyte	Units	LL3EB4-SB-038SN-0005-SO 4/4/2008	LL3EB4-SB-042SN-0004-SO 4/4/2008	LL3EB4-SB-044SN-0005-SO 4/4/2008	LL3EB4-SB-037SN-0004-SO 4/4/2008	LL3EB4-SB-042SN-0005-SO 4/4/2008	LL3EA6A-SB-082A-0004-SO 4/4/2008	LL3EA6A-SB-082A-0002-SO 4/4/2008	LL3EA6A-SB-082A-0001-SO 4/4/2008	LL3EA6A-SB-082A-0005-SO 4/4/2008	L08040200-10 LL3EA6A-SB-082A-0003-SO 4/4/2008
1,3,5-Trinitrobenzene	mg/kg	0.244 U	<b>9.84</b>	0.250 U	<b>0.190 J</b>	<b>0.259</b>	<b>2.03</b>	<b>0.461</b>	<b>0.871</b>	<b>1.68</b>	0.243 U
1,3-Dinitrobenzene	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	<b>0.206 J</b>	0.248 U	<b>0.163 J</b>	<b>0.257</b>	0.243 U
2,4,6-Trinitrotoluene	mg/kg	0.244 U	<b>611</b>	<b>0.948</b>	<b>15.2</b>	<b>323</b>	<b>2040</b>	<b>31.7</b>	<b>1740</b>	<b>2620</b>	<b>3.75</b>
2,4-Dinitrotoluene	mg/kg	0.244 U	<b>0.76</b>	0.250 U	0.250 U	<b>0.422</b>	<b>1.97</b>	0.248 U	<b>1.7</b>	<b>2.08</b>	0.243 U
2,6-Dinitrotoluene	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	<b>1.07 N</b>	0.248 U	0.244 U	0.249 U	0.243 U
2-Amino-4,6-dinitrotoluene	mg/kg	0.244 U	<b>1.86</b>	0.250 U	0.250 U	<b>1.96</b>	<b>0.741</b>	0.248 U	<b>0.772</b>	<b>1.45</b>	0.243 U
2-Nitrotoluene	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 U
3-Nitrotoluene	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 U
4-Amino-2,6-dinitrotoluene	mg/kg	0.244 U	<b>2.63</b>	0.250 U	<b>0.267</b>	<b>1.72</b>	<b>2.07 N</b>	<b>0.412</b>	<b>1.12 N</b>	<b>5.68</b>	0.243 U
4-Nitrotoluene	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 U
HMX	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 U
Nitrobenzene	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 U
Nitroglycerin	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 U
PETN	mg/kg	1.46 U	1.50 U	1.50 U	1.50 U	1.50 U	1.46 U	1.49 U	1.46 U	1.50 U	1.46 U
RDX	mg/kg	0.244 U	<b>0.849</b>	0.250 U	<b>0.203 J</b>	<b>0.394</b>	<b>0.779 N</b>	0.248 U	<b>1.52 N</b>	<b>1.22</b>	0.243 U
Tetryl	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 U

**Bold** indicates detection

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.

N = There is presumptive evidence that the analyte is present, but it has not been confirmed. The analyte is tentatively identified. There is an indication that the reported analyte is present, however, all quality control requirements necessary for confirmation were not met.

none of the concentrations was above 10 mg/kg. Table 3-5 indicates the range of detected concentrations of the other explosives as follows:

1,3,5-trinitrobenzene: 0.259 to 9.84 mg/kg

1,3-dinitrobenzene: 0.163 to 0.257 mg/kg

2,4-dinitrotoluene: 0.422 to 2.08 mg/kg

2,6-dinitrotoluene: 1.07 mg/kg

2-amino-4,6-dinitrotoluene: 0.772 to 1.96 mg/kg

4-amino-2,6-dinitrotoluene: 0.267 to 5.68 mg/kg

An initial inspection of the screening data versus the fixed laboratory data results for both chemicals indicates considerable variability (Table 3-6).

Correlation and regression analyses were performed to statistically test the strength of the relationship between the field screening results and the fixed laboratory results (STATISTICA Version 8 software). A linear regression was performed to determine the statistical correlation (Pearson's) between the field screening and fixed lab TNT data sets. The plot of residuals versus the fixed lab results showed that the assumption of a constant error variance was violated. The linear regression model assumes that the standard deviations of the error terms (the part of the equation not explained by the independent variable) must be constant and not dependent on the independent variable (i.e., the fixed laboratory results, in this case). A common technique to remedy this is to transform the data. A transformation (natural log) of the field screening and fixed lab TNT results was then applied to correct for this problem. The regression equation, using the transformed data points, and a plot are shown below:

**Table 3-6**  
**Comparison of Field Screening and Fixed Laboratory Data**  
**Ravenna Army Ammunition Plant**  
**Ravenna, Ohio**

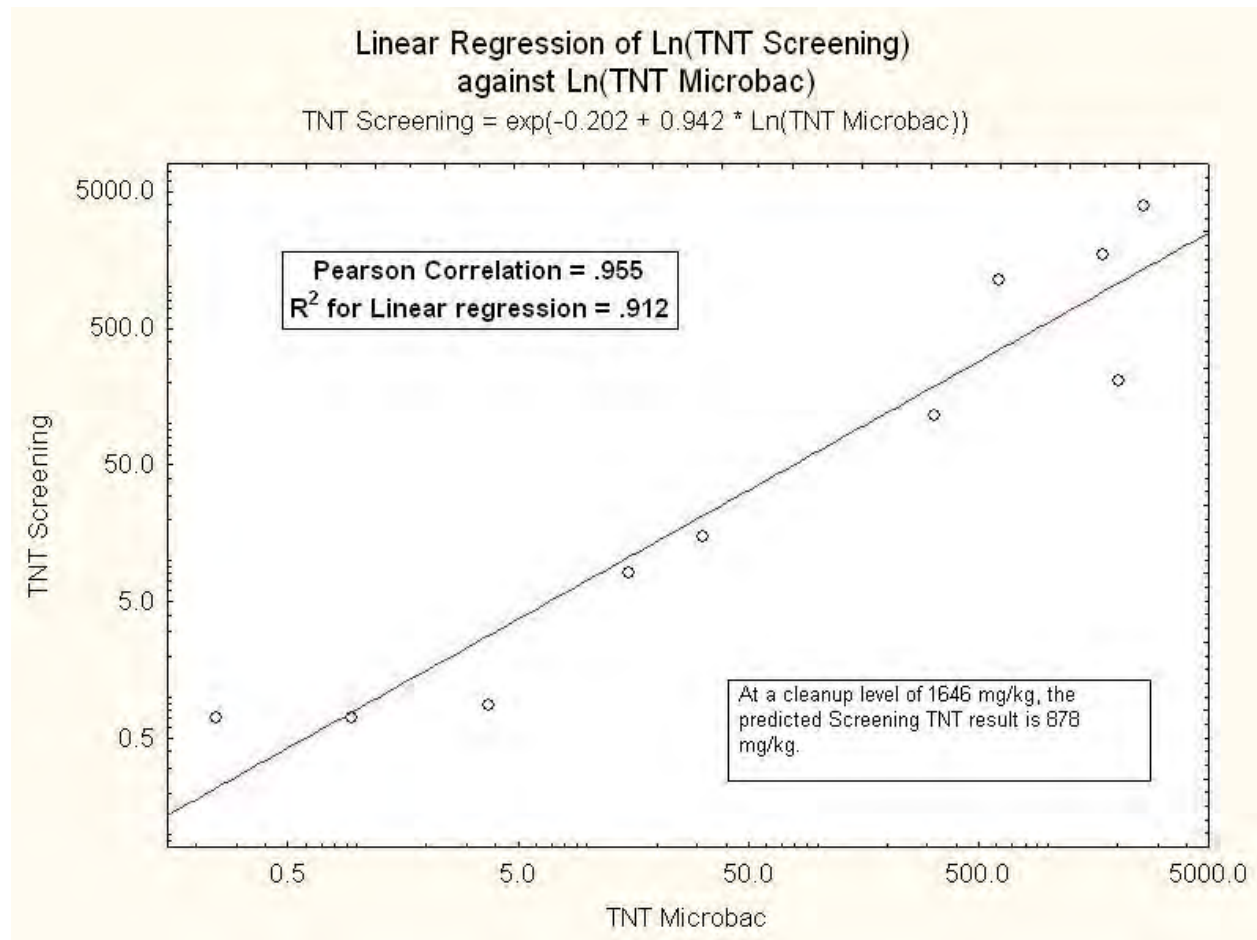
Sample ID	2,4,6-Trinitrotoluene (TNT)		RDX	
	Screening mg/kg	Microbac mg/kg	Screening mg/kg	Microbac mg/kg
LL3EB4-SB-038SN-0005-SO	0.7 U	0.244 U	0.8 U	0.244 U
LL3EB4-SB-042SN-0004-SO	1130	611	5.51	0.849
LL3EB4-SB-044SN-0005-SO	0.7 U	0.948	1.73	0.250 U
LL3EB4-SB-037SN-0004-SO	8.20	15.2	0.8 U	0.203 J
LL3EB4-SB-042SN-0005-SO	115	323	0.98	0.394
LL3EA6A-SB-082A-0001-SO	1728	1740	7.33	1.52 N
LL3EA6A-SB-082A-0002-SO	15	31.7	0.8 U	0.248 U
LL3EA6A-SB-082A-0003-SO	0.87	3.75	0.8 U	0.243 U
LL3EA6A-SB-082A-0004-SO	206	2040	7.2	0.779 N
LL3EA6A-SB-082A-0005-SO	3916	2620	0.8 U	1.22

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.

N = There is presumptive evidence that the analyte is present, but it has not been confirmed.





As shown on the plot, the Pearson Correlation is 0.995 and the  $R^2$  value is 0.912. A correlation coefficient close to 1 indicates a strong linear relationship. Therefore, a fairly strong linear relationship has been demonstrated between the field screening method and the fixed laboratory analyses.

The regression equation shown on the plot can be used to evaluate quantitatively the low bias observed with the screening data. This would help in determining whether the screening effort was successful in detecting cleanup goal exceedances and whether incorrect decisions were made as to whether a building footprint should have been covered in anticipation of remediation. As shown on the plot, a fixed laboratory result at the TNT cleanup goal of 1,646 mg/kg would be estimated as a field screening result of 878 mg/kg. This means that a field screening result between 878 mg/kg and the cleanup goal of 1,646 mg/kg will be interpreted as an exceedance. This happened in one of the field screening results (Sample ID LL3EB4-SB-042SN-0004-SO). This particular location was covered with plastic, however, since another portion of the same core did exceed the TNT cleanup level.

Although the potential for an incorrect decision appears low, screening results above 878 mg/kg will be considered exceedances for the purposes of making remediation decisions. With respect to the 10 pairs of correlation samples, one incorrect decision was made. A false negative

decision (no exceedance of the cleanup level when there was one) was made at LL3EA6A-SB-082A-0004-SO. This location was covered with plastic since other portions of the same core (the first and last intervals) indicated a cleanup goal exceedance.

Due to the high degree of censoring (percentage of nondetects) in the RDX data sets, a regression is highly uncertain and not useful in quantifying the relationship between the two sets of data. With respect to correlation, however, the nonparametric Spearman Rank Order Correlation test, which tests the strength of the relationship (which may not necessarily be linear) between the two sets of data, was used. The results indicate a correlation coefficient of 0.679, which is significant at the 0.05 level. Thus, there is some relationship between the two analytical methods. There does not appear to be a low bias in the RDX screening analyses since whenever RDX was detected in the screening sample, it was detected at a level higher than in the fixed laboratory analysis. There also does not seem to be a significant high bias in the screening results.

There is considerable uncertainty in applying correlation and regression analyses for decision-making. In addition, there are several reasons that may have contributed to the observed low bias of the TNT screening results. The following uncertainties should be considered:

- The heterogeneity of the soil matrix. The sample collected from core #82A at Building EA-6A (fourth interval) was reported by the laboratory at 2,040 mg/kg TNT, but the screening sample result was 206 mg/kg. This sample pair represents the largest difference among the 10 pairs. The core that was selected for correlation analysis was a duplicate of a boring collected earlier at the same location. The TNT concentration in that original boring interval was 4,020 mg/kg, which compares more favorably to the fixed lab result of 2,040 mg/kg. Thus, the variability in results may be due more to the heterogeneity of the soil rather than the inability of the screening tests to accurately measure the TNT concentration.
- Only ten correlation samples were analyzed by the fixed laboratory. This is a small number of observations for recognizing trends and drawing conclusions.
- The two analytical methods differ greatly in the way the samples are prepared prior to analysis. The screening sample is manually homogenized to the extent possible in the screening lab; the fixed lab sample is dried, sieved, and ground to a fine powder. The latter methodology results in a more representative sample for analysis and the screening methodology results in a less homogenized and more variable sample. In addition, the extraction method of the screening analysis (a 3-minute shake with acetone) may be less efficient than done in a fixed laboratory (18-hour sonication).
- Nondetect values were reported in two of the correlation sample pairs. Each analytical methodology has a different detection limit. In evaluating the correlation, a value must be selected to represent the concentration (one-half the detection limit was used). This introduces uncertainty into the evaluation since the “true” value of the nondetect could be somewhere between zero and the detection limit.

Based on the statistical analyses, it is recommended that the low bias of the TNT screening results be conservatively factored in to decisions to cover a particular building footprint.

Remediation will be conducted at locations where the TNT screening results are at or above 878 mg/kg.

### **3.6 ADDITIONAL SCREENING RESULTS**

Table 3-7 summarizes the additional field screening results for samples collected outside building footprints. Most of these samples were collected from visually impacted areas and contained the highest levels of TNT (up to 29,900 mg/kg). These additional areas are depicted on Figures 3-1 and 3-2.

### **3.7 ADDITIONAL FIXED LABORATORY RESULTS**

On two occasions, samples were collected from visually impacted areas outside the building footprints and were sent to the fixed laboratory for analysis. Tables 3-8 and 3-9 provide the analytical data results from those samples. The highest detected concentrations were for TNT.

In the five soil samples, the TNT concentrations ranged from 36.6 to 27,800 mg/kg. RDX concentrations ranged from 1.7 to 6.89 mg/kg. Additional explosives compounds were detected, similar to those detected in the correlation samples (Table 3-5). None of the metal concentrations appeared elevated with respect to either cleanup goals in the IROD or preliminary facility-wide cleanup goals. It is noted that the facility-wide cleanup goals are preliminary draft, and will change pending review by Ohio EPA and other stakeholders.

The surface water sample results were compared to the Ohio River basin aquatic life criteria (Table 9). Six explosives exceeded the Outside the Mixing Zone Average (OMZA) in at least one of the two samples. Preliminary draft facility-wide cleanup levels have also been calculated based on a National Guard Trainee exposure scenario (SAIC, 2008). These preliminary values are generally much higher than the OMZA values. Nonetheless, the detected levels in the two surface water samples exceed the facility-wide surface water cleanup goals for TNT and 2,4-DNT. These facility-wide cleanup goals are preliminary and will change pending review by Ohio EPA and other stakeholders.

**Table 3-7**  
**Summary of Additional Screening Outside Building Footprints**  
**Ravenna Army Ammunition Plant**  
**Ravenna, Ohio**

Sample ID	TNT mg/kg (Cleanup Goal: 1,646 mg/kg)	RDX mg/kg (Cleanup Goal: 838 mg/kg)
LL4G13VP1-SS-017SN-0001-SO	ND	ND
Pink Water 1	1.0	0.8
Pink Water 2	4.7	3.6
Pink Water 3	9.9	1.9
Pink Water 4	23.6	2.9
LL2DB4-PIT	<b>23,000</b>	74.2
LL2DB10-SCREEN 1	<b>2,730</b>	7.9
LL2DB10-SCREEN 2	<b>3,380</b>	16.0
LL2DB10-SCREEN 3	<b>4,710</b>	9.6
LL2DB10-SCREEN 3 DUP	<b>4,260</b>	16.3
LL3EB4A URS-EPA 1	<b>29,900</b>	94.2
LL3EB4A URS-EPA 2	57.3	3.8
LL3EB4A URS-EPA 3	344	5.9
LL3EB4A URS-EPA 4	<b>2,250</b>	12.1

**Bold** indicates exceedance of cleanup goal.

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**Table 3-8**  
**Analytical Data Summary - Soil Samples at DB-4A and EB-4A**  
**Ravenna Army Ammunition Plant**  
**Ravenna, Ohio**

Analyte	Units	LL3EB4A-EPA1SS	LL3EB4A-EPA2SS	LL3EB4A-EPA3SS	LL3EB4A-EPA4SS	LL2DB4A-SS-104SN-0001
<b>EXPLOSIVES</b>						
1,3,5-Trinitrobenzene	mg/kg	19.6	0.851	1.3	6.82	2.48 U
1,3-Dinitrobenzene	mg/kg	1.47 J	0.247 U	0.248 U	0.157 J	2.48 U
2,4,6-Trinitrotoluene	mg/kg	27800	209	272	3670	36.6
2,4-Dinitrotoluene	mg/kg	17.1	0.188 J	0.160 J	1.94	2.48 U
2,6-Dinitrotoluene	mg/kg	0.646 N	0.247 U	0.248 U	0.250 U	2.48 U
2-Amino-4,6-dinitrotoluene	mg/kg	5.14 J	0.975	0.533	1.82	2.48 U
2-Nitrotoluene	mg/kg	0.249 U	0.247 U	0.248 U	0.250 U	2.48 U
3-Nitrotoluene	mg/kg	0.249 U	0.247 U	0.248 U	0.250 U	2.48 U
4-Amino-2,6-dinitrotoluene	mg/kg	4.71 N	1.53	0.724	1.98 J	1.63 J
4-Nitrotoluene	mg/kg	0.249 U	0.247 U	0.248 U	0.250 U	2.48 U
HMX	mg/kg	1.23 J	0.247 U	0.248 U	0.967	2.48 U
Nitrobenzene	mg/kg	0.249 U	0.247 U	0.248 U	0.250 U	2.48 U
Nitroglycerin	mg/kg	0.249 U	0.247 U	0.248 U	0.250 U	2.48 U
PETN	mg/kg	1.50 U	1.48 U	1.49 U	1.50 U	14.9 U
RDX	mg/kg	6.89 J	2.47 U	0.248 U	1.91	1.70 J
Tetryl	mg/kg	0.249 U	0.247 U	0.248 U	0.250 U	2.48 U
<b>METALS</b>						
Aluminum, Total	mg/kg	11700	13300	13300	11000	
Barium, Total	mg/kg	84.3	65.1	81.7	64.1	
Beryllium, Total	mg/kg	0.703	0.712	0.775	0.633	
Cadmium, Total	mg/kg	37.2	1.26	1.36	7.3	
Calcium, Total	mg/kg	12500	5960	10900	4850	
Chromium, Total	mg/kg	18.9 J	17.3 J	17.6 J	16.6 J	
Cobalt, Total	mg/kg	8.34 JI	10.5 JI	10.2 JI	9.81 JI	
Copper, Total	mg/kg	32.3	21.9	19.6	21.5	
Iron, Total	mg/kg	22900	29400	22900	21800	
Magnesium, Total	mg/kg	3900	3810	3720	3040	
Manganese, Total	mg/kg	344 J	317 J	334 J	310 J	
Potassium, Total	mg/kg	1430 JI	1530 JI	1390 JI	1260 JI	
Silver, Total	mg/kg	0.207 J	0.201 J	0.320 J	0.366 U	
Sodium, Total	mg/kg	127	89.3	105	69.6	
Vanadium, Total	mg/kg	17.9	20.4	19.2	16.8	
Zinc, Total	mg/kg	186	81.1	87.2	91	
Antimony, Total	mg/kg	-- RI	-- RI	-- RI	-- RI	
Arsenic, Total	mg/kg	10.3	11.4	10.5	10.7	
Lead, Total	mg/kg	70.7	21.3	90.1	28	
Nickel, Total	mg/kg	22.8	25.1	23.5	22.9	
Selenium, Total	mg/kg	0.274 JI	0.285 JI	0.366 JI	0.297 JI	
Thallium, Total	mg/kg	0.159	0.191	0.143	0.17	
Mercury, Total	mg/kg	0.173	0.0252 J	0.0327 J	0.0342 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.

JI = Estimated concentration because of a matrix effect, evidenced by a matrix spike recovery outside of control limits (but greater than 30%).

RI = The nondetect sample result was rejected due to a recovery below 30% in the associated matrix spike. The presence or absence of the analyte could not be verified. The result is not usable.

N = There is presumptive evidence that the analyte is present, but it has not been confirmed. The analyte is tentatively identified. There is an indication that the reported analyte is present, however, all quality control requirements necessary for confirmation were not met.

**Table 3-9**  
**Analytical Data Summary - Water Samples at DB-4A and EB-4A**  
**Ravenna Army Ammunition Plant**  
**Ravenna, Ohio**

Analyte	Units	Surface Water Criteria, ug/L <sup>(1)</sup>	LL3EB4A-EPA3SW	LL2DB4A-GW-100SN
<u>EXPLOSIVES</u>				
1,3,5-Trinitrobenzene	ug/L	11	<b>397</b>	<b>1370</b>
1,3-Dinitrobenzene	ug/L	22	10.2 U	102 U
2,4,6-Trinitrotoluene	ug/L	13	<b>7310</b>	<b>1470</b>
2,4-Dinitrotoluene	ug/L	44	<b>10.1 J</b>	<b>84.4 J</b>
2,6-Dinitrotoluene	ug/L	81	10.2 U	102 U
2-Amino-4,6-dinitrotoluene	ug/L	18	<b>102</b>	<b>263</b>
2-Nitrotoluene	ug/L	71	10.2 U	102 U
3-Nitrotoluene	ug/L	42	10.2 U	102 U
4-Amino-2,6-dinitrotoluene	ug/L	11	<b>125</b>	<b>339</b>
4-Nitrotoluene	ug/L	46	10.2 U	102 U
HMX	ug/L	220	<b>8.14 J</b>	<b>104</b>
Nitrobenzene	ug/L	380	10.2 U	102 U
Nitroglycerin	ug/L	18	10.2 U	102 U
PETN	ug/L	--	76.5 U	765 U
RDX	ug/L	79	<b>70.9</b>	<b>960</b>
Tetryl	ug/L	--	10.2 U	102 U

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

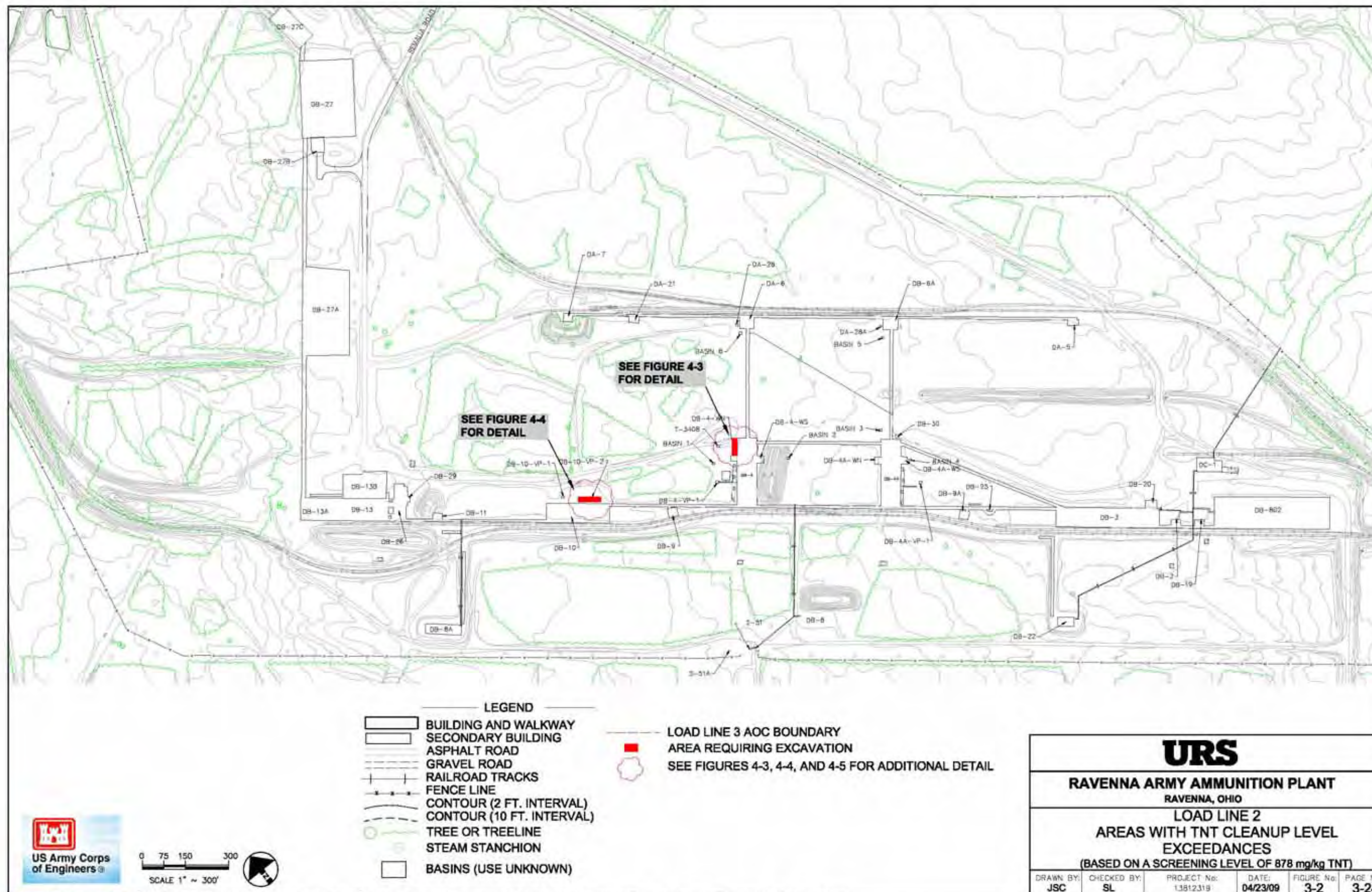
J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

<sup>(1)</sup> Ohio River Basin Aquatic Life Criteria, Ohio Administrative Code (OAC) 3745-1-32

Value shown is the Outside the Mixing Zone Average. Shaded cell indicates detected exceedance.

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#### 4.1 SUMMARY OF CLEANUP GOAL EXCEEDANCES

No exceedances of either the TNT or RDX cleanup goals were detected during the field screening investigation at either the low or medium potential buildings. Based on this post-slab removal sampling, explosive contamination beneath the floor slabs at these buildings was not detected, and no remediation appears warranted. However, the final determination regarding remediation at the low and medium potential buildings will be based on the results of the MI sampling.

There were no RDX exceedances at any high potential building at any load line. Exceedances for TNT were identified at three buildings in Load Line 3: Buildings EB-4, EA-6, and EA-6A. Eight exceedances (based on TNT screening levels greater than 878 mg/kg) ranged from 1,130 to 4,860 mg/kg. These areas were covered with plastic within 2 days of the completion of screening analyses. The exceedances at Building EB-4 occurred in one soil core sample at the two depths. At Building EA-6A, three portions of one soil core sample exceeded the TNT cleanup goal. An exceedance at Building EA-6 occurred in one soil core sample but only at the bottom depth location. Based on this post-slab removal sampling, there is evidence of explosive contamination above cleanup goals beneath the floor slabs at melt pour and TNT screening buildings within Load Line 3.

#### 4.2 CLEANUP GOAL EXCEEDANCES OUTSIDE BUILDING FOOTPRINTS

Additional samples were field screened primarily at Load Lines 2 and 3. At Load Line 2, additional samples were collected at Building DB-4 (sample ID LL2DB4-PIT), Building DB-10 (sample IDs LL2DB10-SCREEN 1 through 3), and Building DB-4A (Sample IDs Pink Water 1 through 4). At Load Line 3, contingency core samples were collected at Building EB-4A (sample IDs LL3EB4A-SB-100SN and LL3EB4A-SB-101SN) and additional samples (at the location where Ohio EPA had sampled after screening) were collected near Building EB-4A (Sample IDs LL3EB4A URS-EPA 1 through 4).

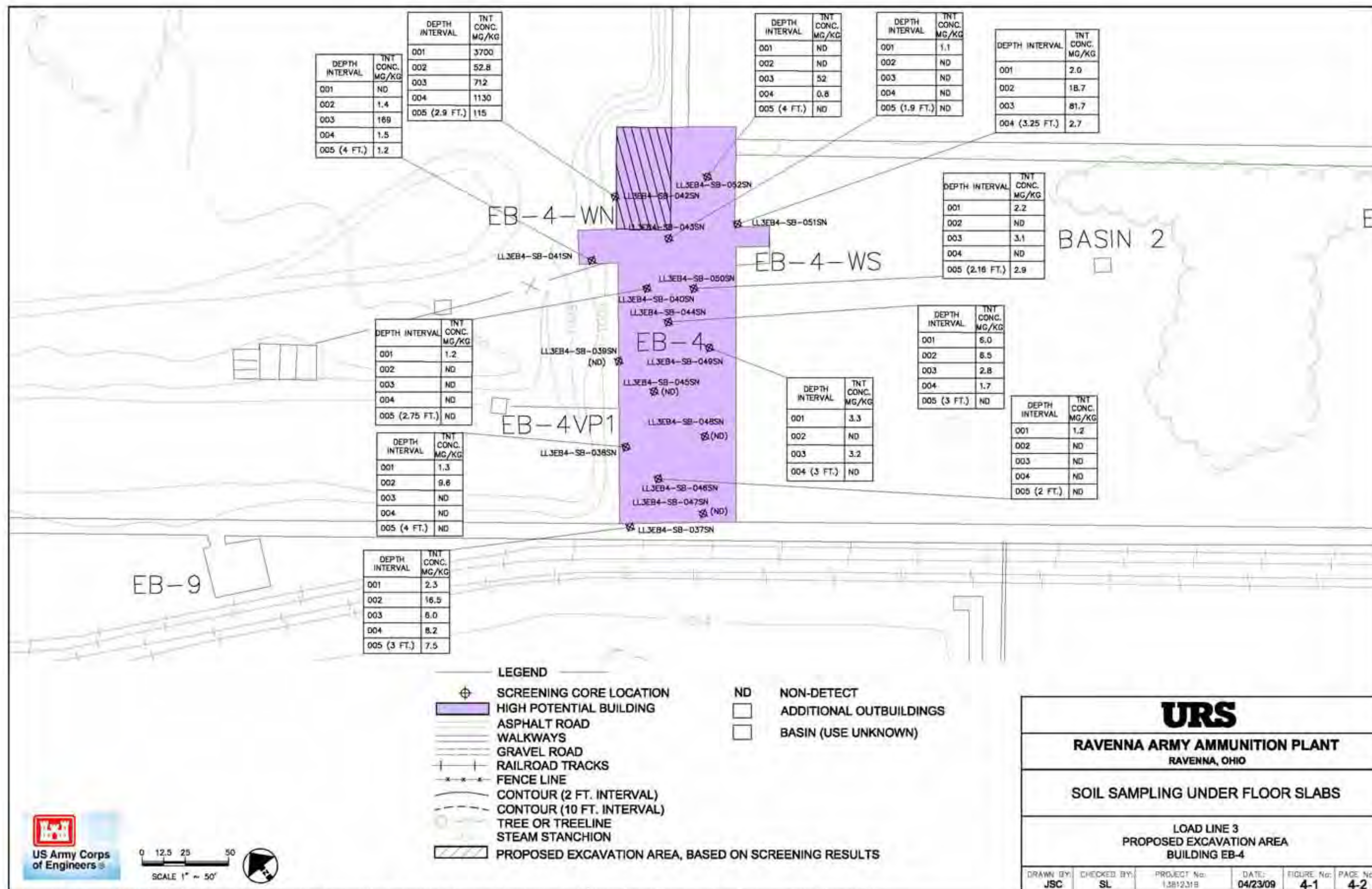
TNT was detected in all the additional samples at these two load lines and seven of the additional sample concentrations were above the TNT cleanup goal. Exceedances for the additional screening samples were detected at Load Line 2 in samples LL2DB10-SCREEN 1 through 3 and LL2DB4-PIT. These samples were collected near visibly contaminated areas outside building footprints. At Load Line 3 an additional TNT exceedance was observed near Building EB-4A.

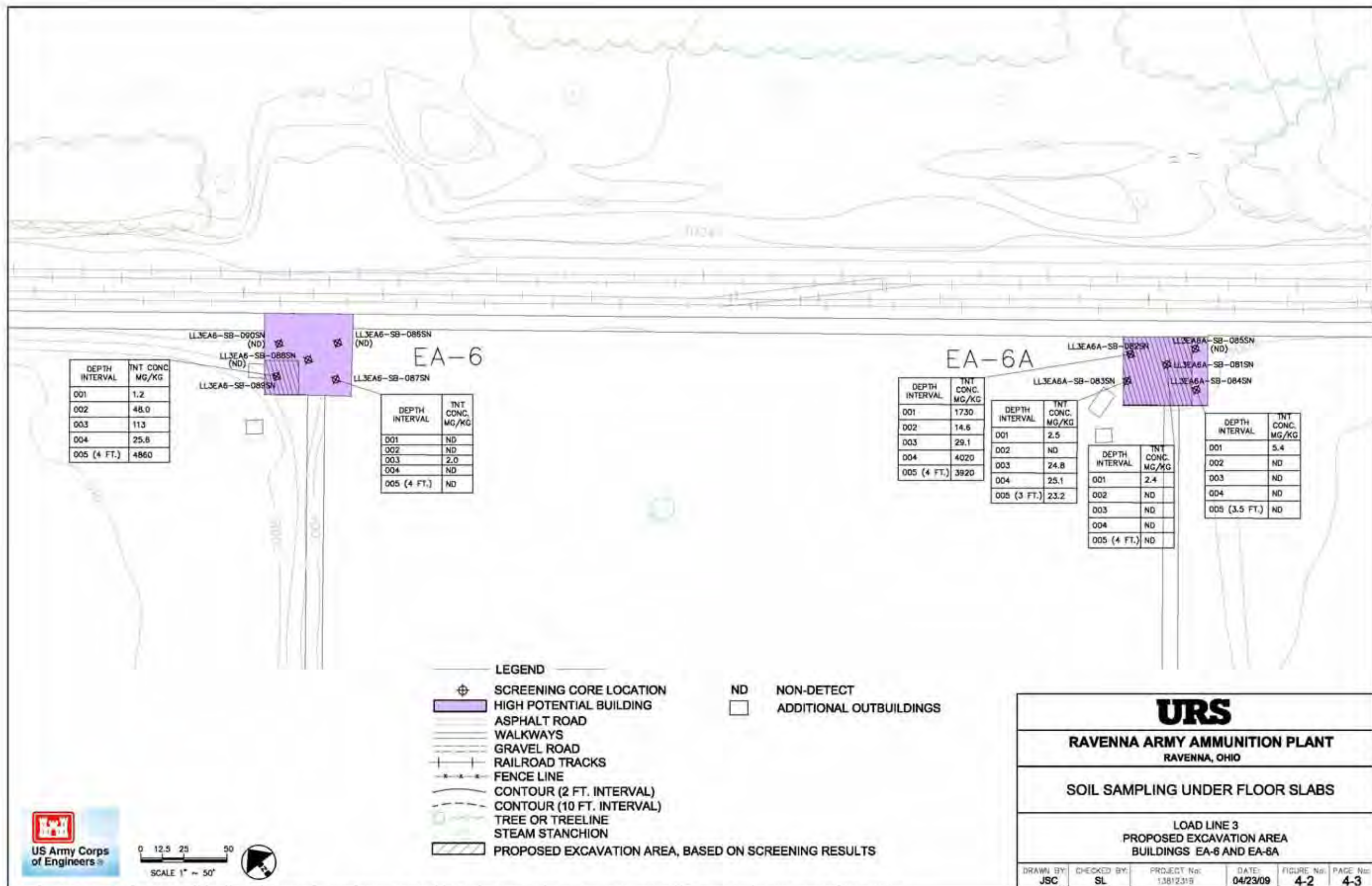
#### 4.3 SUMMARY OF EXCAVATION AREAS

The screening effort identified areas at three high potential buildings at Load Line 3 that exceeded the cleanup levels for TNT. These areas are noted for future remediation excavation work as indicated on Figures 4-1 and 4-2. These three areas are summarized below:

- Building EB-4, Northeast corner of footprint and north sump area (EB-4-WN). This area exceeded the TNT cleanup level down to approximately 3 feet bgs (the deepest interval sampled was 2.9 feet, because of refusal). Figure 4-1 indicates an area approximately 40 feet by 80 feet by 4 feet deep that will require excavation.







- Building EA-6. This area exceeded the TNT cleanup level in the deepest interval screened (4 feet). Figure 4-2 indicates an area approximately 20 feet by 20 feet by 5 feet deep that will require excavation.
- Building EA-6A. This area exceeded the TNT cleanup level in both the shallowest and deepest intervals screened from the coring collected in the northeast corner. Figure 4-2 indicates an area approximately 40 feet by 40 feet by 5 feet deep that will require excavation.

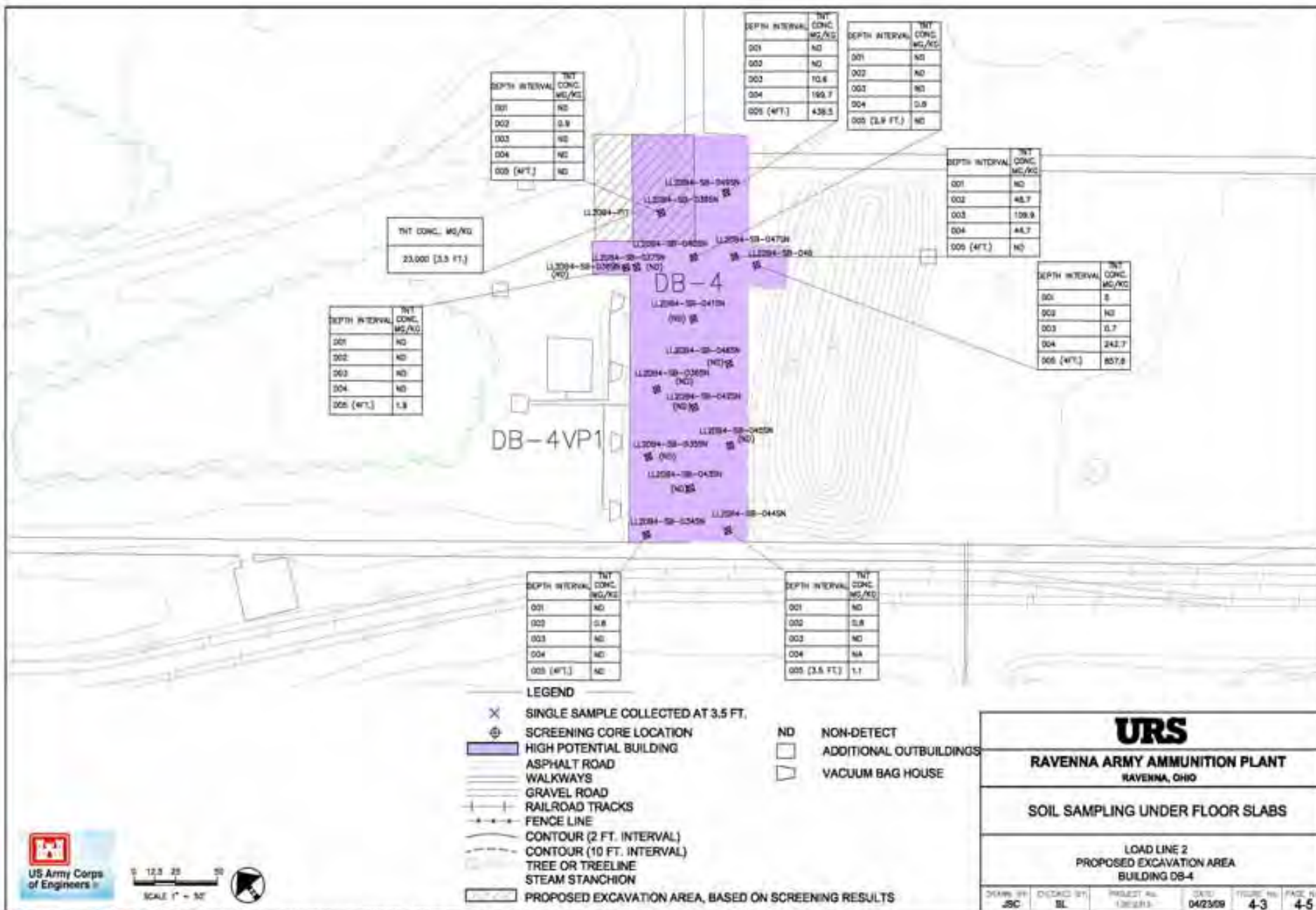
Additionally, based upon field observations, there is explosive contaminated soil not fully delineated by the screening effort. Two of these additional areas are near the Load Lines 2 and 3 melt pour buildings and associated sump areas. The melt pour sumps appear to have contributed to pink water emanating from the Load Lines 2 and 3 melt pour east foundations after slab removal. The elevator sump excavation at DB-4 was visually impacted at 3.5 feet bgs downgradient of the north sump. This area may be impacted to the east building foundation.

The screening samples or fixed laboratory samples collected outside the building footprints indicate three areas where remediation is warranted. They are:

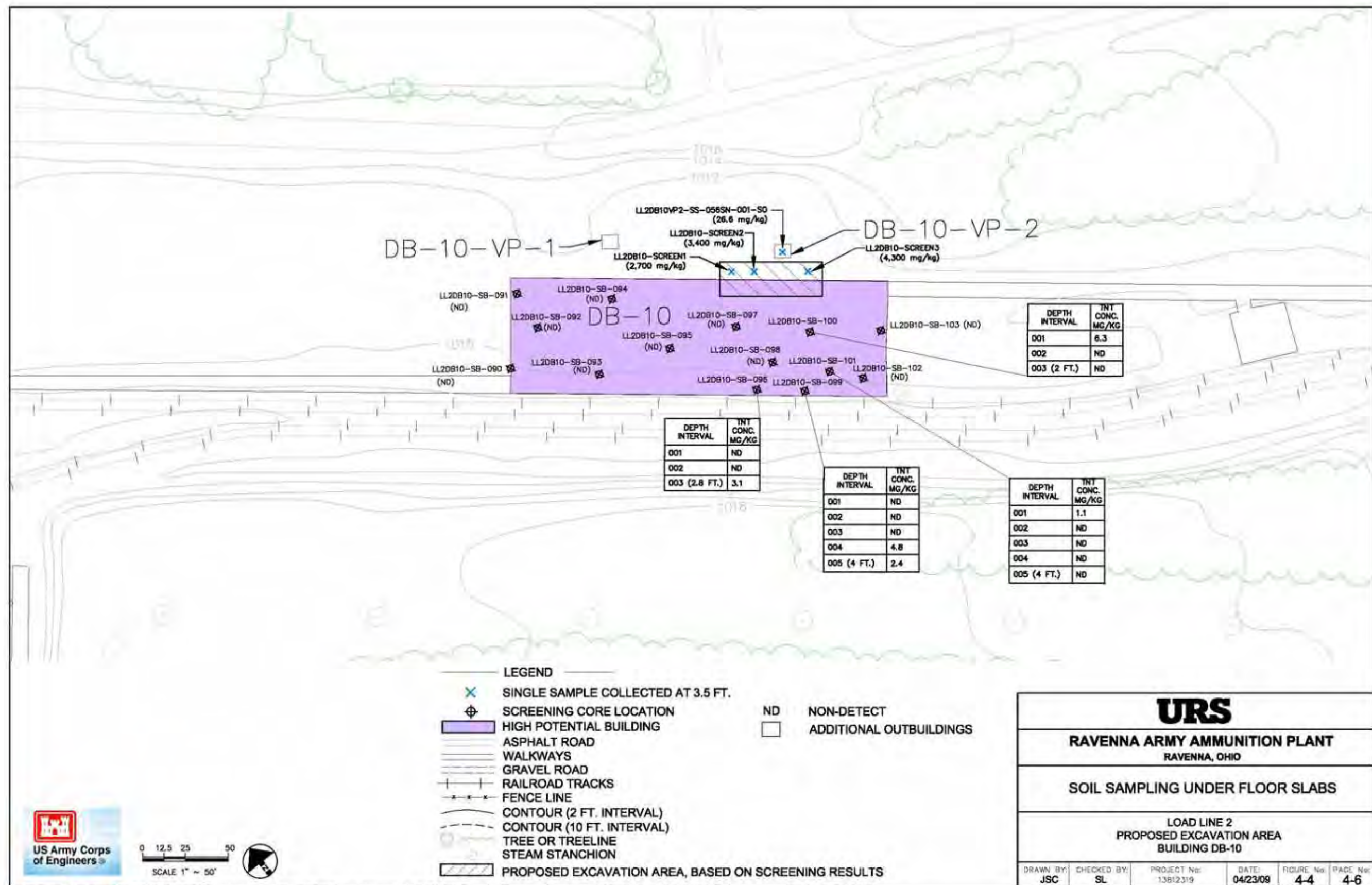
- At Load Line 2, the North Elevator sump area (near Building DB-4) and the north sump area (near Building DB-4-WN) (Figure 4-3). The highest levels of TNT in the screening effort were observed in the pit area excavated around the north elevator sump. The pit currently contains standing water that was pink in color shortly after the slab removal effort. This pit will require excavation of the visually impacted zone at approximately 3 feet bgs. Based on limited information regarding the extent of contamination, this removal area is approximately 60 feet by 60 feet by 4 feet deep.
- At Load Line 2, the area near DB-10 and DB-10-VP-2 (Figure 4-4). A large piece of TNT was removed from this area during the screening investigation. The area seems to be surficially impacted, but no samples were collected at depth. Therefore, the depth to which excavation may be required is unknown. Based on the limited information regarding the extent of contamination, this removal area is approximately 20 feet by 60 feet by 2 feet deep.
- At Load Line 3 outside the northeast corner of Building EB-4A and the sump area (EB-4A-WN) (Figure 4-5). This area was identified by soil staining that occurred after the field screening sample was collected. Additional samples indicated the TNT cleanup goal exceedance. The sump area appears to be the source of contamination. Excavation of the sump is warranted. Based on the limited information regarding the extent of contamination, this removal area is approximately 40 feet by 60 feet by 4 feet deep.

Based upon observations and findings during this investigation, it is also apparent that these areas of potential impact are not delineated only by the building footprints. The impacted areas will require additional characterization to support area excavation. This will be done by collecting field screening confirmation samples once visually impacted soil is removed. If cleanup goals are not exceeded, the final MI soil samples can then be collected.



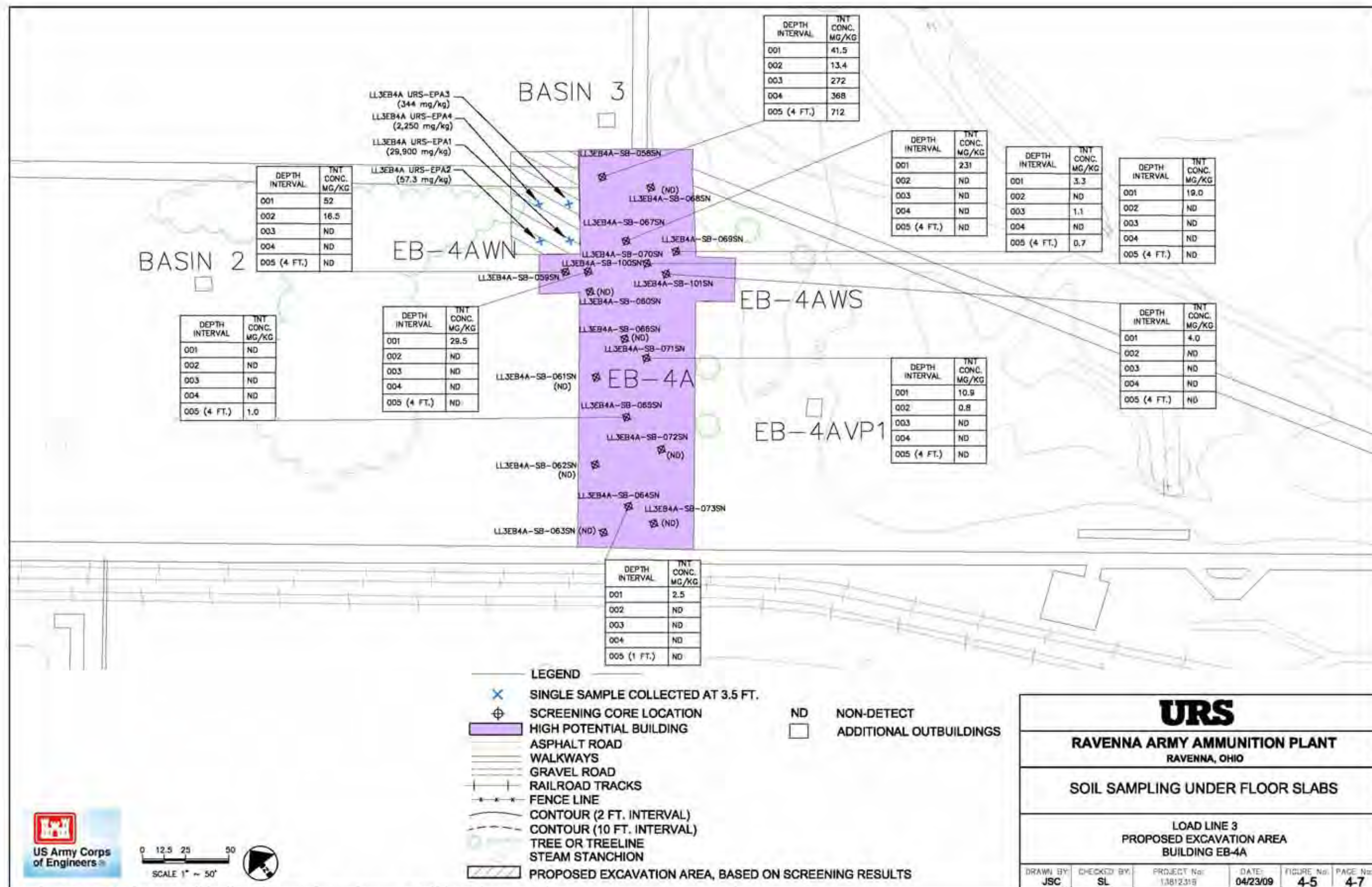






K:\Projects\RA\RAVENNA AAP\13B12319\WORK\Figures\Screening\_Report\_Final\_Figures\RAVENNA-Fig 4-4 Field Screening Core Locations and Potential Excav DB10.dwg User: jessica\_cotton Jul 14, 2009 11:15am





In addition to excavation extent issues, the soil will need to be tested to determine whether it is Resource Conservation and Recovery Act (RCRA) hazardous, based on the concentrations of dinitrotoluene (DNT) found in the limited fixed laboratory samples collected during this sampling effort. Table 3-8 indicates that the 2,4-DNT concentration detected in sample LL3EB4A-EPA1SS was more than 20 times the toxicity characteristic leaching procedure (TCLP) limit of 0.13 mg/L. Depending on the results of the multi-increment (MI) samples collected subsequent to the screening effort, there may be other chemicals that pose a similar concern.

- Jenkins (2008). Quality Assurance Inspections – Ravenna AAP. March 28, 2008.
- SAIC. 2001. Facility-Wide Sampling and Analysis Plan for Environmental Investigations at the Ravenna Army Ammunition Plant, Ravenna, Ohio. Prepared for the U.S. Army Corps of Engineers, Louisville District. March 2001.
- SAIC. 2008. Facility-Wide Human Health Cleanup Goals for the Ravenna Army Ammunition Plant (RVAAP), Ravenna, Ohio. Draft. September, 2008.
- URS. 2008. URS Group, Inc. Letter Report Work Plan for the Sampling of Soils Below Floor Slabs at LLs-2,3,4 and Excavation and Transportation of Contaminated Soils to Load Line 4 (Buildings G-1, G-1A, and G-3). Prepared for the U.S. Army Corps of Engineers, Louisville District. Final. February 7, 2008.
- USACE. 2001. U.S. Army Corps of Engineers. Standard Operating Procedure for Colorimetric Analysis of Explosives. Final. March 16, 2001.

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**APPENDIX A**  
**Load Line Summaries**

### Summary of Field Activities, Load Line 2

BLDG. #	FUNCTION	Potential <sup>(1)</sup>	Sample No	BRAC Cleared	Sampled	Comments/Notes/Remarks
DC-1	Boiler House / Power House 2	M	86	15-Apr	18-Apr	
DB-2	Paint and Oil Storage / Service Bldg	M	3	11-Apr	11-Apr	
DB-3	Receiving & Painting Bldg / Shell Receiving Bldg	M	5	16-Apr	18-Apr	
DB-4	Melt Loading Bldg / Melt Loading Bldg and SPCC	H	34 to 50	23-Apr	18-23 Apr/21,22 May*	4/18 noted visual contamination east end of walkway and in pit around elevator casing at NE end. Additional screening sample collected. Area covered 4/23.
DB-4A	Melt Loading Bldg / Melt Loading Bldg and SPCC	H	13 to 29	17-Apr	17-18 Apr/8-21,22 May*	Additional samples collected near pink water area. Area covered 4/23.
DB-4WN	Annex Building, Washout Bldg, North Annex	M	52	23-Apr	18-23 Apr	Incorporated into core samples for DB-4 as per Figure 3-1 of the Work Plan.
DB-4WS	Annex Building, Washout Bldg, South Annex	M	51	23-Apr	18-23 Apr	Incorporated into core samples for DB-4 as per Figure 3-1 of the Work Plan.
DB-4VP1	Vacuum Pump House	L	87	16-Apr	22-May	Footprint covered with water after slab removal. Area covered with plastic on 4/21/08 until footprint was accessible for sampling.
DB-4AWN	Annex Building, Washout Bldg, North Annex	M	30	17-Apr	18-Apr	Incorporated into core samples for DB-4A as per Figure 3-1 of the Work Plan.
DB-4AVP1	Vacuum Pump House	L	88	16-Apr	17-Apr	
DB-4AWS	Annex Building, Washout Bldg, South Annex	M	10	17-Apr	18-Apr	Incorporated into core samples for DB-4A as per Figure 3-1 of the Work Plan.
DA-5	Ammonium Nitrate Service Building / Service Bldg	M	85	8-May	8-May	
DA-6	High Explosive Prep Bldg / Explosive Prep Bldg	H	73 to 77	8-May	7-May	
DA-6A	High Explosive Prep Bldg / Explosive Prep Bldg	H	80 to 84	8-May	8-May	
DA-7	TNT Service Bldg / Service Bldg	M	70	7-May	7-May	
DB-8	Change House	L	31	18-Apr	18-Apr	
DB-8A	Change House	L	59	22-Apr	23-Apr	
DB-9	Booster Service Bldg / Service Bldg	M	55	8-May	8-May	
DB-9A	Booster Service Bldg / Service Bldg	M	8	16-Apr	17-Apr	
DB-10	Drilling & Boostering Bldg / Drilling & Assembly Bldg	H	90 to 103	8-May	30-Apr/8,9,21, 22 May*	Additional samples collected where product removed. Area between DB-10 and DB-10VP2 covered 5/16.
DB-10VP1	Vacuum Pump Bldg / Vacuum Pump House	L	57	22-Apr	23-Apr	
DB-10VP2	Vacuum Pump Bldg / Vacuum Pump House	L	56	22-Apr	23-Apr	See Note above.
DB-11	Fuze Service Bldg / Service Bldg	M	60	22-Apr	23-Apr	
DB-13	Assembly & Shipping / Packing and Shipping Bldg	L	64	24-Apr	24-Apr	
DB-13A	T. Barricade Shipping / Shell Storage	L	65	24-Apr	24-Apr	
DB-13B	Shipping Warehouse Annex	L	62	24-Apr	24-Apr	
DB-19	Elec Locomotive Service / Service Bldg	M	2	16-Apr	17-Apr	
DB-20	Line Office / Service Bldg	M	4	16-Apr	17-Apr	
DA-21	TNT Box Bldg / Service Bldg	M	71	7-May	7-May	
DB-22	Change House	L	6	17-Apr	17-Apr	
DB-25	Washout Bldg	M	7	17-Apr	17-Apr	
DB-26	X-Ray Bldg / Radiographic Bldg	M	63	24-Apr	24-Apr	
DB-27	Maj Cal Pro Ldg / Cyclic Building Heating # 2	L	68	30-Apr	30-Apr	
DB-27A	Maj Cal Pro Ldg / Cyclic Building Heating # 1	L	66	30-Apr	30-Apr	
DB-27B	Maj Cal Pro Ldg / Boiler Plant	L	67	30-Apr	9-May	
DB-27C	Maj Cal Pro Ldg / Shipping Bldg	L	69	7-May	7-May	
DA-28	Rotary Lift Pump House / Elevator Machine House	L	72	7-May	8-May	
DA-28A	Rotary Lift Pump House / Elevator Machine House	L	79	8-May	8-May	
DB-29	Elevator Machine House	L	61	24-Apr	24-Apr	
DB-30	Elevator Machine House	L	104	22-May	22-May	
DB-802	Inert Storage	L	1	8-May	8-May	
2-51	Time Clock Alley / Clock Alley	L	32	17-Apr	18-Apr	
2-51A	Gate House Annex / Load Line Office	L	33	17-Apr	18-Apr	

<sup>(1)</sup> H = High potential building, M = Medium potential building, L = Low potential building as designated in Work Plan.

\* - Bldg sampled on multiple dates due to demolition debris covering a portion of the footprint.



### Summary of Field Activities, Load Line 3

BLDG. #	FUNCTION	Potential <sup>(1)</sup>	Sample No.	BRAC Cleared	Sampled	Comments/Notes/Remarks
EB-2	Paint & Oil Storage / Service Building	M	2	27-Mar	28-Mar	
EB-3	Receiving & Painting / Shell Receiving Bldg	M	1	27-Mar	28-Mar	
EB-4	Melt Loading Bldg / Melt Load Bldg	H	37 to 52	1-Apr	4/4;4/30	Multiple refusals; TNT exceedance; plastic covered 4/8
EB-4WN	Washout Bldg , North Annex / Washout Annex	M	See EB-4	2-Apr	4-Apr	Incorporated into core samples for EB-4 as per Figure 3-1 of the Work Plan.
EB-4WS	Washout Bldg , South Annex / Washout Annex	M	See EB-4	2-Apr	4-Apr	Incorporated into core samples for EB-4 as per Figure 3-1 of the Work Plan.
EB-4VP1	Vacuum Pump Bldg / Vacuum Pump House	L	33	2-Apr	3-Apr	
EB-4A	Melt Loading Bldg / Melt Load Bldg	H	58 to 74	2-Apr	4/3;4/24	TNT Exceedance Core # 42. Covered with plastic on 4/8. Two contingency cores collected outside sumps
EB-4AWN	Washout Bldg , North Annex / Washout Annex	M	See EB-4A	2-Apr	3-Apr	Incorporated into core samples for EB-4A as per Figure 3-1 of the Work Plan.
EB-4AWS	Washout Bldg , South Annex / Washout Annex	M	See EB-4A	2-Apr	3-Apr	Incorporated into core samples for EB-4A as per Figure 3-1 of the Work Plan.
EB-4AVP1	Vacuum Pump Bldg / Vacuum Pump House	L	75	18-Apr	18-Apr	
EA-5	Ammonium Nitrate Service / Service Building	M	80	9-Apr	10-Apr	
EA-6	High Explosive Prep / Explosive Preparation Bldg	H	86 to 90	9-Apr	10-Apr	TNT exceedance, Core #89. Covered with plastic on 4/11.
EA-6A	High Explosive Prep / Explosive Preparation Bldg	H	81 to 85	27-Mar	3/28;4/4	TNT exceedance, Core #82. Covered with plastic on 4/4.
EA-7	TNT Service Bldg / Service Bldg	M	30	9-Apr	10-Apr	
EB-8	Change house	L	4	27-Mar	28-Mar	
EB-8A	Change house	L	6	2-Apr	4-Apr	
EB-9	Booster Service Bldg / Service Bldg	M	32	2-Apr	3-Apr	
EB-9A	Booster Service Bldg / Service Bldg	M	76	3-Apr	2-Apr	
EB-10	Drilling and Boostering / Drilling & Assembly Bldg	H	13 to 27	3-Apr	4/7 and 4/10	Multiple refusals during coring.
EB-10A	X-ray Bldg / Radiographic Bldg	M	See EB-10	3-Apr	7-Apr	Incorporated into core samples for EB-10 as per Figure 3-1 of the Work Plan.
EB-10VP1	Vacuum Pump Bldg / Vacuum Pump House	L	28	2-Apr	3-Apr	
EB10-VP2	Vacuum Pump Bldg / Vacuum Pump House	L	29	2-Apr	3-Apr	
EB-11	Fuze Service Bldg / Service Bldg	M	11	3-Apr	4-Apr	
EB-13	Assembly and Shipping / Packing & Shipping Bldg	L	7	9-Apr	10-Apr	
EB-13A	Barricade & Shipping Bldg / Car Barricade	L	8	9-Apr	10-Apr	
EB-13B	Shipping Warehouse Annex	L	9	9-Apr	10-Apr	
EB-19	Electric Locomotive Service / Service Bldg	M	1	27-Mar	28-Mar	
EB-20	Line Office Bldg / Line Office	L	79	27-Mar	2-Apr	
EA-21	TNT Box Building / Service Bldg	M	31	9-Apr	10-Apr	
EB-22	Change House	L	3	27-Mar	28-Mar	
EB-25	Washout Bldg	M	77	2-Apr	2-Apr	
EB-26	Elevator Machinery Bldg	L	NA	NA	Not Sampled	Slab once attached to Bldg EB-13. Could not be identified separately. Field sample incorporated into sample for EB-13 .
EA-28	Rotary Lift Pump House / Elevator Machine House	L	34	9-Apr	10-Apr	
EA-28A	Rotary Lift Pump House / Elevator Machine House	L	54	27-Mar	28-Mar	
3-51	Clock Alley	L	5	27-Mar	28-Mar	
3-51A	Gate House Annex / Load Line Office	L	55	27-Mar	28-Mar	

<sup>(1)</sup> H = High potential building, M = Medium potential building, L = Low potential building as designated in Work Plan.

### Summary of Field Activities, Load Line 4

BLDG. #	FUNCTION	Potential <sup>(1)</sup>	Sample No.	BRAC Cleared	Sampled	Comments/Notes/Remarks
G-2	Paint Storage	M	29	27-Mar	28-Mar	
G-4	Boiler House / Power House # 7	M	2	18-Mar	21-Mar	
G-5	Line Office Bldg / Line Office	L	1	18-Mar	14-Mar	
G-6	Change House	L	35	2-Apr	2-Apr	
G-6A	Change House	L	28	27-Mar	28-Mar	
G-7	Booster Service Bldg / Not In Use	L	3	21-Mar	21-Mar	
G-8	Melt Pour Bldg	H	4 to 15	21-Mar	21-Mar	
G-8VP1	Vacuum Pump Bldg / Vacuum Pump House	L	24	27-Mar	28-Mar	
G-9	T.N.T Service Bldg / Explosive Screening Receiving	H	33 to 34	27-Mar	28-Mar	
G-10	Nitrate Screening	L	39	2-Apr	2-Apr	
G-11	Ammonium Nitrate Service / Magazine	M	23	27-Mar	28-Mar	
G-12	Cooling Bldg / Explosive Cooling Bldg	M	16	21-Mar	21-Mar	
G-12A	Cooling Bldg / Explosive Cooling Bldg	M	22	27-Mar	28-Mar	
G-12VP1	Vacumn Pump Bldg / Vacuum Pump House	L	25	27-Mar	28-Mar	
G-13	Top Pour Bldg / Funnel Removal & Face Off	M	20	27-Mar	28-Mar	
G-13A	Maj Cal Pro Ldg / X-ray	M	19	27-Mar	28-Mar	
G-13VP1	Vacumn Pump Bldg / Vacuum Pump House	L	18	27-Mar	28-Mar	
G-13VP2	Vacumn Pump Bldg / Vacuum Pump House	L	30	27-Mar	28-Mar	
G-14	Booster Service	L	Not Sampled	--	--	G-14 replaced with G-13A during last period of operation.
G-15	T.N.T Service Bldg / Explosive Prep Receiving	H	31 to 32	27-Mar	28-Mar	
G-16	T.N.T Service Bldg / TNT Receiving	M	21	27-Mar	28-Mar	
G-17	Component Service Bldg / Supplementary Charges Magazine	M	26	27-Mar	28-Mar	
G-18	Paint Storage Bldg / Paint Storage	M	27	27-Mar	28-Mar	
G-19	Assembling, Packing & Shipping / Pack & Assemble	M	37	2-Apr	2-Apr	
G-19A	Shipping Building	L	38	2-Apr	2-Apr	
G-20	Time Clock Alley / Gate House	L	36	14-Apr	18-Apr	

<sup>(1)</sup> H = High potential building, M = Medium potential building, L = Low potential building as designated in Work Plan.

**APPENDIX B**  
**BRACD Quality Assurance Surveillance Forms**

## **APPENDIX B INTRODUCTION**

This appendix contains the quality assurance surveillance forms filled out by BRACD once a floor slab at a specific building is removed. Because these forms contain handwritten information, this appendix is not accessible (i.e., Section 508 compliant).

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL


Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building <u>G4</u> to grade. <u>3-17-08</u>
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	<u>3-18-08</u>
Compliance (Exceeded, Met, Partially Met)	<u>Partially Met</u>
Comments	<u>Concrete sufficiently removed &amp; stock piled to permit UAS to complete initial sampling. Area still contains chunks of concrete, wood &amp; steel.</u>
COR Signature	<u>IB Venger</u> CC: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

SHIPPED MAR 18 2008

URS

# QUALITY ASSURANCE SURVEILLANCE OF

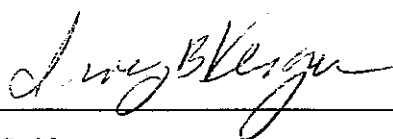
## FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building <u>G5</u> to grade. <u>3-17-08</u>
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	<u>3-18-08</u>
Compliance (Exceeded, Met, Partially Met)	<u>Partially Met</u>
Comments	<u>Concrete is sufficiently removed to permit URS to complete initial sampling. Area still contains some concrete, wood &amp; steel to be removed prior to grading.</u>
COR Signature	 CC: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

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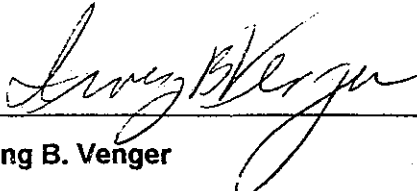


# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

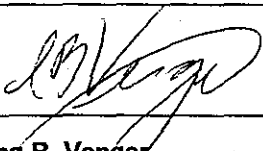
Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building <u>G4</u> to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	3-21-2008
Compliance (Exceeded, Met, Partially Met)	Partially met
Comments	<p>Major concrete is removed &amp; sized - Debris of concrete, wood &amp; steel remain for later cleanup.</p> <p>surface condition suitable for sampling</p>
COR Signature	
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

CC: MKM/PIKA & URS

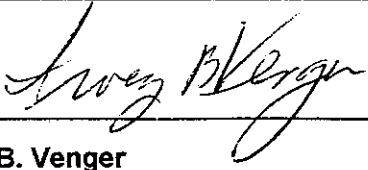
# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building <u>G7</u> to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	3-21-08
Compliance (Exceeded, Met, Partially Met)	Partially met
Comments	Major concrete is removed & sized. Debris of concrete wood & steel for later cleanup Surface condition suitable for sampling
COR Signature	 CC: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

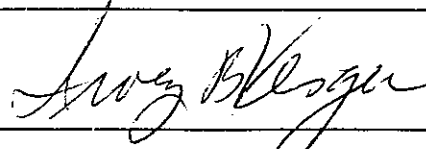
# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Buildings G7 & G8 to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	<del>Once at completion of cleanup.</del>
Date of Surveillance	<del>21-Mar-08</del>
Compliance (Exceeded, Met, Partially Met)	Partially met
Comments	Contractor has removed sufficient concrete from the area of the building footprint to allow sampling by the IRP contractor.
	Scattered pieces of concrete, rebar and wood materials remain and will require cleanup prior to approval for final grading or wait till any standing water recedes.
COR Signature	 CC: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building <u>G8</u> to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	3-21-08
Compliance (Exceeded, Met, Partially Met)	Partially met
Comments	Major concrete is removed & sized. Debris of concrete, wood, steel remain for later cleanup surface is suitable for sampling
COR Signature	 CC: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

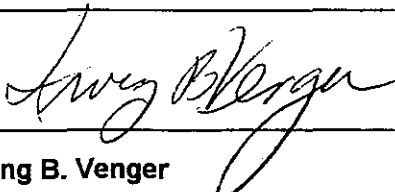
# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building <u>G/2</u> to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	3-21-08
Compliance (Exceeded, Met, Partially Met)	Partially met
Comments	Major concrete is removed and sized. Debris of concrete, wood & steel remain for later cleanup surface is suitable for sampling
COR Signature	 CC: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

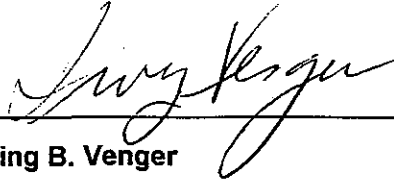


# QUALITY ASSURANCE SURVEILLANCE OF

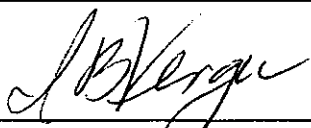
## FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building <u>G12A</u> to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	3-21-08
Compliance (Exceeded, Met, Partially Met)	Partially Met
Comments	<p>Major concrete is removed but not yet sized</p> <p>Concrete must be sized &amp; surfaces of soil leveled to remove deep ruts &amp; remaining large pieces of concrete</p> <p>→ Area is not yet ready for sampling</p>
COR Signature	 <div style="text-align: right;">CC: MKM/PIKA &amp; URS</div>
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

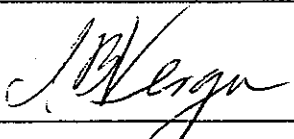
# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building <u>G/3</u> to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	3-21-08
Compliance (Exceeded, Met, Partially Met)	Partially met
Comments	Major concrete is removed & partly sized. Debris of concrete, wood & steel remains and area needs leveled for safe access.  Area not yet clear for sampling
COR Signature	 CC: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

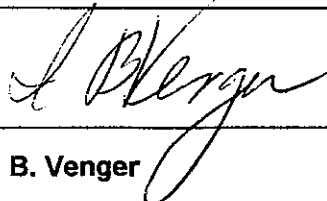
# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building <u>G13A</u> to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	3-21-08
Compliance (Exceeded, Met, Partially Met)	Partially met
Comments	Major concrete is removed and partially sized. Debris of concrete, wood & steel remain. Area requires leveling for safe access  Area not yet clear for sampling
COR Signature	 CC: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building <u>G13VP1</u> to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	3-21-08
Compliance (Exceeded, Met, Partially Met)	Partially met
Comments	Major concrete removed - minor debris remaining
	Surface is satisfactory for sampling
COR Signature	 CC: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

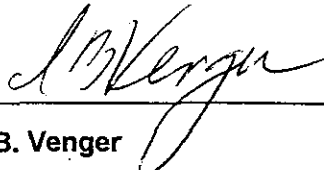
Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building <u>G15</u> to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	3-21-08
Compliance (Exceeded, Met, Partially Met)	Partially met
Comments	Major concrete removed - not yet sized
	area needs leveled for safe access.
	Not yet ready to sample
COR Signature	 CC: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR



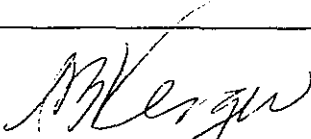
# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building <u>G17</u> to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	3-21-08
Compliance (Exceeded, Met, Partially Met)	Partly met.
Comments	Major concrete is removed but not sized. Area requires leveling for safe access
	Area not clear for sampling
COR Signature	CC: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building <u>G18</u> to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	3-21-08
Compliance (Exceeded, Met, Partially Met)	Partially Met
Comments	Major concrete removed but not sized. Debris of concrete, steel & wood remain. Area requires regrading for safe access.
	Area not clear for sampling.
COR Signature	 CC: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

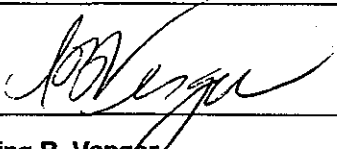
Contract Name	Demolition of Load Line 3 @ Ravenna AAP
Contract No	DAAA09-03-C-0020 CLIN 0006
Task Deliverable	Removal of Floor Slab and Foundation of Buildings EB2, EB3, EB19, EB20, EB22,3-51,3-51A, EB8, EA6A, EA28A to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	27-Mar-08
Compliance (Exceeded, Met, Partially Met)	Partially met
Comments	Contractor has removed sufficient concrete from the area of the building footprint to allow sampling by the IRP contractor.
	cleanup prior to approval for final grading
COR Signature	 CC: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Buildings G2, G6A, G8Sump G9, G11, G12A, G12VP1, G13, G13A, G13VP1, G13VP2, G15, G16, G17, G18, G8VP1 to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	27-Mar-08
Compliance (Exceeded, Met, Partially Met)	Partially met
Comments	Contractor has removed sufficient concrete from the area of the building footprint to allow sampling by the IRP contractor.
	cleanup prior to approval for final grading
	wait till water subsides.
COR Signature	
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

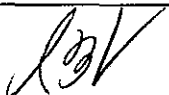
& URS

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 3 @ Ravenna AAP
Contract No	DAAA09-03-C-0020 CLIN 0006
Task Deliverable	Removal of Floor Slab and Foundation of Building _EB4, EB4A, EB4vp1 EB9, EB9A, EB10vp1, EB10vp2 EB25, EB4WN, EB4WS, EB4AWN, EB4AWS to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	2-Apr-08
Compliance (Exceeded, Met, Partially Met)	Partially Met
Comments	Buildings are satisfactory for sampling.
	Debris remains to be cleaned up and soil graded before final seeding
	EB4 & EB4A have rubble remaining on part of the building footprint.
	Sampling may not be possible in these areas until the rubble is processed and steel removed. The building footprint will then be cleared of excess rubble material. URS can partial sample or wait till all material is removed.
COR Signature	 cc: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR




# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL


Contract Name	Demolition of Load Line 3 @ Ravenna AAP		
Contract No	DAAA09-03-C-0020 CLIN 0006		
Task Deliverable	Removal of Floor Slab and Foundation of Building EB10, EB10A, EB11 & EB8A to grade.		
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.		
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.		
Frequency of Surveillance	Once at completion of cleanup		
Date of Surveillance	3-Apr-08		
Compliance (Exceeded, Met, Partially Met)	Partially Met		
Comments	Buildings are satisfactory for sampling. Debris remaining to be cleaned up and soil graded before final seeding.		
COR Signature	 4-3-08 cc: MKM/PIKA & URS		
COR Printed Name	Irving B. Venger		
Title	Industrial Specialist, COR		

# QUALITY ASSURANCE SURVEILLANCE OF

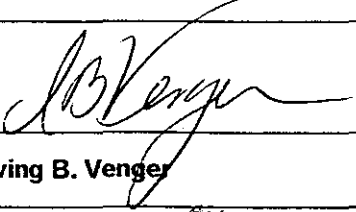
## FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 3 @ Ravenna AAP	
Contract No	DAAA09-03-C-0020 CLIN 0006	
Task Deliverable	Removal of Floor Slab and Foundation of Building EB10, EB10A, EB11 & EB8A to grade.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	3-Apr-08	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Buildings are satisfactory for sampling. Debris remains to be cleaned up and soil graded before final seeding.	
COR Signature	 4-3-08 cc: MKM/PIKA & URS	
COR Printed Name	Irving B. Venger	
Title	Industrial Specialist, COR	

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

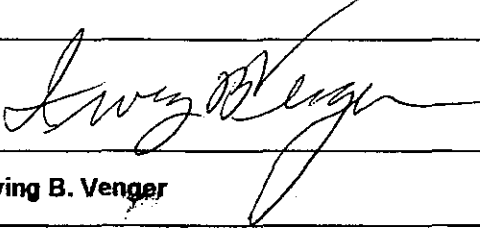
Contract Name	Demolition of Load Line 3 @ Ravenna AAP	
Contract No	DAAA09-03-C-0020 CLIN 0006	
Task Deliverable	Removal of Floor Slab and Foundation of Building EB10, EB10A, EB11 & EB8A to grade.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	3-Apr-08	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Buildings are satisfactory for sampling. Debris remains to be cleaned up and soil graded before final seeding.	
COR Signature	 4-3-08 cc: MKM/PIKA & URS	
COR Printed Name	Irving B. Venger	
Title	Industrial Specialist, COR	

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 3 @ Ravenna AAP	
Contract No	DAAA09-03-C-0020 CLIN 0006	
Task Deliverable	Removal of Floor Slab and Foundation of Building EB4Avp1 to grade.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	3-Apr-08	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Buildings are satisfactory for sampling. Debris remains to be cleaned up and soil graded before final seeding.	
	I missed this one when it was cleared.	
COR Signature		
COR Printed Name	Irving B. Venger	
Title	Industrial Specialist, COR	

cc: MKM/PIKA & URS


# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 3 @ Ravenna AAP	
Contract No	DAAA09-03-C-0020 CLIN 0006	
Task Deliverable	Removal of Floor Slab and Foundation of Building EB13, EB13A, EB13B, EA6, EA28, EA21, EA7 & EA5 to grade.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	<del>3-Apr-08</del> 9 April 2008	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Buildings are satisfactory for sampling. Debris remains to be cleaned up and soil graded before final seeding.	
COR Signature		
COR Printed Name	Irving B. Venger	
Title	Industrial Specialist, COR	

cc: MKM/PIKA & URS



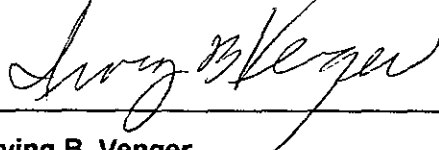
# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 2 @ Ravenna AAP	
Contract No	DAAA09-03-C-0023 CLIN 0008	
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB2 & DB20__to grade.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	4/11/08	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Gross concrete is removed sufficient to allow initial sampling by URS	
	Additional cleanup will be required prior to final grading	
COR Signature		
COR Printed Name	Irving B. Venger	
Title	Industrial Specialist, COR	

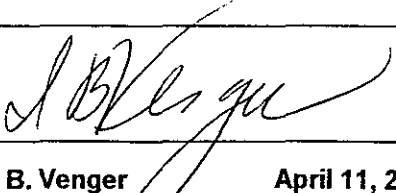
cc: MKM/PIKA & URS

April 11, 2008

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL


Contract Name	Demolition of Load Line 4 @ Ravenna AAP
Contract No	DAAA09-03-C-0024 CLIN 0007
Task Deliverable	Removal of Floor Slab and Foundation of Building __G20__ to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	11-Apr-08
Compliance (Exceeded, Met, Partially Met)	Partially met
Comments	Contractor has removed sufficient concrete from the area of the building footprint to allow sampling by the IRP contractor.
	require cleanup prior to approval for final grading
COR Signature	 <div style="text-align: right;">CC: MKM/PIKA &amp; URS</div>
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 2 @ Ravenna AAP	
Contract No	DAAA09-03-C-0023 CLIN 0008	
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB2 & DB19__ to grade.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	11-Apr-08	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Gross concrete is removed sufficient to allow initial sampling by URS	
	Additional cleanup will be required prior to final grading	
COR Signature		
COR Printed Name	Irving B. Venger April 11, 2008	
Title	Industrial Specialist, COR	

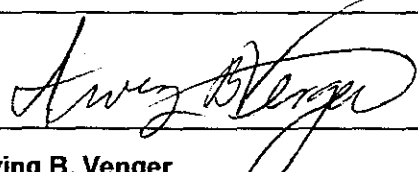
cc: MKM/PIKA & URS

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 2 @ Ravenna AAP	
Contract No	DAAA09-03-C-0023 CLIN 0008	
Task Deliverable	Removal of Floor Slab and Foundation of Buildings Dc-1to grade.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	15-Apr-08	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Gross concrete is removed sufficient to allow initial sampling by URS	
	Additional cleanup will be required prior to final grading	
COR Signature		
COR Printed Name	Irving B. Venger April 15, 2008	
Title	Industrial Specialist, COR	

cc: MKM/PIKA & URS

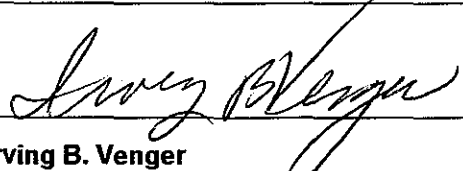
# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 2 @ Ravenna AAP	
Contract No	DAAA09-03-C-0023 CLIN 0008	
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB20, DB3, DB9A, DB4Avp1 to grade.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	16-Apr-08	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Gross concrete is removed sufficient to allow initial sampling by URS	
	Additional cleanup will be required prior to final grading	
COR Signature		
COR Printed Name	Irving B. Venger	
Title	Industrial Specialist, COR	

cc: MKM/PIKA & URS

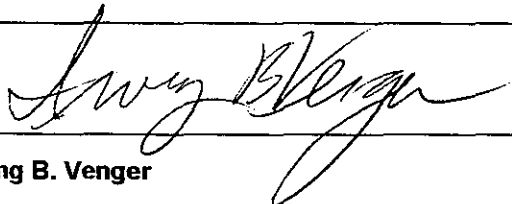
# QUALITY ASSURANCE SURVEILLANCE OF

## FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 2 @ Ravenna AAP		
Contract No	DAAA09-03-C-0023 CLIN 0008		
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB4A, DB25, DB22, 2-51 & 2-51A to grade. <i>also DB 8</i>		
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.		
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.		
Frequency of Surveillance	Once at completion of cleanup		
Date of Surveillance	17-Apr-08		
Compliance (Exceeded, Met, Partially Met)	Partially Met		
Comments	Gross concrete is removed sufficient to allow initial sampling by URS		
	Additional cleanup will be required prior to final grading		
COR Signature	 <span style="float: right;">cc: MKM/PIKA &amp; URS</span>		
COR Printed Name	Irving B. Venger		
Title	Industrial Specialist, COR		

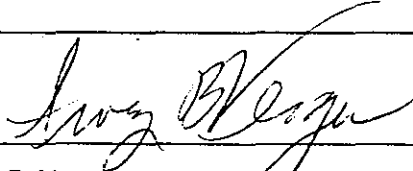


# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 2 @ Ravenna AAP	
Contract No	DAAA09-03-C-0023 CLIN 0008	
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB4A to grade.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	18-Apr-08	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Revised Disposition Gross concrete is removed sufficient to allow most initial sampling by URS. Some concrete remains on the building footprint that may block access to some sample points. This will be removed either during processing of the concrete to smaller size or during ship-out.	
	Additional cleanup will be required prior to final grading	
COR Signature		
COR Printed Name	Irving B. Venger	
Title	Industrial Specialist, COR	

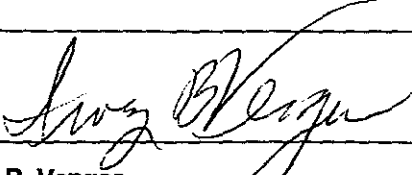
cc: MKM/PIKA & URS

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

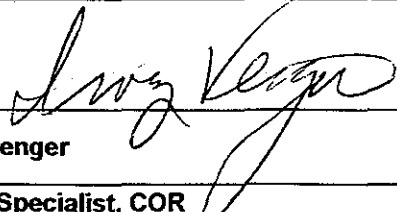
Contract Name	Demolition of Load Line 2 @ Ravenna AAP	
Contract No	DAAA09-03-C-0023 CLIN 0008	
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB4, DB10-vp1, Db10-vp2, DB11 and DB8A to grade.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	23-Apr-08	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Gross concrete is removed sufficient to allow most initial sampling by URS at all buildings. Some concrete remains on the building footprint at DB4 that may block access to some sample points. This will be removed either during processing of the concrete to smaller size or during ship-out.	
	Additional cleanup will be required prior to final grading	
COR Signature	 <span style="float: right;">cc: MKM/PIKA &amp; URS</span>	
COR Printed Name	Irving B. Venger	
Title	Industrial Specialist, COR	

# QUALITY ASSURANCE SURVEILLANCE OF

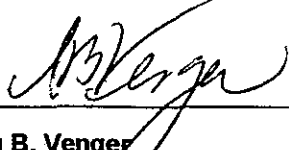
## FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 2 @ Ravenna AAP	
Contract No	DAAA09-03-C-0023 CLIN 0008	
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB4, DB10-vp1, Db10-vp2, DB11 and DB8A to grade.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	23-Apr-08	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Gross concrete is removed sufficient to allow most initial sampling by URS at all buildings. Some concrete remains on the building footprint at DB4 that may block access to some sample points. This will be removed either during processing of the concrete to smaller size or during ship-out.	
	Additional cleanup will be required prior to final grading	
COR Signature	 <span style="float: right;">cc: MKM/PIKA &amp; URS</span>	
COR Printed Name	Irving B. Venger	
Title	Industrial Specialist, COR	

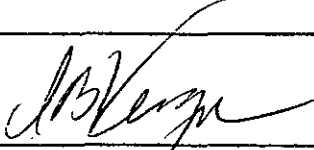
# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 2 @ Ravenna AAP
Contract No	DAAA09-03-C-0023 CLIN 0008
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB26 & DB29 to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	24-Apr-08
Compliance (Exceeded, Met, Partially Met)	Partially Met
Comments	Gross concrete is removed sufficient to allow most initial sampling by URS at this building. The entire building is not available for sampling because the walls of a large basement area have been collapsed and the basement floor remains undamaged. The scope addresses removal of above ground slabs and foundations to grade and this has been done. The remainder of the building
	Additional cleanup will be required prior to final grading
COR Signature	 <span style="float: right;">cc: MKM/PIKA &amp; URS</span>
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

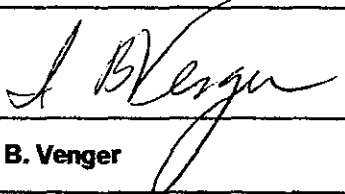
Contract Name	Demolition of Load Line 2 @ Ravenna AAP	
Contract No	DAAA09-03-C-0023 CLIN 0008	
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB13, DB13A,DB13B to grade.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	24-Apr-08	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Gross concrete is removed sufficient to allow most initial sampling by URS at all buildings.	
	Additional cleanup will be required prior to final grading	
COR Signature	 <span style="float: right;">cc: MKM/PIKA &amp; URS</span>	
COR Printed Name	Irving B. Venger	
Title	Industrial Specialist, COR	

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

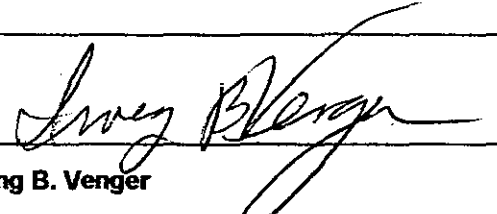
Contract Name	Demolition of Load Line 2 @ Ravenna AAP
Contract No	DAAA09-03-C-0023 CLIN 0008
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB27 & 27A to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	30-Apr-08
Compliance (Exceeded, Met, Partially Met)	Partially Met
Comments	Gross concrete is removed sufficient to allow access sampling by URS at this building. The entire building may not be available for sampling because of rough soil conditions due to lack of grading.
	Additional cleanup will be required prior to final grading
COR Signature	 cc: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR



# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

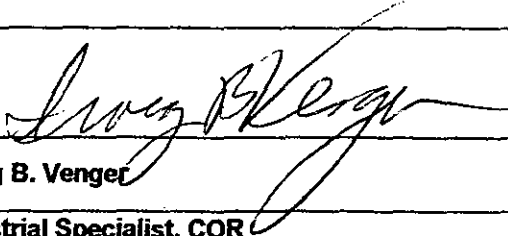
Contract Name	Demolition of Load Line 2 @ Ravenna AAP
Contract No	DAAA09-03-C-0023 CLIN 0008
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB27C, DA7 & DA21 to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	7-May-08
Compliance (Exceeded, Met, Partially Met)	Partially Met
Comments	Gross concrete is removed sufficient to allow access sampling by URS at this building. The entire building may not be available for sampling because of rough soil conditions due to lack of grading.
	Additional cleanup will be required prior to final grading
COR Signature	 cc: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

# QUALITY ASSURANCE SURVEILLANCE OF FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 2 @ Ravenna AAP	
Contract No	DAAA09-03-C-0023 CLIN 0008	
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB4A to grade. Also DB4AWN & DB4AWS were removed but not added to this report when originally issued.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	4/18/2008 Revised 5-8-08	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Revised Disposition Gross concrete is removed sufficient to allow most initial sampling by URS. Some concrete remains on the building footprint that may block access to some sample points. This will be removed either during processing of the concrete to smaller size or during ship-out.	
	Additional cleanup will be required prior to final grading	
COR Signature	 <span style="float: right;">cc: MKM/PIKA &amp; URS</span>	
COR Printed Name	Irving B. Venger	
Title	Industrial Specialist, COR	

# QUALITY ASSURANCE SURVEILLANCE OF

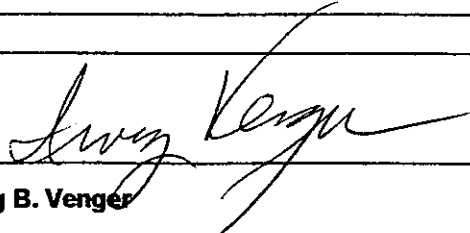
## FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 2 @ Ravenna AAP	
Contract No	DAAA09-03-C-0023 CLIN 0008	
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB4, DB10-vp1, Db10-vp2, DB11, DB9 and DB8A to grade. Also DB4WN, DB4WS & DB4VP1 were removed but not added to this report when originally issued.	
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.	
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.	
Frequency of Surveillance	Once at completion of cleanup	
Date of Surveillance	4/23/2008 Revised 5-8-08	
Compliance (Exceeded, Met, Partially Met)	Partially Met	
Comments	Gross concrete is removed sufficient to allow most initial sampling by URS at all buildings. Some concrete remains on the building footprint at DB4 that may block access to some sample points. This will be removed either during processing of the concrete to smaller size or during ship-out.	
	Additional cleanup will be required prior to final grading	
COR Signature		
COR Printed Name	Irving B. Venger	
Title	Industrial Specialist, COR	

cc: MKM/PIKA & URS

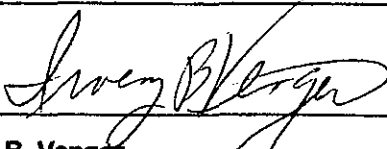
# QUALITY ASSURANCE SURVEILLANCE OF

## FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 2 @ Ravenna AAP
Contract No	DAAA09-03-C-0023 CLIN 0008
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DB27, 27A & 27B to grade. Building 27B was inadvertently not included with this report when originally issued.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	4/30/2008 Revised 5-8-08
Compliance (Exceeded, Met, Partially Met)	Partially Met
Comments	Gross concrete is removed sufficient to allow access sampling by URS at this building. The entire building may not be available for sampling because of rough soil conditions due to lack of grading.
	Additional cleanup will be required prior to final grading
COR Signature	 cc: MKM/PIKA & URS
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

# QUALITY ASSURANCE SURVEILLANCE OF

## FLOOR SLAB & FOUNDATION REMOVAL

Contract Name	Demolition of Load Line 2 @ Ravenna AAP
Contract No	DAAA09-03-C-0023 CLIN 0008
Task Deliverable	Removal of Floor Slab and Foundation of Buildings DA6, DA28, DA28A, DA5, DB10 & DB802 to grade.
Acceptable Quality Level	No remaining concrete sufficiently large that it would impede mowing with a field mower. All miscellaneous trash such as coffee cups, water bottles and paper are removed from the area. Record depth and location of any foundations not completely removed.
Method of Surveillance	COR walk through visual inspection with contractor Project Manager or its representative.
Frequency of Surveillance	Once at completion of cleanup
Date of Surveillance	5/8/2008 Revised to include DB10 (recently completed)
Compliance (Exceeded, Met, Partially Met)	Partially Met
Comments	Gross concrete is removed sufficient to allow access sampling by URS at this building. The entire building footprint may not be available for sampling because of rough soil conditions due to lack of grading.
	Additional cleanup will be required prior to final grading
COR Signature	 <div style="text-align: right;">cc: MKM/PIKA &amp; URS</div>
COR Printed Name	Irving B. Venger
Title	Industrial Specialist, COR

**APPENDIX C**  
**Field Sampling Reports**



## **INTRODUCTION TO APPENDIX C FIELD SAMPLING REPORT FORMS**

This appendix contains the field sampling reports that are completed in the field during sampling activities. There is a field sampling report for each sampling location at the three load lines. Because these forms contain handwritten information, this appendix is not accessible (i.e., Section 508 compliant).

In general, these forms are completed (or “logged”) by the field crew member assigned to observe and record the sampling activities, not necessarily the sampling crew member actually pulling the sample or coring at a given location. For the most samples, Xavier Sotelo acted as the sample logger. Logging was also done by:

Stan Levenger  
Tom George  
Jeffrey Berk  
Brenda Pratt

As an efficiency, two sampling crews were utilized simultaneously to collect the screening samples. The crews remained within very close proximity to each other, enabling them to use a single data recording member to complete the sample forms for both teams with consistency. Therefore, similar sample times (within a few minutes) have been recorded on the sample forms.

Once the sampling form was completed by the logger, another crew member (usually the Technical Project Manager, Stan Levenger) reviewed the form for completeness and accuracy. Other crew members that reviewed the forms included:

Mike Shoop  
Jeffrey Berk  
Jennifer Shepard  
Jo Ann Bartsch

A final Quality Control check of all information, include a comparison to field notes, was done at the request of the regulators after the field investigation was completed. This QC review was done by Jennifer Shepard and Jo Ann Bartsch.

The staff mentioned above also participated in the actual collection of the samples.

Location ID: LL4G13VA-SS-175N-0001-50 Field Sampling Report RYAAP Sub-Slab Sample and Removal, Rayenna, OH

Date: 21 Mar 08 Possible stained soil screen outside bldg footprint

### Sampling Information

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

Sample Collection: 1540 hrs 21 Mar 08 Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
IFMI, # of increments taken: 00700.5 Estimated - Measured - Surveyed  
Sample Depth: 0.0 FT (below surface) Decon: Dedicated - Each Day - Each Location X 10/21/00

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters			
PID / FID Readings: Background: <u>60</u> ppm	VOC				Corrosivity			
	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	X	TNT/ROX		Ignitability			
Water Level FT	Metals (Selected)							
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.								

### Sample Description

Dark brown clayey silt with sand, wet, dark red stain,

sampled outside footprint to verify potential visual impact. Does not represent bldg.

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: Stan Burgess (Please Print)

Signature: Stan Burgess

Reviewed by: Jennifer Shepard (Please Print)

Signature: Jennifer Shepard Date: 10/27/08

QC Jada 11/11/08



Location ID: LL4G8-SB-005 SN-0001-50 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/21/08

### 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	
Miscellaneous	Well Purging Form Yes - No		JMC JS 10/21/08	

Sample Collection: 1530 hrs Sample Type: Composite - MI - Grab JS 10/21/08 Location: Plotted on Map - Staked in Field  
 Sample Depth: 0-4 FT (below surface) Decon: Dedicated - Each Day Each Location Estimated - Measured - Surveyed

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

**Sample Description**  
Soft, moist, brown SAND w/ demolition debris  
 JS 10/21/08

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: Javier Sotol (Please Print)  
 Signature: Javier Sotol

Reviewed by: Mike Sharp (Please Print)  
 Signature: Mike Sharp Date: 4-2-08

OC JS 10/21/08

# Field Sampling Report

Location ID: LL4G8-SB-006 SN-0001-50 *js 10/27/08*

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/21/08

## Sampling Information

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

Sample Collection: 1550 hrs Sample Type: Composite - MI - Grab *js 10/27/08* Location: Plotted on Map - Staked in Field  
 Sample Depth: 0-4 FT (below surface) Decon: Dedicated Each Day - Each Location  
 Estimated - Measured - Surveyed

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

Sample Description 0-36" Brown Sand 36"-48" Brown 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: Xavier Sotelo (Please Print) Reviewed by: Mike Sharp (Please Print)  
 Signature: Xavier Sotelo Signature: Mike Sharp Date: 4-2-08

*QC js 10/27/08*

# Field Sampling Report

Location ID: LL4 G8-SB-0075N-0001-60

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/21/08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1 & 15 hrs  
 Sample Type: Composite - MI - Grab  
 If MI, # of increments taken: 1  
 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)	Analytical Parameters			Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC			Corrosivity
	SVOC			Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	<u>✓</u>	<u>TNT/RDX</u>	Ignitability
Water Level: FT	Metals (Selected)			
Temperature: °C	Perchlorate			
Sp. Conductance: uMHOs	PCBs			QA Samples
pH: units	Nitrate / Nitrite			MS/MSD
Dissolved Oxygen: Mg / L	TPH DRO / HRO			Yes / No
Redox Potential: mV	Propellants			NA
Turbidity: N.T.U.				Duplicate ID
				Equipment Rinse ID
				Trip Blank ID

Sample Description  
soft, moist, brn SAND, w/ demo debris  
js 10/27/08

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Mike Shoop (Please Print)

Signature: Mike Shoop Date: 4-2-08

LL4 G8-SB-0075N-0001-60  
11/11/08

Location ID: LLH G8-SB-0085N-1001-50 *JS 10/27/08* **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/21/08

### 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 <input checked="" type="checkbox"/>
Type/Construction			Mattocks	
Miscellaneous	Well Purging Form Yes - No		<i>JMC JS 10/27/08</i>	

Sample Collection: 1630 hrs

Sample Type: Composite - MI - Grab *JS 10/27/08*  
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)	Analytical Parameters				Other Parameters
PID / FID Readings:	VOC				Corrosivity
Background: <u>0-0</u> ppm	SVOC				Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	<u>✓</u>	<u>TNT / RDX</u>		Ignitability
Water Level	Metals (Selected)				
Temperature	Perchlorate				
Sp. Conductance:	PCBs				QA Samples
pH	Nitrate / Nitrite				MS/MSD
Dissolved Oxygen	TPH DRO / HRO				Yes / No
Redox Potential	Propellants				NA
Turbidity					Duplicate ID
					Equipment Rinse ID
					Trip Blank ID
					NA

### Sample Description

Brown SAND some 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: Xavier Sotelo (Please Print)

Reviewed by: Mike Skoop (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 4-2-08

*QC JS 10/27/08*



Location ID: LL4G8-SB-009 SN-0001-50 *js wpr/b*

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/21/08

### 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	
Miscellaneous	Well Purgin Form Yes - No		<i>JMC</i> <i>js 10/27/08</i>	

Sample Collection: 1675 hrs *js 10/27/08* Sample Type: Composite - MI - Grab *js 10/27/08* Location: Plotted on Map - Staked in Field  
 Sample Depth: 0-4 FT (below surface) If MI, # of increments taken: 1 Estimated - Measured - Surveyed  
 Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters															
PID / FID Readings:	VOC				Corrosivity															
Background: <u>0-0</u> ppm	SVOC				Reactivity Sulfide/Cyanide															
Sample: ppm	Explosives (Selected)	<u>✓</u>	<u>TNT/RDX</u>		Ignitability															
Water Level FT	Metals (Selected)				<b>QA Samples</b> <table border="1"> <tr> <td>MS/MSD</td> <td>Yes / No</td> <td>NA</td> </tr> <tr> <td>Duplicate ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Equipment Rinse ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Trip Blank ID</td> <td></td> <td>NA</td> </tr> </table>				MS/MSD	Yes / No	NA	Duplicate ID		NA	Equipment Rinse ID		NA	Trip Blank ID		NA
MS/MSD	Yes / No	NA																		
Duplicate ID		NA																		
Equipment Rinse ID		NA																		
Trip Blank ID		NA																		
Temperature °C	Perchlorate																			
Sp. Conductance: uMHOs	PCBs																			
pH units	Nitrate / Nitrite																			
Dissolved Oxygen Mg / L	TPH DRO / HRO																			
Redox Potential mV	Propellants																			
Turbidity N.T.U.																				

**Sample Description**  
Loose, moist, brown gravel

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**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: \_\_\_\_\_

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QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks  
 Parameters: Same as Above - As Listed

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Logged By: Xavier Setelo (Please Print)  
 Signature: Vin S

Reviewed by: M. Ke Shoop (Please Print)  
 Signature: [Signature] Date: 4-7-08

*QC js 10/27/08*

## Field Sampling Report

Location ID: LL468-SB-010 SN

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/21/08

## 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	
Miscellaneous	Well Purging Form Yes - No		JMC JS 10/27/08	

Sample Collection: 1705 hrsSample Type: Composite - MI - Grab JS 10/27/08Location: Plotted on Map - Staked in FieldSample Depth: 0-4 FT (below surface)Decon: Dedicated Each Day Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters			
PID / FID Readings:	VOC				Corrosivity			
Background: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	<u>✓</u>	<u>TNT/RDX</u>		Ignitability			
Water Level FT	Metals (Selected)							
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.								

## Sample Description

gray clay mottled brown

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 ListedLogged By: Xavier Sobelo (Please Print)Reviewed by: Mike Shoop (Please Print)Signature: Xavier SobeloSignature: Mike Shoop Date: 4-2-08QC JS 10/27/08

## Field Sampling Report

Date: 21 Mar 08

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	#	Plastic Liner	X
Type/Construction					Mattocks		K 16/2/08	
Miscellaneous	Well Purging Form Yes - No				JMC			

Sample Collection: 1720 hrs  
0.0, 1.0, 2.0, 3.0, 4.0  
Sample Depth: FT (below surface)

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

Decon: Dedicated - Each Day - Each Location

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

Field Parameters (at time of sample)		Analytical Parameters				Other Parameters			
PID / FID Readings:		VOC				Corrosivity			
Background:	ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	ppm	Explosives (Selected)				Ignitability			
Water Level	FT	Metals (Selected)							
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.	TNT/PCX	X						

Sample Description	Split Sample
sand/gravel 0.0 to 0.2 Powert wet rot plast, no stain / odor	Split Sample ID: _____
silty clay, 4 to 6, 1.0 to 4.0, no odor / stain, mod plast, mod snt	Name: _____
2.5 recovery	Agency/Company: _____
Soil sample description should include: Munsell Color Odor Staining Texture Sorting Plasticity Moisture	Address: _____
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: Stan Brown (Please Print)

Signature: [Signature]

Reviewed by: M. Lee Shaw (Please Print)

Signature: Shirley E. [Signature] Date: \_\_\_\_\_

QC JS 10/27/00

Location ID: LL 468-SB-0125N-0001-50

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/21/08

js 10/27/08

## 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	
Miscellaneous	Well Purging Form Yes - No		js 10/27/08 JMC	

Sample Collection: 1835 hrsSample Type: Composite - MI - Grab js 10/27/08Location: Plotted on Map - Staked in Field  
Estimated - Measured - SurveyedSample 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: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓</u> <u>TNT/ROX</u>	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

## Sample Description

Loose brown 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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: Mike Shoop (Please Print)Signature: [Signature]Signature: [Signature] Date: 4-2-08

QC js 10/27/08

# Field Sampling Report

Location ID: LL468-SB-013 SN-6001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/21/08

## 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	
Miscellaneous	Well Purging Form Yes - No		JMC	

Sample Collection: 1725 hrs

Sample Type: Composite - MI - Grab

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)	Analytical Parameters			Other Parameters
PID / FID Readings:	VOC			Corrosivity
Background: <u>0-0</u> ppm	SVOC			Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/> TNT/RDX		Ignitability
Water Level	Metals (Selected)			
Temperature	Perchlorate			
Sp. Conductance: uMHOs	PCBs			QA Samples
pH	Nitrate / Nitrite			MS/MSD
Dissolved Oxygen	TPH DRO / HRO			Yes / No
Redox Potential	Propellants			NA
Turbidity				Duplicate ID
				Equipment Rinse ID
				Trip Blank ID
				NA

## Sample Description

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: Vaughn Sothel (Please Print)

Reviewed by: M. Ke Shoop (Please Print)

Signature: Vaughn Sothel

Signature: Michael Shoop Date: 4-2-08

at field 11/11/08

# Field Sampling Report

Location ID: LL4G8-SB-018 <sup>4</sup> SM-6001-SQ 10/27/08  
11/6/08

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/2/08

## 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 <input checked="" type="checkbox"/>
Type/Construction			Mattocks	<u>JS 10/27/08</u>
Miscellaneous	Well Purging Form Yes - No			<u>JMC</u>

Sample Collection: 1900 hrs

Sample Type: Composite - MI - Grab JS 10/27/08  
 If MI, # of increments taken:

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

Sample Depth: 0.4 JS 10/27/08  
 FT (below surface)

Decon: Dedicated - Each Day - Each Location

### Field Parameters (at time of sample)

### Analytical Parameters

### Other Parameters

PID / FID Readings: Background: <u>0.0</u> ppm	VOC				Corrosivity			
	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	<u>TNT/ROX</u>		Ignitability			
Water Level	FT	Metals (Selected)						
Temperature	°C	Perchlorate						
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.							

### Sample Description

brn sandy 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: Xavier S. Wells (Please Print)

Signature: Xavier S. Wells

Reviewed by: Mike Shoop (Please Print)

Signature: Michael Shoop Date: 4-2-08

QC JS 10/27/08

Location ID: 11468-SB-015-SN-0001-50 **Field Sampling Report** RVAAP Sub-Slab Sample and Removal, Ravenna, OH  
Date: 21 March

Sampling Information							
Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge		
Method	Bailer		Sample Bottle		Scoop		Trowel
	Pump		Bacon Bomb		Bowl		Hand Auger
					Push Probe	<input checked="" type="checkbox"/>	Plastic Liner <input checked="" type="checkbox"/>
Type/Construction					Mattocks		<u>16/27/00</u>
Miscellaneous	Well Purging Form Yes - No <input checked="" type="checkbox"/>				JMC		

Sample Collection: 1825 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
Sample Depth: 0-0.10, 1.0, 3.0, 4.0 FT (below surface) If MI, # of increments taken: 5 Estimated - Measured - Surveyed  
Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters			
PID / FID Readings:	VOC				Corrosivity			
Background: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)				Ignitability			
Water Level FT	Metals (Selected)							
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.	<u>TNT/ROX</u>	<u>N</u>						

Sample Description	Split Sample
<u>0-0 to 1.5 Snd &amp; gravel, wet, powert, not plast, no odor / stain</u> <u>1.5 to 4.0 silty clay, Lfbr, mod sand, mod plast,</u> <u>3.0' heavy</u>	Split Sample ID: Name: Agency/Company: Address: QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks Parameters: Same as Above - As Listed

Soil sample description should include: Munsell Color Odor Staining Texture Sorting Plasticity Moisture  
Water sample description should include: Color Odor Sheen Turbidity  
Logged By: John Green (Please Print) Reviewed by: M. Ke Shoop (Please Print)  
Signature: John Green Signature: Michael Shoop Date: 4-2-08

DL JG 10/27/00



Location ID: 114612-SS-016-0001-50

## Field Sampling Report

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 21 Nov 07

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe
Type/Construction			Mattocks
Miscellaneous	Well Purgin Form Yes - No		

Sample Collection: 1458 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-0 to 1.0 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: <u>js 10/27/08</u> ppm	Explosives (Selected)	Ignitability
Water Level	Metals (Selected)	
Temperature	Perchlorate	
Sp. Conductance: <u>uMHOs</u>	PCBs	QA Samples
pH	Nitrate / Nitrite	MS/MSD
Dissolved Oxygen	TPH DRO / HRO	Yes / No
Redox Potential	Propellants	Duplicate ID
Turbidity	<u>TNT/CAP</u> X	Equipment Rinse ID
		Trip Blank ID

## Sample Description

Mid bn sand & gravel, poor sort, no plast,  
Mst, No odor / stain

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 ListedLogged By: Stam Davis (Please Print)Reviewed by: Mike Shopp (Please Print)

Signature: \_\_\_\_\_

Signature: Michael Shopp Date: 4-2-08

QO js 10/27/08

# Field Sampling Report

Location ID: 11467-SS-003SN-0001-S0

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 21 Mar 08

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe
Type/Construction			Mattocks
Miscellaneous	Well Parging Form Yes - No		

Sample Collection: 1435 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 Sample Depth: 00 to 1.0 FT (below surface) If MI, # of increments taken: 1 Estimated - Measured - Surveyed  
 Decon: Dedicated - Each Day - Each Location

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

## Sample Description

Med bn silty clay, no odor, no stain, mod  
sort, mod plast, wet

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: Stanley (Please Print)

Signature: [Signature]

Reviewed by: M. Ke S... (Please Print)

Signature: [Signature] Date: 4-2-08

QC JS 10/27/08

Location ID: 6-4464-55-0025N-0001-50 **Field Sampling Report**

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 2/1/08

### 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			
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1720 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 If MI, # of increments taken: \_\_\_\_\_ Estimated - Measured - Surveyed  
 Sample Depth: 00 to 10 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:	<u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	ppm	Explosives (Selected)				Ignitability			
Water Level	FT	Metals (Selected)				QA Samples			
Temperature	°C	Perchlorate							
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.	<u>TNT/RDX</u>	X						

Sample Description	Split Sample
<u>4th silty clay, no odor, no stain, Mod soil</u> <u>mod plast, MS+ MI</u>	Split Sample ID: _____
	Name: _____
	Agency/Company: _____
	Address: _____
	_____
	_____
Soil sample description should include: Munsell Color Odor Staining Texture Sorting Plasticity Moisture	QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks Parameters: Same as Above - As Listed
Water sample description should include: Color Odor Sheen Turbidity	_____
	_____
	_____

Logged By: Stan Perry (Please Print)  
 Signature: Stan Perry

Reviewed by: M. Ke Sharp (Please Print)  
 Signature: Michael Sharp Date: 4-2-08

QC js 10/27/08

Location ID: 113 351A -0555N-001-50 **Field Sampling Report**

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 28 Mar 08

### Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge	
Method	Bailer	Sample Bottle	Scoop	Trowel
	Pump	Bacon Bomb	Bowl	Hand Auger
			Push Probe	<input checked="" type="checkbox"/> Plastic Liner
Type/Construction			Mattocks	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1055 hrs **Sample Type:** Composite - MI Grab **Location:** Plotted on Map - Staked in Field  
 Sample Depth: 00-10 FT (below surface) **Decon:** Dedicated - Each Day Each Location  
 If MI, # of increments taken: \_\_\_\_\_ Estimated - Measured - Surveyed

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

**Sample Description**

Dark silty clay, wet, well/sat,  
plast, No odor/Stain

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: Stan Livers (Please Print) Reviewed by: Jeff Berh (Please Print)  
 Signature: Stan Livers Signature: Jeff Berh Date: 4/2/08

OC J8 10/27/08

Location ID: LL33-SL-0051V-001-10

## Field Sampling Report

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 28 Mar 08

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe
Type/Construction			Mattocks
Miscellaneous	Well Purging Form Yes / No		

Sample Collection: 100 hrs 20 to 1.0 FT (below surface) Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
If MI, # of increments taken: 2 Estimated - Measured Surveyed  
Sample Depth: 20 to 1.0 FT (below surface) Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0-0</u> ppm	VOC	Corrosivity
Sample: ppm	SVOC	Reactivity Sulfide/Cyanide
Water Level: FT	Explosives (Selected)	Ignitability
Temperature: °C	Metals (Selected)	
Sp. Conductance: uMHOs	Perchlorate	
pH: units	PCBs	QA Samples
Dissolved Oxygen: Mg / L	Nitrate / Nitrite	MS/MSD Yes / No NA
Redox Potential: mV	TPH DRO / HRO	Duplicate ID NA
Turbidity: N.T.U.	Propellants	Equipment Rinse ID NA
	<u>TNT/RDX</u> <u>1</u>	Trip Blank ID NA

## Sample Description

4th Silty sand 0.0 to 0.3  
Wet  
4th Silty clay 0.3 to 1.0  
Sat, well sort, mod plast, No stain/odor

## 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 ListedLogged By: Sam Lopez (Please Print)Signature: Sam LopezReviewed by: Jeff Berk (Please Print)Signature: Jeff Berk Date: 4-2-08

OC JS 10/26/08

# Field Sampling Report

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Location ID: 113EB-8-SS-004-0001-50

Date: 28 Mar 08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1916 hrs 1916 Sample Type: Composite - MI - Grab  
 If MI, # of increments taken: 2  
 Location: Plotted on Map - Staked in Field  
 Estimated - Measured - Surveyed  
 Sample Depth: 0.0 to 1.0 FT (below surface) Decon: Dedicated - Each Day - Each Location

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

## Sample Description

14 in silty sand 0.0 to 0.3, wet  
14 in silty clay 0.3 to 1.0  
mod plast, well sort, no odor/stain, wet

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: Stan Brown (Please Print)

Signature: Stan Brown

Reviewed by: Jeffrey Reih

Signature: Jeffrey Reih

Date: 4-2-08

QC - JS 10/27/08

# Field Sampling Report

Location ID: 113EB-19-SS-0015N-001-50

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 28 Mar 08

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe
Type/Construction			Mattocks
Miscellaneous	Well Pugging Form Yes - No		

Sample Collection: 1905 hrs  
 Sample Depth: 0.0 to 1.0 FT (below surface)  
 Sample Type: Composite - MI - Grab  
 If MI, # of increments taken: 2  
 Decon: Dedicated - Each Day - Each Location  
 Location: Plotted on Map - Staked in Field  
 Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0-0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	Ignitability
Water Level: FT	Metals (Selected)	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH: units	Nitrate / Nitrite	MS/MSD
Dissolved Oxygen: Mg / L	TPH DRO / HRO	Duplicate ID
Redox Potential: mV	Propellants	Equipment Rinse ID
Turbidity: N.T.U.	<u>TNT/ROX</u> X	Trip Blank ID

## Sample Description

1/2 in silty sand, no odor/stain, no plastic, not wet, wet

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: Stan Leung (Please Print)

Signature: Stan Leung

Reviewed by: Jeff Berk (Please Print)

Signature: Jeff Berk Date: 4-2-08

QC - JS 10/27/08



Location ID: 113EB-2-SS-002SN-001-50 **Field Sampling Report**

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 28 Mar 08

**Sampling Information**

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

Sample Collection: 1855 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 Sample Depth: 0040.01 FT (below surface) If MI, # of increments taken: 2 Estimated - Measured - Surveyed  
 Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.2</u> ppm	VOC	Corrosivity
Sample: ppm	SVOC	Reactivity Sulfide/Cyanide
Water Level FT	Explosives (Selected)	Ignitability
Temperature °C	Metals (Selected)	
Sp. Conductance: uMHOs	Perchlorate	QA Samples
pH units	PCBs	MS/MSD Yes / No NA
Dissolved Oxygen Mg / L	Nitrate / Nitrite	Duplicate ID NA
Redox Potential mV	TPH DRO / HRO	Equipment Rinse ID NA
Turbidity N.T.U.	Propellants	Trip Blank ID NA
	<u>TNT/EDX</u> <u>X</u>	

**Sample Description**

Light silty sand, Moist wet, not plast,  
Mod soil, No steam / odor

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: Stan Livingston (Please Print)

Signature: Stan Livingston

Reviewed by: Jeff Berk (Please Print)

Signature: J/Berk Date: 4-2-08

QC - js 10/27/08

Location ID: 43FB-3-SS-078SV-0001-SS **Field Sampling Report**

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 28 Mar 08

## Sampling Information

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

Sample Collection: 1845 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 0.5 to 1.0 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0-0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	Ignitability
Water Level: FT	Metals (Selected)	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH: units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen: Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential: mV	Propellants	Equipment Rinse ID NA
Turbidity: N.T.U.	<u>TNT / RDX</u> X	Trip Blank ID NA

## Sample Description

14 in silty sand, Mt. Wood / Stam, 10 ft plastic

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 ListedLogged By: Stan Lavery (Please Print)Reviewed by: Jeff Berh (Please Print)Signature: Stan LaverySignature: Jeff Berh Date: 4-2-08

OC - JS 10/27/08

Location ID: LLH G11-SS-023SN-0001-80 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

### 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1.0 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field  
Estimated - Measured - 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: <u>0.1</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	Ignitability
Water Level: FT	Metals (Selected) <u>✓</u> <u>TNT/EX</u>	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH: units	Nitrate / Nitrite	
Dissolved Oxygen: Mg / L	TPH DRO / HRO	
Redox Potential: mV	Propellants	
Turbidity: N.T.U.		

**Sample Description**  
BRN SANDY GRAVEL

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**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: \_\_\_\_\_

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**QA/QC Provided:** MS/MSD - Duplicate - Trip Blanks - Field Blanks  
**Parameters:** Same as Above - As Listed

Logged By: Kurt Satch (Please Print)

Reviewed by: Jeff Berk (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 4-2-08

QC - J8 10/27/08

Location ID: LL459-SB-34EN-0001-50 *Jo 10/27/08* **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 5/28/08

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe
Type/Construction			Mattocks
Miscellaneous	Well Purging Form Yes - No		Plastic Liner <input checked="" type="checkbox"/>

Sample Collection: 1000 hrsSample Type: Composite - MI - Grab *Jo 10/27/08*  
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)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0.2</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>- TNT/RDX</u>	Ignitability
Water Level: FT	Metals (Selected)	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH: units	Nitrate / Nitrite	
Dissolved Oxygen: Mg / L	TPH DRO / HRO	
Redox Potential: mV	Propellants	
Turbidity: N.T.U.		

## Sample Description

moist, brn sandy gravel  
clay @ 44-48"

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 ListedLogged By: Xavier Soto (Please Print)Reviewed by: Jeff Berk (Please Print)Signature: [Signature]Signature: [Signature] Date: 4-2-08

OC - Jo 10/27/08

# Field Sampling Report

Location ID: LL469-2B-033SN-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/25/08

js 10/27/00

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 10/10 hrs

Sample Type: Composite - MI - Grab

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)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0.2</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓ TAT/ROX</u>	Ignitability
Water Level: FT	Metals (Selected)	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH: units	Nitrate / Nitrite	MS/MSD: Yes / No <u>NA</u>
Dissolved Oxygen: Mg/L	TPH DRO / HRO	Duplicate ID: <u>NA</u>
Redox Potential: mV	Propellants	Equipment Rinse ID: <u>NA</u>
Turbidity: N.T.U.		Trip Blank ID: <u>NA</u>

### Sample Description

moist, brown sandy gravel  
in clay @ 30-40"

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Jeff Berh (Please Print)

Signature: Jeff Berh Date: 4-2-08

QC - js 10/27/00

Location ID: LL4 018-SS-027SN-0001-52 Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

### Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge	
Method	Bailer	Sample Bottle	Scoop	Trowel
	Pump	Bacon Bomb	Bowl	Hand Auger
			Push Probe	<input checked="" type="checkbox"/> Plastic Liner
Type/Construction			Mattocks	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1/40 hrs M 160000 Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 If MI, # of increments taken: 0.0/0.0 Estimated - Measured - Surveyed  
 Sample Depth: 1.0 FT (below surface) Decon: Dedicated - Each Day Each Location

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: <u>ppm</u>	Explosives (Selected) <input checked="" type="checkbox"/> <u>TNT/RDX</u>	Ignitability
Water Level <u>FT</u>	Metals (Selected)	
Temperature <u>°C</u>	Perchlorate	
Sp. Conductance: <u>umhos</u>	PCBs	QA Samples
pH <u>units</u>	Nitrate / Nitrite	MS/MSD Yes / No <u>NA</u>
Dissolved Oxygen <u>Mg/L</u>	TPH DRO / HRO	Duplicate ID <u>NA</u>
Redox Potential <u>mV</u>	Propellants	Equipment Rinse ID <u>NA</u>
Turbidity <u>N.T.U.</u>		Trip Blank ID <u>NA</u>

Sample Description  
Wet, Brown Sand w/ clump debris JS 10/27/08

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample ID: \_\_\_\_\_

Name: \_\_\_\_\_

Agency/Company: \_\_\_\_\_

Address: \_\_\_\_\_

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks  
 Parameters: Same as Above - As Listed

Logged By: XAVIER SATELO (Please Print)  
 Signature: Xin Sate

Reviewed by: Jeff Berk (Please Print)  
 Signature: Jeff Berk Date: 4-2-08

QC - JS 10/27/08

Location ID: LL4G17-SS-026 SN-0001-S0
 Field Sampling Report
 RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

Sampling Information			
Source	Groundwater / Product		Surface Water
Method	Bailer		Sample Bottle
	Pump		Bacon Bomb
			Push Probe
Type/Construction			Mattocks
Miscellaneous	Well Purging Form Yes - No		

Sample Collection: 1150 hrs
 Sample Type: Composite - MI - Grab
 Location: Plotted on Map - Staked in Field

Sample Depth: 0.0 to 1.0 FT (below surface)
 If MI, # of increments taken: \_\_\_\_\_
 Estimated - Measured - Surveyed

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: _____ ppm	Explosives (Selected)			Ignitability		
Water Level _____ FT	Metals (Selected)	<u>✓</u>	<u>TNT/ROX</u>			
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 _____ NT.U.						

Sample Description  
wet, brown sand w/ demolition debris  
js 10/27/03

Split Sample ID: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 Agency/Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks  
 Parameters: Same as Above - As Listed

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

Water sample description should include:  
 Color Odor Sheen Turbidity

Logged By: Xavier Sotelo (Please Print)
 Reviewed by: Jeff Berk (Please Print)

Signature: Xavier Sotelo
 Signature: Jeff Berk
 Date: 4-2-08

OC - js 10/27/03



# Field Sampling Report

Location ID: LL4G134-SS-0195N-001-SU

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 7/28/08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1230 hrs 10/27/08 Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 If MI, # of increments taken: 1 Estimated - Measured Surveyed  
 Sample Depth: 0-1 FT (below surface) Decon: Dedicated - Each Day - Each Location GPS

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: <u>ppm</u>	Explosives (Selected) <u>✓ TNT / RDX</u> <u>10/27/08</u>	Ignitability
Water Level <u>FT</u>	Metals (Selected) <u>✓ TNT / RDX</u>	
Temperature <u>°C</u>	Perchlorate	
Sp. Conductance: <u>uMHOs</u>	PCBs	QA Samples
pH <u>units</u>	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen <u>Mg / L</u>	TPH DRO / HRO	Duplicate ID NA
Redox Potential <u>mV</u>	Propellants	Equipment Rinse ID NA
Turbidity <u>N.T.U.</u>		Trip Blank ID NA

Sample Description  
wet, brown, loose 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: Raviera Sobel (Please Print)

Reviewed by: Jeff Berk (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 4-2-08

QC - 10/27/08

# Field Sampling Report

Location ID: LL4G13-SS-0200SN-0001-5

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1248 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map Staked in Field  
 If MI, # of increments taken: 1 Estimated - Measured GRS  
 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: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: <u>0.0</u> ppm	Explosives (Selected) <u>✓</u> <u>TNT/ROX</u>	Ignitability
Water Level <u>0.0</u> FT	Metals (Selected)	
Temperature <u>0.0</u> °C	Perchlorate	
Sp. Conductance: <u>0.0</u> uMHOs	PCBs	QA Samples
pH <u>0.0</u> units	Nitrate / Nitrite	MS/MSD Yes / No <u>NA</u>
Dissolved Oxygen <u>0.0</u> Mg / L	TPH DRO / HRO	Duplicate ID <u>NA</u>
Redox Potential <u>0.0</u> mV	Propellants	Equipment Rinse ID <u>NA</u>
Turbidity <u>0.0</u> N.T.U.		Trip Blank ID <u>NA</u>

Sample Description  
wet, brown loose 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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Jeff Berk (Please Print)

Signature: Jeff Berk Date: 4-2-08

QC - JG 10/27/08

# Field Sampling Report

Location ID: LL4 G13 VP2 SS-03 SN-0001-S1

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 223 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 If MI, # of increments taken: 1 Estimated - Measured - Surveyed  
 Sample Depth: 0-1 FT (below surface) Decon: Dedicated - Each Day - Each Location DR

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0.2</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: _____ ppm	Explosives (Selected) <u>✓ TNT / RDX</u>	Ignitability
Water Level: _____ FT	Metals (Selected) <u>✓ TNT / RDX</u>	
Temperature: _____ °C	Perchlorate	
Sp. Conductance: _____ uMHOs	PCBs	QA Samples
pH: _____ units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen: _____ Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential: _____ mV	Propellants	Equipment Rinse ID NA
Turbidity: _____ N.T.U.		Trip Blank ID NA

Sample Description  
Loose, wet, 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: Kavir Sato (Please Print)

Signature: [Signature]

Reviewed by: Jeff Berh (Please Print)

Signature: [Signature] Date: 4-2-08

QC - JS 10/27/08

# Field Sampling Report

Location ID: LLG15-SB-0715N-0001-50 *JB 10/27/08*

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3-28-08

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method <u>JMC</u>	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Hand Auger
Type/Construction			Push Probe <i>8 10/27/08</i>
Miscellaneous	Well Purging Form Yes - No		Plastic Liner <i>JMC</i> <input checked="" type="checkbox"/>
			Mattocks <input checked="" type="checkbox"/>

Sample Collection: 1137 hrs

Sample Type: Composite - MI Grab

Location: Plotted on Map Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed *GPS'd JB 10/27/08*

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>ND</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	Ignitability
Water Level: FT	Metals (Selected)	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH: units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen: Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential: mV	Propellants	Equipment Rinse ID NA
Turbidity: N.T.U.	TNT / ROX <input checked="" type="checkbox"/>	Trip Blank ID NA

## Sample Description

Silty clay, lt brown all throughout, moist

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: JB, Pott (Please Print)

Reviewed by: Jeff Beck (Please Print)

Signature: JB

Signature: JB Date: 4-2-08

QC: JB 10/27/08

# Field Sampling Report

Location ID: LL4615-SB-0325N-0001-50 *JS 10/27/08*

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3-28-08

## Sampling Information

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

Sample Collection: 147 hrs

Sample Type: Composite - MI Grab

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

### Sample Description

Silty, clay H. brown, moist throughout

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. Pruthi (Please Print)

Signature: B. Pruthi

Reviewed by: Jeff Berh (Please Print)

Signature: Jeff Berh Date: 4-2-08

QC - JS 10/27/08

# Field Sampling Report

Location ID: LL4613VPI-SS-018SN-0001-50 *js 10/27/08*

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

## 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	
Miscellaneous	Well Purging Form Yes - No					

Sample Collection: 1420 hrs      Sample Type: Composite - MI Grab      Location: Plotted on Map - Staked in Field  
 If MI, # of increments taken: \_\_\_\_\_      Estimated - Measured - Surveyed  
 Sample Depth: 0-1 FT (below surface)      Decon: Dedicated - Each Day Each Location      NO GPS

Field Parameters (at time of sample)		Analytical Parameters				Other Parameters			
PID / FID Readings:		VOC				Corrosivity			
Background:	<u>ND</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	ppm	Explosives (Selected)				Ignitability			
Water Level	FT	Metals (Selected)							
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.	<u>TNT / RDX</u> ✓							

**Sample Description**  
Brown moist lean clay with 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: J. George (Please Print)  
 Signature: [Signature]

Reviewed by: Jeff Berk (Please Print)  
 Signature: [Signature] Date: 4-2-08

OC - js 10/27/08

# Field Sampling Report

Location ID: LL4G12A-SS-0225N-0001-SD *js 10/27/08*

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

## Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge	
Method	Bailer		Sample Bottle		Scoop	Trowel
	Pump		Bacon Bomb		Bowl	Hand Auger
					Push Probe	<input checked="" type="checkbox"/> Plastic Liner
Type/Construction					Mattocks	
Miscellaneous	Well Purging Form Yes - No					

Sample Collection: 1440 hrs

Sample Type: Composite - MI - Grab *js 10/27/08*

Location: Plotted on Map - Staked in Field *js 10/27/08*  
Estimated - Measured - Surveyed

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location *js 10/27/08*

## Field Parameters (at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:	VOC	Corrosivity
Background: <u>NO</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	Ignitability
Water Level: FT	Metals (Selected)	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	MS/MSD
pH: units	Nitrate / Nitrite	Duplicate ID
Dissolved Oxygen: Mg / L	TPH DRO / HRO	Equipment Rinse ID
Redox Potential: mV	Propellants	Trip Blank ID
Turbidity: N.T.U.	<u>TNT/ROX</u> <input checked="" type="checkbox"/>	

## QA Samples

## Sample Description

## Split Sample

Brown, wet, coarse-textured SAND SM to SW-SM with gravel.

Split Sample ID:

Name:

Agency/Company:

Address:

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: Tom George (Please Print)

Reviewed by: Jeff Beck (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 4-2-08

OC- js 10/27/08



**Location ID:**

# Field Sampling Report

**RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH**

Date: 3/28/08

### Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge		
Method	Bailer		Sample Bottle		Scoop		Trowel
	Pump		Bacon Bomb		Bowl		Hand Auger
					Push Probe	<input checked="" type="checkbox"/>	Plastic Liner
Type/Construction					Mattocks		
Miscellaneous	Well Purging Form Yes - No						

Sample Collection: 1455 hrs

**Sample Type:** Composite - MI - (Grab)

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

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

NO GPS

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters			
PID / FID Readings:	VOC				Corrosivity			
Background: <i>ND</i> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)				Ignitability			
Water Level FT	Metals (Selected)							
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.	<i>TNT/ROX</i>							

Sample Description	Split Sample
Brown moist to wet, clay	<div>Split Sample ID:</div> <div>Name:</div> <div>Agency/Company:</div> <div>Address:</div>
<div>Soil sample description should include:</div> <div>Munsell Color   Odor   Staining   Texture   Sorting   Plasticity   Moisture</div> <div>Water sample description should include:</div> <div>Color   Odor   Sheen   Turbidity</div>	<div>QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks</div> <div>Parameters: Same as Above - As Listed</div>

Logged By: Xavier Sotelo (Please Print)

Signature: Kim J. [Signature]

Reviewed by: Jeff Berk (Please Print)

Signature: [Signature] Date: 4-2-08

QC - Jg 10/27/08

Field Sampling Report

Location ID: LL468VPI-SS-0245N-0001-50 8/10/27/00

Date: 3/28/08

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

**RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH**

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	<input checked="" type="checkbox"/>	Plastic Liner	
Type/Construction					Mattocks			
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 155 hrs      Sample Type: Composite - MI - Grab      Location: Plotted on Map - Staked in Field  
If MI, # of increments taken: \_\_\_\_\_      Estimated - Measured - Surveyed  
Sample Depth: 0-1 FT (below surface)      Decon: Dedicated - Each Day - Each Location      NO GPS

Field Parameters (at time of sample)		Analytical Parameters				Other Parameters			
PID / FID Readings:		VOC				Corrosivity			
Background:	NO ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	ppm	Explosives (Selected)				Ignitability			
Water Level	FT	Metals (Selected)							
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.	TNT / RDX	✓						

Sample Description	Split Sample
<i>Brown wet Leontide with sand</i>	<div>Split Sample ID: _____</div> <div>Name: _____</div> <div>Agency/Company: _____</div> <div>Address: _____</div>
<div>Soil sample description should include:</div> <div><i>Munsell Color   Odor   Staining   Texture   Sorting   Plasticity   Moisture</i></div> <div>Water sample description should include:</div> <div><i>Color   Odor   Sheen   Turbidity</i></div>	<div><b>QA/QC Provided:</b> MS/MSD - Duplicate - Trip Blanks - Field Blanks</div> <div><b>Parameters:</b> Same as Above - As Listed</div>

Logged By: Tom G. [Signature] (Please Print)  
Signature: [Signature]  
Reviewed by: Jeff Beck (Please Print)  
Signature: [Signature] Date: 4-2-08

QC - JF 10/27/03

Location ID: LL4616-SS-021SN-0001-50 *8/10/27/08* **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

**Sampling Information**

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge	
Method	Barler		Sample Bottle		Scoop	Trowel
	Pump		Bacon Bomb		Bowl	Hand Auger
					Push Probe	<input checked="" type="checkbox"/> Plastic Liner
Type/Construction					Mattocks	
Miscellaneous	Well Purging Form Yes - No					

Sample Collection: 1540 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field  
Estimated - Measured - 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: <u>ND</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)				Ignitability			
Water Level: FT	Metals (Selected)							
Temperature: °C	Perchlorate				<b>QA Samples</b>			
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: NTU	<u>TNT / ROX</u>	<u>✓</u>						

**Sample Description**

Brown, wet lean clay with sand

**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

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Don George (Please Print)

Reviewed by: Jeff Berk (Please Print)

Signature: Don George

Signature: Jeff Berk Date: 4-2-08

QC - 8/10/27/08

Location ID: LL4 G2-SS-0295N-0001 - 50 *js 10/21/08* Field Sampling Report  
Date: 3/28/08 RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Location ID: LL9 G C-SS-0245N 0001-50

**RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH**

Date: 3/28/08

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			
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1600 hrs

**Sample Type:** Composite - MI - Grab

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

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

60-5

Field Parameters		Analytical Parameters				Other Parameters			
PID / FID Readings:		VOC				Corrosivity			
Background:	ND ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	ppm	Explosives (Selected)				Ignitability			
Water Level	FT	Metals (Selected)							
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.	TWT/RA ✓							

Sample Description  
Brown moist, coarse-grained SAND SP-SM/SM  
fine gravel

### Sample Description

**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: DM Deery (Please Print)

Signature: L. Anderson

Reviewed by: Jeff Berk (Please Print)

Signature: [Signature] Date: 4-2-01

OC-178 10/27/08

Location ID: LL4 G6A-SS-0285N-0001-50 *JK 10/27/08*

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

## Sampling Information

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

Sample Collection: 1620 hrsSample Type: Composite - MI - Grab  
If MI, # of increments taken:Location: Plotted on Map Staked in Field  
Estimated - Measured - SurveyedSample Depth: 0-1 FT (below surface)Decon: Dedicated - Each Day Each Location

GPS

JK 10/27/08

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>NP</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance uMHOs	PCBs	
pH units	Nitrate / Nitrite	
Dissolved Oxygen Mg / L	TPH DRO / HRO	
Redox Potential mV	Propellants	
Turbidity N.T.U.	<u>TNT/ROX</u>	

## Sample Description

Top - Brown wet, coarse-grained sand SW-subBottom Brown moist, loam clay with 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 ListedLogged By: Tony Brown (Please Print)Signature: Tony BrownReviewed by: Jeff Berh (Please Print)Signature: Jeff Berh Date: 4-2-08

QC - JK 10/27/08

# Field Sampling Report

Location ID: LL3EB22-55-0035V-0001.50 *JS 10/27/08*

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

## 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	
Miscellaneous	Well Purging Form Yes - No					

Sample Collection: 1755 hrs

Sample Type: Composite - MI - Grah

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

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

GPS

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters		
PID / FID Readings:	VOC				Corrosivity		
Background: <u>ND</u> ppm	SVOC				Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)				Ignitability		
Water Level: FT	Metals (Selected)						
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.	<u>TNT/ROX</u>			<u>✓</u>			

## Sample Description

Brown wet coarse-grit sand (5m)  
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: Tom Georgy (Please Print)

Signature: [Signature]

Reviewed by: Jeff Berk (Please Print)

Signature: [Signature] Date: 04-02-08

QC - JS 10/27/08

Location ID: LL3EB6A-SB-081SN-0001-S0 *in 10/27/00* **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

### 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			✓
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1830 hrs

Sample Type: Composite - MI - Grab *JS 102710*  
If MI # of increments taken: \_\_\_\_\_

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

Sample Depth: 04 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:	ND ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	ppm	Explosives (Selected)				Ignitability			
Water Level	FT	Metals (Selected)							
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.	TNT/ROX							

Sample Description	Split Sample
<p>Brown Sand - To 10/27/08</p>	<p>Split Sample ID:</p> <p>Name:</p> <p>Agency/Company:</p> <p>Address:</p>
<p>Soil sample description should include:</p> <p>Munsell Color   Odor   Staining   Texture   Sorting   Plasticity   Moisture</p> <p>Water sample description should include:</p> <p>Color   Odor   Sheen   Turbidity</p>	<p>QA/QC Provided: MS/MSD • Duplicate • Trip Blanks • Field Blanks</p> <p>Parameters: Same as Above • As Listed</p>

Logged By: Ben Gory (Please Print)

Signature: Zou Li

Reviewed by: Jeff Berk (Please Print)

Signature: [Signature] Date: 4-2-08

DL - H 10/27/03

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					

Sample Collection: 1900 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

GPS *10/27/08*

Field Parameters (at time of sample)		Analytical Parameters		Other Parameters	
PID / FID Readings:		VOC		Corrosivity	
Background:	ppm	SVOC		Reactivity Sulfide/Cyanide	
Sample:	ppm	Explosives (Selected)		Ignitability	
Water Level	FT	Metals (Selected)			
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.	TNT/ROX	✓		

Sample Description  
Brown Sand - To 10/27/08

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

Water sample description should include:  
  
 Color Odor Sheen Turbidity

Split Sample ID: \_\_\_\_\_  
  
 Name: \_\_\_\_\_  
 Agency/Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
  
 QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks  
 Parameters: Same as Above - As Listed

Logged By: Tom O'Grady (Please Print)

Reviewed by: Jeff Berh (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 4-2-08

QC - JF 10/27/08



Location ID: LL3EB6A-SB-0835N - 6001-SB vs 10/27/00 Field Sampling Report  
RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

**RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH**

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	js 10/17/09	Plastic Liner	✓
Type/Construction					Mattocks		sonc	✓
Miscellaneous	Well Purging Form Yes - No							

Sample Collection: 1910 hrs  
Sample Depth: 0-3 FT (below surface) refused @ 3'

Sample Type: Composite - MI - Grab  
If MI, # of increments taken: \_\_\_\_\_  
Decon: Dedicated - Each Day Each Location

**Location:** Plotted on Map - Staked in Field  
Estimated - Measured Surveyed  
CPS 6/10/2000

Field Parameters (at time of sample)		Analytical Parameters				Other Parameters			
PID / FID Readings:		VOC				Corrosivity			
Background: <i>ND</i> ppm		SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm		Explosives (Selected)				Ignitability			
Water Level FT		Metals (Selected)							
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.		<i>TNT/ROX</i>							

Sample Description

Brown SAND TG 10/27/08

Munsell Color   Odor   Staining   Texture   Sorting   Plasticity   Moisture

*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: Tom George (Please Print)  
Signature: Tom George

Reviewed by: Jeff Berk (Please Print)  
Signature: [Signature] Date: 4-2-08

DC - js 10/27/08

Location ID: LL3EB6A-SB-084SN <sup>6001-50</sup> <sup>10/27/08</sup> **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

### 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	SMC
Miscellaneous	Well Purging Form Yes - No					

Sample Collection: 1925 hrs 10/27/08 @ 3.5' Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 Sample Depth: 0-3.5 FT (below surface) Decon: Dedicated - Each Day - Each Location Estimated - Measured - Surveyed  
6PS 10/27/08

Field Parameters (at time of sample)		Analytical Parameters				Other Parameters			
PID / FID Readings:		KOC				Corrosivity			
Background:	ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	ppm	Explosives (Selected)				Ignitability			
Water Level	FT	Metals (Selected)							
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.	TNT/ROX							

Sample Description  
Browns AND  
To 10/27/08

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: Tom George (Please Print)  
 Signature: Tom George

Reviewed by: Jeff Berk (Please Print)  
 Signature: Jeff Berk Date: 4-2-08

QC - JS 10/27/08

Location ID: LL3EB6A-SB-0855N-0001-50 *js 10/27/08* **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

**Sampling Information**

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge	
Method	Bailer		Sample Bottle		Scoop	
	Pump		Bacon Bomb		Bowl	
					Push Probe	
Type/Construction					Mattocks	
Miscellaneous	Well Parging Form Yes - No					

Sample Collection: 1940 hrs refused Sample Type: Composite - MI - grab Location: Plotted on Map Staked in Field  
 Sample Depth: 0-3 FT (below surface) @ 3 If MI, # of increments taken: 1 Estimated - Measured - Surveyed  
 Decon: Dedicated - Each Day - Each Location *6PS 10/27/08*

Field Parameters (at time of sample)		Analytical Parameters			Other Parameters		
PID / FID Readings:		VOC			Corrosivity		
Background:	<u>ND</u>	SVOC			Reactivity Sulfide/Cyanide		
Sample:		Explosives (Selected)			Ignitability		
Water Level		Metals (Selected)					
Temperature		Perchlorate			<b>QA Samples</b>		
Sp. Conductance:		PCBs			MS/MSD	Yes / No	NA
pH		Nitrate / Nitrite			Duplicate ID		NA
Dissolved Oxygen		TPH DRO / HRO			Equipment Rinse ID		NA
Redox Potential		Propellants			Trip Blank ID		NA
Turbidity		<u>TNT/ROX</u>					

Brown SAND To 10/27/08

Note: Drove Sample 0-24" Refused. Moved over 6". Redrove same sample to 0-36"

Soil sample description should include: Refused @ 36"

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: Jeff Berk (Please Print) Reviewed by: Jeff Berk (Please Print)

Signature: [Signature] Signature: [Signature] Date: 4-2-08

*OC- js 10/27/08*

Location ID: EA28A LL3-EB6A-SS-054 SN-000150 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 3/28/08

### Sampling Information

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

Sample Collection: 1950 hrs

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

Location: Plotted on Map - Staked in Field  
Estimated - Measured - 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: <u>ND</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	Ignitability
Water Level	Metals (Selected)	
Temperature	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen	TPH DRO / HRO	Duplicate ID NA
Redox Potential	Propellants	Equipment Rinse ID NA
Turbidity	<u>TNT/ROX</u> ✓	Trip Blank ID NA

**Sample Description**  
Brown, moist, fine grained  
silty-sand (SS) & 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 Blank - Field Blanks  
 Parameters: Same as Above - As Listed

Logged By: Tom Greary (Please Print)

Signature: [Signature]

Reviewed by: Jeff Berk (Please Print)

Signature: [Signature] Date: 4-2-08

QC - JS 10/27/08

Location ID: LL4 G6 -SS-035 SW -0001-5

## Field Sampling Report

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 4/2/08

## 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		
Miscellaneous	Well Purging Form Yes - No				

Sample Collection: 0953 hrs  
Sample Depth: 5-12 FT (below surface)Sample Type: Composite - MI - Grab  
If MI, # of increments taken:  
Decon: Dedicated - Each Day - Each LocationLocation: Plotted on Map - Staked in Field  
Estimated - Measured - Surveyed ES

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings: Background: <u>0.0</u> ppm	VOC			Corrosivity		
	SVOC			Reactivity Sulfide/Cyanide		
Sample: _____ ppm	Explosives (Selected)	✓	<u>TNT/RDX</u>	Ignitability		
Water Level _____ FT	Metals (Selected)					
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.						

## Sample Description

wet, brown, silty clay w/ 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 ListedLogged By: Xavier Sobelo (Please Print)Signature: Xavier SobeloReviewed by: M. Lee Sharp (Please Print)Signature: [Signature] Date: 4-2-08

OC- JS 10/24/08

Location ID: LL4G19-SS-037SN-0001-SS

Date: 4/2/08

Field Sampling Report

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

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	
Miscellaneous	Well Purging Form Yes - No					

Sample Collection: 15 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0 - 1 FT (below surface)

Decon: Dedicated - Each Day Each Location

If MI, # of increments taken: 6

Estimated - Measured - Surveyed

Field Parameters (at time of sample)		Analytical Parameters			Other Parameters		
PID / FID Readings:		VOC			Corrosivity		
Background:	<u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample:	ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	<u>TNT/RDX</u>	Ignitability		
Water Level	FT	Metals (Selected)					
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.						

<div>Sample Description</div> <div>moist, brown silty clay w/ gravel</div>	<div>Split Sample ID:</div> <div>Name:</div> <div>Agency/Company:</div> <div>Address:</div> <div>QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks</div> <div>Parameters: Same as Above - As Listed</div>
<div>Soil sample description should include:</div> <div>Munsell Color Odor Staining Texture Sorting Plasticity Moisture</div> <div>Water sample description should include:</div> <div>Color Odor Sheen Turbidity</div>	

Logged By: Vincent Sotelo (Please Print)

Signature: [Signature]

Reviewed by: Mike Sloop (Please Print)

Signature: [Signature]

Date: 4-2-08

QC - JS 10/24/08

# Field Sampling Report

Location ID: LL4G19A-SS-038SN-001-S

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 4/2/08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 0925 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 Sample Depth: 0 - 1 FT (below surface) If MI, # of increments taken: 1 Estimated - Measured - Surveyed  
 Decon: Dedicated - Each Day Each Location GPS

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

### Sample Description

moist, brown silt w/ clay and demolition debris

### 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: Xavier Setelo (Please Print)

Reviewed by: M. Kay Sharp (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 4-2-08

QC - JS 10/24/08

# Field Sampling Report

Location ID: LL4G1A-SS-0395N-0001-S0

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 4/2/08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1000 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map Staked in Field

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

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

### Sample Description

moist, brown clay w/ 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: Xavier Sotelo (Please Print)

Reviewed by: Mike Sharp (Please Print)

Signature: Xavier Sotelo

Signature: Mike Sharp Date: 4-2-08

QC - JS 10/24/08



# Field Sampling Report

Location ID: LL3 EB20-SS-079SN-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/2/08

## Sampling Information

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

Sample Collection: 1024 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0-0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓ TNT / RDX</u>	Ignitability
Water Level: FT	Metals (Selected) <u>✓ TNT / RDX</u>	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH: units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen: Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential: mV	Propellants	Equipment Rinse ID NA
Turbidity: N.T.U.		Trip Blank ID NA

### Sample Description

moist, brn silty clay w/ rock fragments

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: Lavie Sotelo (Please Print)

Reviewed by: M. Lee Sharp (Please Print)

Signature: Lavie Sotelo

Signature: M. Lee Sharp Date: 4-2-08

QC - JB 10/24/08

# Field Sampling Report

Location ID: LL3 EB25 -SS-077SN-0001-SS

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/2/08

## Sampling Information

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

Sample Collection: 1050 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓ TNT/ROX</u>	Ignitability
Water Level: FT	Metals (Selected) <u>✓ TNT/ROX</u>	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH: units	Nitrate / Nitrite	
Dissolved Oxygen: Mg / L	TPH DRO / HRO	
Redox Potential: mV	Propellants	
Turbidity: N.T.U.		

## Sample Description

moist brown silty clay w/ demo debris

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: Javier Sotelo (Please Print)

Reviewed by: Mike Sharp (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 4-2-08

QC - js 10/24/08

# Field Sampling Report

Location ID: LL3 EB9A-SS-076SN-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/2/08

## Sampling Information

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

Sample Collection: 1100 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day Each Location

Estimated - Measured - Surveyed

GPS

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: <u>ppm</u>	Explosives (Selected) <u>✓ TNT/RDX</u>	Ignitability
Water Level <u>FT</u>	Metals (Selected) <u>✓ <del>TNT/RDX</del></u>	
Temperature <u>°C</u>	Perchlorate	
Sp. Conductance: <u>uMHOs</u>	PCBs	
pH <u>units</u>	Nitrate / Nitrite	
Dissolved Oxygen <u>Mg / L</u>	TPH DRO / HRO	
Redox Potential <u>mV</u>	Propellants	
Turbidity <u>N.T.U.</u>		

## QA Samples

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

## Sample Description

moist brown silty clay 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: Xavier Sotelo (Please Print)

Reviewed by: M. K. Shoop (Please Print)

Signature: Xavier Sotelo

Signature: M. K. Shoop Date: 4-2-08

OC- 1424108

# Field Sampling Report

Location ID: LL3 E134A-SB-0735W-001-52

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/3/06

## Sampling Information

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

Sample Collection: 1300 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed  
GAJ

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: <u>1</u> ppm	Explosives (Selected) <u>✓</u> <u>TNT/RDX</u>	Ignitability
Water Level <u>1</u> FT	Metals (Selected)	
Temperature <u>1</u> °C	Perchlorate	
Sp. Conductance: <u>1</u> uMHOs	PCBs	QA Samples
pH <u>1</u> units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen <u>1</u> Mg/L	TPH DRO / HRO	Duplicate ID NA
Redox Potential <u>1</u> mV	Propellants	Equipment Rinse ID NA
Turbidity <u>1</u> N.T.U.		Trip Blank ID NA

### Sample Description

DRY BROWN CLAY SLAG top 9"

### 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

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Xavier Sotol (Please Print)

Reviewed by: Stan Loney (Please Print)

Signature: Xin Sotol

Signature: Stan Loney Date: 07Apr

QC - js 10/24/08

Location ID: LL3EB10VP1-0285N-0001-50 Field Sampling Report RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH  
 Date: 4/3/08

### 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 0930 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 Sample Depth: 0-1 FT (below surface) If MI, # of increments taken: 1 Estimated - Measured - Surveyed GPS  
 Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters		Other Parameters	
PID / FID Readings: Background: <u>0.0</u> ppm	VOC		Corrosivity	
	SVOC		Reactivity Sulfide/Cyanide	
Sample: ppm	Explosives (Selected)	<u>✓ TNT / RDX</u>	Ignitability	
Water Level FT	Metals (Selected)	<u>✓ Lead / Cad</u>		
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.				

<p>Sample Description</p> <p><u>dry tan silty clay w/ gravel and construction debris</u></p> <p>Soil sample description should include:              Munsell Color Odor Staining Texture Sorting Plasticity Moisture</p> <p>Water sample description should include:              Color Odor Sheen Turbidity</p>	<p>Split Sample ID:</p> <p>Name:</p> <p>Agency/Company:</p> <p>Address:</p> <p>QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks              Parameters: Same as Above - As Listed</p>
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Logged By: Javier Sotelo (Please Print) Reviewed by: Stan Gurep (Please Print)  
 Signature: [Signature] Signature: [Signature] Date: 07 April

QC - JS - 10/24/05

# Field Sampling Report

Location ID: 123 EB10VP2-024 SN-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/3/08

## Sampling Information

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

Sample Collection: 0.4 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)		Analytical Parameters		Other Parameters	
PID / FID Readings:		VOC		Corrosivity	
Background:	<u>0.0</u> ppm	SVOC		Reactivity Sulfide/Cyanide	
Sample:	ppm	Explosives (Selected)	<u>✓ TNT/RDX</u>	Ignitability	
Water Level	FT	Metals (Selected)			
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.				

### Sample Description

moist lt. brown silty clay w/ construction debris

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: Xavier Sotelo (Please Print)

Reviewed by: Stacy Levers (Please Print)

Signature: Xavier Sotelo

Signature: Stacy Levers Date: 07/08/08

QC - JS 10/29/08

Location ID: LL3EB9-SS-032SN 2001 SS **Field Sampling Report** RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH  
 Date: 4/3/06

### 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1030 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map Staked in Field  
 Sample Depth: 0-1 FT (below surface) If MI, # of increments taken: 1 Estimated - Measured Surveyed  
 Decon: Dedicated - Each Day - Each Location GRS

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<u>✓</u>	<u>TNT / RDX</u>	Ignitability		
Water Level FT	Metals (Selected)					
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.						

**Sample Description**  
moist, brown, silty sand trace gravel

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**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: Vincent Sotelo (Please Print) Reviewed by: Stan Bowers (Please Print)  
 Signature: Vincent Sotelo Signature: Stan Bowers Date: 07 Apr 06

QC - JB 10/24/03





Location ID: LL3ED4A-SB-0585N-0001-50 JS 10/17/08 **Field Sampling Report** RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH  
Date: 4/3/09

### Sampling Information

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

Sample Collection: 154 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map Staked in Field  
Sample Depth: 0-4 FT (below surface) If MI, # of increments taken: 1 Estimated - Measured - Surveyed  
Decon: Dedicated - Each Day - Each Location GRD

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

Sample Description  
moist brown 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 ID: \_\_\_\_\_  
Name: \_\_\_\_\_  
Agency/Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
QA/QC Provided: MS/MSD Duplicate Trip Blanks Field Blanks  
Parameters: Same as Above - As Listed

Logged By: Xavier Soto (Please Print)

Signature: Xavier Soto

Reviewed by: Stanley (Please Print)

Signature: Stanley Date: 07 April

OC - JS 10/24/08

Location ID: LL3EB4A-SB-059 SN -0001-50 *JS 10/27/08* **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/3/06

### Sampling Information

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

*JMC*

Sample Collection: 1630 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
*JS 10/27/08* If MI # of increments taken: 1 Estimated - Measured - Surveyed  
 Sample Depth: 0-4 FT (below surface) Decon: Dedicated - Each Day Each Location *GPS*

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.2</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: <u>ppm</u>	Explosives (Selected) <u>✓ TNT/RDX</u>	Ignitability
Water Level <u>FT</u>	Metals (Selected)	
Temperature <u>°C</u>	Perchlorate	
Sp. Conductance: <u>uMHOs</u>	PCBs	QA Samples
pH <u>units</u>	Nitrate / Nitrite	MS/MSD Yes / No <u>NA</u>
Dissolved Oxygen <u>Mg / L</u>	TPH DRO / HRO	Duplicate ID <u>NA</u>
Redox Potential <u>mV</u>	Propellants	Equipment Rinse ID <u>NA</u>
Turbidity <u>N.T.U.</u>		Trip Blank ID <u>NA</u>

**Sample Description**  
dry brown 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: Krainer Sotelo (Please Print)

Signature: [Signature]

Reviewed by: Shan Leung (Please Print)

Signature: [Signature] Date: 07 Apr 09

*QC - JS 10/24/08*

Location ID: LL3EB4A-SR-0605N-0001 -50 m **Field Sampling Report**

**RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH**

Date: 7/31/00

### Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge			
Method	Bailer	Sample Bottle	Scoop		Trowel	
	Pump	Bacon Bomb	Bowl		Hand Auger	
			Push Probe	JS 101-100	Plastic Liner	✓
Type/Construction			Mattocks			
Miscellaneous	Well Purging Form Yes - No		JMC			

Estimated - Measured - Surveyed  
GPR

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters			
PID / FID Readings: Background: 0.0 ppm	VOC				Corrosivity			
	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	✓	TNT/RDX		Ignitability			
Water Level FT	Metals (Selected)							
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.								

Sample Description	Split Sample
<i>dry Brown clay</i>	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: Xavier Sotelo (Please Print)

Signature: 

Reviewed by: Stan Lerner (Please Print)

Signature: Stan Loney Date: 4/11/18

OC - J. 10/24/08

# Field Sampling Report

Location ID: LL3EB4A-SB-061SN-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/3/09

↑ SL 07Apr

## Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge		
Method	Bailer		Sample Bottle		Scoop		Trowel
	Pump		Bacon Bomb		Bowl	<u>JS</u>	Hand Auger
					Push Probe	<u>10/24/08</u>	Plastic Liner <input checked="" type="checkbox"/>
Type/Construction					Mattocks		
Miscellaneous	Well Purging Form Yes - No				<u>UML</u>		

Sample Collection: 1330 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day Each Location

Estimated - Measured - Surveyed

OPS

## Field Parameters

(at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:	VOC				Corrosivity			
Background: <u>0-2</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	<u>TNT/RDX</u>		Ignitability			
Water Level	Metals (Selected)	<input checked="" type="checkbox"/>	<u>NO</u>					
Temperature	Perchlorate				QA Samples			
Sp. Conductance: uMHOs	PCBs				MS/MSD	Yes / No	NA	
pH	Nitrate / Nitrite				Duplicate ID		NA	
Dissolved Oxygen	TPH DRO / HRO				Equipment Rinse ID		NA	
Redox Potential	Propellants				Trip Blank ID		NA	
Turbidity								

## Sample Description

dry brown clay

## 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

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Victor Sotelo (Please Print)

Reviewed by: Stanley (Please Print)

Signature: Victor Sotelo

Signature: Stanley Date: 07Apr

OC- JS 10/24/08

# Field Sampling Report

Location ID: LL3EBA-SB-062 SN-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/3/06

## 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	
Miscellaneous	Well Purging Form Yes - No		JMC	

Sample Collection: 1310 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)	Analytical Parameters		Other Parameters	
PID / FID Readings:	VOC		Corrosivity	
Background: <u>0.0</u> ppm	SVOC		Reactivity Sulfide/Cyanide	
Sample: ppm	Explosives (Selected)	<u>✓</u> TNT/RDX	Ignitability	
Water Level: FT	Metals (Selected)			
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.				

### Sample Description

slay 10" x 1" inches → dry brown 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: V. Sotelo (Please Print)

Signature: [Signature]

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 07Apr06

QC - js 10/24/06

Location ID: 43EB4A-SB-0635W-001-S0 **Field Sampling Report** RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH  
 Date: 4/3/06 ↑ RJA

### 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	
Miscellaneous	Well Purging Form Yes - No		JMC	

Sample Collection: 1215 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 Sample Depth: 0-4 FT (below surface) IF MI, # of increments taken: 1 Estimated - Measured Surveyed  
 Decon: Dedicated - Each Day Each Location GRS

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters		
PID / FID Readings:	VOC				Corrosivity		
Background: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<u>✓</u>	<u>TNT/RDX</u>		Ignitability		
Water Level	Metals (Selected)				QA Samples		
Temperature	Perchlorate				MS/MSD	Yes / No	NA
Sp. Conductance:	PCBs				Duplicate ID		NA
pH	Nitrate / Nitrite				Equipment Rinse ID		NA
Dissolved Oxygen	TPH DRO / HRO				Trip Blank ID		NA
Redox Potential	Propellants						
Turbidity							

<p><b>Sample Description</b></p> <p><u>dry brown clay</u></p> <p>Soil sample description should include:              Munsell Color Odor Staining Texture Sorting Plasticity Moisture</p> <p>Water sample description should include:              Color Odor Sheen Turbidity</p>	<p><b>Split Sample</b></p> <p>Split Sample ID: _____</p> <p>Name: _____</p> <p>Agency/Company: _____</p> <p>Address: _____</p> <p>QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks              Parameters: Same as Above - As Listed</p>
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Logged By: Jim Sotelo (Please Print) Reviewed by: Stan Gering (Please Print)  
 Signature: Jim Sotelo Signature: Stan Gering Date: 5/7/06

CC - JS 10/24/08

# Field Sampling Report

Location ID: LL3EB4A-SB-0645N-0001-SD

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/3/09

## Sampling Information

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

Sample Collection: 1230 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)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.7</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓</u> <u>TNT/RDX</u>	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen Mg/L	TPH DRO / HRO	Duplicate ID NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

### Sample Description

DRY BROWN 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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Stanley Levens (Please Print)

Signature: Stanley Levens Date: 07 April

QC - JF 10/24/08





# Field Sampling Report

Location ID: LL3 EB4A-SB-0665N-0001-20

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/3/09

## 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	
Miscellaneous	Well Purging Form Yes - No		JMC	

Sample Collection: 1740 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)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓ TNT / RDX</u>	Ignitability
Water Level	Metals (Selected)	
Temperature	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen	TPH DRO / HRO	Duplicate ID NA
Redox Potential	Propellants	Equipment Rinse ID NA
Turbidity		Trip Blank ID NA

## Sample Description

moist brown 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: Ravener S. L. L. (Please Print)

Signature: [Signature]

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 04/04/09

GC - JS 10/24/08

Field Sampling Report

Location ID: 43EB44-SB-067SN-0068 RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/3/08

**RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH**

### Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	JS 072408	Plastic Liner	✓
Type/Construction					Mattocks			
Miscellaneous	Well Purging Form Yes - No				JML			

(GRS)

Field Parameters (at time of sample)		Analytical Parameters				Other Parameters			
PID / FID Readings:		VOC				Corrosivity			
Background:	0.0 ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	ppm	Explosives (Selected)	✓	TNT/RDX		Ignitability			
Water Level	FT	Metals (Selected)							
Temperature	°C	Perchlorate				QA Samples			
Sp. Conductance:	µMHOs	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.								

Sample Description	Split Sample
<p><i>brown clay</i></p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<p>Split Sample ID: _____</p> <p>Name: _____</p> <p>Agency/Company: _____</p> <p>Address: _____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p><b>Soil sample description should include:</b></p> <p><i>Munsell Color   Odor   Staining   Texture   Sorting   Plasticity   Moisture</i></p> <p><b>Water sample description should include:</b></p> <p><i>Color   Odor   Sheen   Turbidity</i></p>	<p><b>QA/QC Provided:</b> MS/MSD - Duplicate - Trip Blanks - Field Blanks</p> <p><b>Parameters:</b> Same as Above - As Listed</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

Signature: [Signature] Date: 07/17/2011

QC- JF 10/24/08

# Field Sampling Report

Location ID: LL3EB4A-SB-0685N-001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/3/08

## 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	
Miscellaneous	Well Purging Form Yes - No		JMC	

Sample Collection: 1645 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured Surveyed  
GRS

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<u>✓</u>	<u>TNT / RDX</u>	Ignitability		
Water Level	Metals (Selected)			QA Samples		
Temperature	Perchlorate			MS/MSD	Yes / No	NA
Sp. Conductance: uMHOs	PCBs			Duplicate ID		NA
pH	Nitrate / Nitrite			Equipment Rinse ID		NA
Dissolved Oxygen	TPH DRO / HRO			Trip Blank ID		NA
Redox Potential	Propellants					
Turbidity						

Sample Description	Split Sample
<u>Dry Brown Clay</u>	Split Sample ID:
	Name:
	Agency/Company:
	Address:
	QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks
	Parameters: Same as Above - As Listed

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Xavier Sotelo (Please Print)

Reviewed by: Stan Lopez (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 07 April

OC - js 10/21/08

Location ID: LL3EB4A-SB-0695N-0051-S0 *81 07AP* **Field Sampling Report** RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH  
 Date: 4/3/06

### Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe <i>js 10/24/05</i>
Type/Construction			Trowel
Miscellaneous	Well Purging Form Yes - No		Hand Auger
			Plastic Liner <input checked="" type="checkbox"/>
			Mattocks
			<i>JMC</i>

Sample Collection: 1755 hrs Sample Type: Composite - MI - Gras Location: Plotted on Map - Straked in Field  
 Sample Depth: 0 - 4 FT (below surface) If MI, # of increments taken:            Estimated - Measured - Surveyed  
 Decon: Dedicated - Each Day Each Location *GP*

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters
PID / FID Readings:	VOC			Corrosivity
Background: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/> <u>TNT/ROX</u>		Ignitability
Water Level FT	Metals (Selected)			
Temperature °C	Perchlorate			
Sp. Conductance: uMHOs	PCBs			
pH units	Nitrate / Nitrite			
Dissolved Oxygen Mg / L	TPH DRO / HRO			
Redox Potential mV	Propellants			
Turbidity N.T.U.				

<b>Sample Description</b> <u>Dry brown clay</u>        	<b>Split Sample</b> Split Sample ID: <u>                    </u> Name: <u>                    </u> Agency/Company: <u>                    </u> Address: <u>                    </u>  QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks Parameters: Same as Above - As Listed
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Soil sample description should include:  
 Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:  
 Color Odor Sheen Turbidity

Logged By: Xavier Sotol (Please Print) Reviewed by: Stan Swery (Please Print)  
 Signature: Xavier Sotol Signature: Stan Swery Date: 07APR

*QC - js 10/24/05*

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	
Miscellaneous	Well Purging Form Yes - No				JML	

Sample Collection: 0943 hrs  
Sample Depth: 0-3 FT (below surface)

Sample Type: Composite - MI - Grab  
If MI, # of increments taken: \_\_\_\_\_  
Decon: Dedicated Each Day - Each Location

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

Field Parameters (at time of sample)		Analytical Parameters			Other Parameters		
PID / FID Readings:		VOC			Corrosivity		
Background:	<u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample:	ppm	Explosives (Selected)			Ignitability		
Water Level	FT	Metals (Selected)	<u>TNT/RDX</u>				
Temperature	°C	Perchlorate	<u>SS</u>		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.	<u>TNT/RDX</u>	<u>X</u>				

Sample Description	Split Sample
<u>brown clay</u> <u>Refusal @ 3' JS 10/24</u>	Split Sample ID: _____ Name: _____ Agency/Company: _____ Address: _____  QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks Parameters: Same as Above - As Listed
Soil sample description should include: Munsell Color Odor Staining Texture Sorting Plasticity Moisture  Water sample description should include: Color Odor Sheen Turbidity	

Logged By: Xavier Sotelo (Please Print)  
Signature: [Signature]

Reviewed by: [Signature] (Please Print)  
Signature: [Signature] Date: 07/1/09

QC- JS 10/24/09

Location ID: LL3 EBY-SB-0385N-0001-50 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/4/08

### 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	
Miscellaneous	Well/Purging Form Yes - No		JMC	

Sample Collection: 100 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day Each Location

Estimated - Measured - Surveyed  
6.0

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

**Sample Description**  
Moist, brown 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: Xavier Sotelo (Please Print)

Reviewed by: Stan Leung (Please Print)

Signature: Xavier Sotelo

Signature: Stan Leung Date: 16 Oct 08

OC - js 10/29/08

Location ID: LL3EB4-SB-0465N-0001-50 *js 10/24/08*

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/4/08

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge	
Method	Bailer	Sample Bottle	Scoop	Trowel
	Pump	Bacon Bomb	Bowl	Hand Auger
			Push Probe <i>js 10/24/08</i>	Plastic Liner <input checked="" type="checkbox"/>
Type/Construction			Mattocks	
Miscellaneous	Well Purging Form Yes - No		<i>JML</i>	

Sample Collection: 1015 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map Staked in FieldSample Depth: 0-2 FT (below surface)Decon: Dedicated - Each Day - Each LocationEstimated - Measured - Surveyed *OPS*Field Parameters  
(at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <i>X</i> <u>TNT / RDX</u> <i>js 10/24/08</i>	Ignitability
Water Level FT	Metals (Selected) <i>X</i> <u>TNT / RDX</u> <i>js 10/24/08</i>	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

## Sample Description

## Split Sample

Brown silty sand  
Reddish C 2' sand

Split Sample ID:

Name:

Agency/Company:

Address:

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 ListedLogged By: Yavier Sotelo (Please Print)Reviewed by: Stan Levens (Please Print)Signature: Y. SoteloSignature: Stan Levens Date: 10/24/08*QC - js 10/24/08*





Location ID: LL3EB4-SB-0395N - 0001-50 *js 10/24/08* **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/4/08

## Sampling Information

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

Sample Collection: 1130 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in FieldSample Depth: 0 - 2.25 FT (below surface)Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters  
(at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓</u> <u>TNT/RDX</u> <i>js 10/24/08</i>	Ignitability
Water Level: FT	Metals (Selected) <u>✓</u> <u>TOT/RDX</u> <i>js 10/24/08</i>	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH: units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen: Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential: mV	Propellants	Equipment Rinse ID NA
Turbidity: N.T.U.		Trip Blank ID NA

## Sample Description

moist, Brown silty SAND w/ gravelRetracted @ 2.25' js 10/24

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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: Stan Avery (Please Print)Signature: Xavier SoteloSignature: Stan Avery Date: 6/20/08QC- js 10/24/08

Location ID: LL3EB4-SB-G40-SN-0001-50 *js 10/24/08* **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/4/08

### Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe <i>js 10/24/08</i>
Type/Construction			Mattocks
Miscellaneous	Well Purging Form Yes - No		<i>JMC</i>

Sample Collection: 1145 hrs  
*1145* - 2.75 FT (below surface)

Sample Type: Composite - MI - Grab  
 If MI, # of increments taken: 1  
 Decon: Dedicated - Each Day - Each Location

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

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: _____ ppm	Explosives (Selected) <i>TNT/ROX</i>	Ignitability
Water Level _____ FT	Metals (Selected) <i>GI</i>	
Temperature _____ °C	Perchlorate	
Sp. Conductance: _____ uMHOs	PCBs	
pH _____ units	Nitrate / Nitrite	
Dissolved Oxygen _____ Mg / L	TPH DRO / HRO	
Redox Potential _____ mV	Propellants	
Turbidity _____ N.T.U.		

**Sample Description**  
moist, brown silty sand w/ gravel  
refused @ 2.75' js 10/24

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: V. A. Sotelo (Please Print)

Signature: V. A. Sotelo

Reviewed by: Stan Leung (Please Print)

Signature: Stan Leung Date: 10 Oct 08

OC- *js 10/24/08*

Location ID: LL3EB4-SB-041-SN-0001-S6 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/4/08

### Sampling Information

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

Sample Collection: 1200 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 Sample Depth: 4 FT (below surface) If MI, # of increments taken: 1 Estimated - Measured - Surveyed  
 Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: <u>1</u> ppm	Explosives (Selected) <u>✓ TNT/ROX</u>	Ignitability
Water Level <u>1</u> FT	Metals (Selected)	
Temperature <u>1</u> °C	Perchlorate	
Sp. Conductance: <u>1</u> uMHOs	PCBs	QA Samples
pH <u>1</u> units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen <u>1</u> Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential <u>1</u> mV	Propellants	Equipment Rinse ID NA
Turbidity <u>1</u> N.T.U.		Trip Blank ID NA

**Sample Description**

moist brown silty sand

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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: Xavier Sotelo (Please Print)  
 Signature: Xavier Sotelo

Reviewed by: Stan Leverage (Please Print)  
 Signature: Stan Leverage Date: 16 October

QC: JA 10/24/08

# Field Sampling Report

Location ID: LL3EB4-SB-0445N-6001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/4/08

## Sampling Information

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

Sample Collection: 1400 hrs  
11:00 AM  
 Sample Depth: 3 FT (below surface)

Sample Type: Composite - MI - Grab  
 If MI, # of increments taken: 1  
 Decon: Dedicated - Each Day - Each Location

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

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

Sample Description  
moist brown silty sand w/ gravel  
Passes #3' js 10/24

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Stan Leverage (Please Print)

Signature: Stan Leverage Date: 11/02/08

QC - js 10/24/08

# Field Sampling Report

Location ID: LL3EB4-SB-0505N-0001-50  
 Date: 4/4/06

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

## Sampling Information

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

Sample Collection: 1412 hrs  
 Sample Depth: 2.16 FT (below surface)

Sample Type: Composite - MI - Grab  
 If MI, # of increments taken:  
 Decont: Dedicated - Each Day - Each Location

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

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
Sample: ppm	SVOC	Reactivity Sulfide/Cyanide
Water Level: FT	Explosives (Selected) <u>✓</u> TNT/RDX <u>✓</u>	Ignitability
Temperature: °C	Metals (Selected)	
Sp. Conductance: uMHOs	Perchlorate	
pH: units	PCBs	
Dissolved Oxygen: Mg / L	Nitrate / Nitrite	
Redox Potential: mV	TPH DRO / HRO	
Turbidity: N.T.U.	Propellants	

**Sample Description**  
moist brown silty sand w/ gravel  
Refusal @ 2.16 ft js 10/24

**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: Xavier Sotelo (Please Print)  
 Signature: Xavier Sotelo

Reviewed by: John Gowers (Please Print)  
 Signature: John Gowers Date: 6 October

QC - js 10/24/06

Location ID: LL3EB4-SB-C435N - **Field Sampling Report**  
0001-S0

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/4/08

## Sampling Information

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

Sample Collection: 1435 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map Staked in FieldSample Depth: 0 - 1.9 FT (below surface)Decon: Dedicated - Each Day Each Location

Estimated - Measured - Surveyed

Field Parameters  
(at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓ TNT/RDX</u>	Ignitability
Water Level: FT	Metals (Selected)	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH: units	Nitrate / Nitrite	
Dissolved Oxygen: Mg / L	TPH DRO / HRO	
Redox Potential: mV	Propellants	
Turbidity: N.T.U.		

## Sample Description

moist brown, silty sand w/ gravelRefusal @ 1.9' 4/10/08

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: Xavier Sotelo (Please Print)Reviewed by: Stan Geyer (Please Print)Signature: Xavier SoteloSignature: Stan Geyer Date: 4/10/08

QC - 4/10/08

# Field Sampling Report

Location ID: LL3 EB4-SB-052 SN-0001-50 *js 10/24/08*

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 7/9/08

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe
Type/Construction			Plastic Liner <i>js 10/24/08</i>
Miscellaneous	Well Purging Form Yes - No		Mattocks

Sample Collection: 1515 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed *js*

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

## Sample Description

moist brown silty sand w/gravel

## 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

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Vaivier Sotelo (Please Print)

Reviewed by: Stan Leverage (Please Print)

Signature: Vaivier Sotelo

Signature: Stan Leverage Date: 10/06/08

QC- js 10/24/08

Location ID: LL3EB4-SB-0425H-001-80 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/4/08

**Sampling Information**

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

Sample Collection: 1535 hrs      Sample Type: Composite - MI - Grab      Location: Plotted on Map - Staked in Field  
Sample Depth: -29 FT (below surface)      Decon: Dedicated - Each Day - Each Location      Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓ TNT/RDX</u>	Ignitability
Water Level: FT	Metals (Selected)	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH: units	Nitrate / Nitrite	
Dissolved Oxygen: Mg / L	TPH DRO / HRO	
Redox Potential: mV	Propellants	
Turbidity: N.T.U.		

**Sample Description**  
moist brown silty sand  
Refusal @ 29' JS 10/24/08

**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: Xavier Sotelo (Please Print)      Reviewed by: Stan Levens (Please Print)  
Signature: Xavier Sotelo      Signature: Stan Levens      Date: 10/24/08

DC - JS 10/24/08



# Field Sampling Report

Location ID: LL3 EBG6A-SB-0825N-0001-S0

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/4/08

## 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	
Miscellaneous	Well Purging Form Yes - No		UMC	

Sample Collection: 1640 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)	Analytical Parameters			Other Parameters		
PID / FID Readings: Background: <u>0.0</u> ppm	VOC			Corrosivity		
	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<u>✓</u>	<u>TNT/RDX</u>	Ignitability		
Water Level: FT	Metals (Selected)					
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.						

### Sample Description

moist brown silty SAND w/ gravel

### 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

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Kevin Sotelo (Please Print)

Reviewed by: Stan Levens (Please Print)

Signature: Kevin Sotelo

Signature: Stan Levens Date: 4/10/08

QC - js 10/24/08

# Field Sampling Report

Location ID: LL3EB10-SB-0215N-0001-20

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/7/08

1st 09 APR

## 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	
Miscellaneous	Well Purging Form Yes - No				JMC	

Sample Collection: 1600 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 1.66 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)		Analytical Parameters				Other Parameters			
PID / FID Readings:		VOC				Corrosivity			
Background:	<u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	ppm	Explosives (Selected)	<u>✓</u>	<u>TNT/ROX</u>		Ignitability			
Water Level	FT	Metals (Selected)							
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.								

## Sample Description

Dry brown silty clay

Perusal @ 1.66' js 10/24

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: Xavier Sotero (Please Print)

Reviewed by: Stan Swartz

(Please Print)

Signature: Xavier Sotero

Signature: Stan Swartz Date: 09/08

QC - js 10/24/08

Location ID: LL3EB10-SB-0265N-0001-50 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/7/081 JS 09 Apr

## Sampling Information

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

Sample Collection: 0920 hrs  
Sample Depth: 0-3.25 FT (below surface)Sample Type: Composite - MI - Grab  
If MI, # of increments taken:  
Decon: Dedicated - Each Day - Each LocationLocation: Plotted on Map - Staked in Field  
Estimated - Measured - Surveyed  
GPS

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓</u> <u>TNT/ROX</u>	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH units	Nitrate / Nitrite	
Dissolved Oxygen Mg/L	TPH DRO / HRO	
Redox Potential mV	Propellants	
Turbidity N.T.U.		

Sample Description  
Dry brown silty clay  
Refusal @ 3.25' JS 10/24/08

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: Xavier Sotelo (Please Print)Signature: Xavier SoteloReviewed by: John Sotelo (Please Print)Signature: John Sotelo Date: 09 Apr 08

QC- JS 10/24/08

# Field Sampling Report

Location ID: LL3 EB10-SB-0183N-SV-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/7/08

## 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	
Miscellaneous	Well Purging Form Yes - No				J.M.C.	

Sample Collection: 0955 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 Sample Depth: 3.66 FT (below surface) If MI, # of increments taken: 1 Estimated - Measured - Surveyed  
 Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)		Analytical Parameters				Other Parameters			
PID / FID Readings:		VOC				Corrosivity			
Background:	<u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	ppm	Explosives (Selected)	<u>✓</u>	<u>TNT/RDX</u>		Ignitability			
Water Level	FT	Metals (Selected)				QA Samples			
Temperature	°C	Perchlorate							
Sp. Conductance:	µMHOs	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.								

**Sample Description**

Dry brown silty clay

Refusal @ 3.66' JS 10/24/08

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: Kumar Sotelo (Please Print)  
 Signature: Kumar Sotelo

Reviewed by: Stan Lewis (Please Print)  
 Signature: Stan Lewis Date: 09 April

QC- JS 10/24/08

Location ID: LL3EB10-SB-6255N-S0 6001-S0 11-29 Apr **Field Sampling Report** RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

**RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH**

Date: 4/7/08

### Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	JK 10/21/00	Plastic Liner	✓
Type/Construction					Mattocks			
Miscellaneous	Well Purging Form Yes - No				unc			

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:	ppm	Explosives (Selected)	✓	TNT/RDX		Ignitability			
Water Level	FT	Metals (Selected)							
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.								

Sample Description	Split Sample
dry brown silty clay	Split Sample ID:
	Name:
	Agency/Company:
	Address:
<p>Soil sample description should include:</p> <p>Munsell Color   Odor   Staining   Texture   Sorting   Plasticity   Moisture</p> <p>Water sample description should include:</p> <p>Color   Odor   Sheen   Turbidity</p>	<p>QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks</p> <p>Parameters: Same as Above - As Listed</p>

Signature: [Signature] Date: 09/10/08

QC - for 10/24/08

Location ID: LL3EB10-SB-016SN-S0-0001-S0 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/7/08

### Sampling Information

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

Sample Collection: 1030 hrs

Sample Type: Composite - MI - Grab  
If MI, # of increments taken: 1

Location: Plotted on Map - Skipped in Field  
Estimated - Measured - 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: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓ TNT/RDX</u>	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
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.		

### Sample Description

Brown silty clay

### 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

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Xavier Sotelo (Please Print)

Reviewed by: Stan Lowers (Please Print)

Signature: Xavier Sotelo

Signature: Stan Lowers Date: 09/24/08

QC - 10/24/08

Location ID: LL3 EB10-SB-0175N-S

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/7/08

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe
Type/Construction			Mattocks
Miscellaneous	Well Purging Form Yes - No		UMC

Sample Collection: 11/5 hrsSample Type: Composite - MI - Grab JS 10/24/08  
If MI, # of increments taken:Location: Plotted on Map Staked in Field  
Estimated - Measured Surveyed  
GPSSample 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: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓</u> <u>TNT/ROX</u>	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

## Sample Description

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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: Stan Levens (Please Print)Signature: Xavier SoteloSignature: Stan Levens Date: 09 April

QC - JS 10/24/08

# Field Sampling Report

Location ID: LL3 EB/0-SB-019SN-SJ-001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/7/08

## Sampling Information

Source	Groundwater / Product		Surface Water		Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle		Scoop		Trowel	
	Pump		Bacon Bomb		Bowl		Hand Auger	
					Push Probe	<i>js 10/24/08</i>	Plastic Liner	<input checked="" type="checkbox"/>
Type/Construction					Mattocks			
Miscellaneous	Well Purging Form Yes - No				<i>UML</i>			

Sample Collection: 1340 hrs

Sample Type: Composite - MI - Grab *js 10/24/08*  
If MI, # of increments taken: 1

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

Sample Depth: 3.45 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: <u>0.0</u> ppm		SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm		Explosives (Selected) <input checked="" type="checkbox"/> <u>TNT/ROX</u>				Ignitability			
Water Level FT		Metals (Selected)							
Temperature °C		Perchlorate							
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.									

## Sample Description

Dry brown, silty clay w/ cobbles and construction debris

Refusal @ 3.45' js 10/24

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: Xavier Soto (Please Print)

Signature: Xavier Soto

Reviewed by: Stan Owen (Please Print)

Signature: Stan Owen Date: 09 Apr 08

*DL - js 10/24/08*



# Field Sampling Report

Location ID: LL3EB10-SB-0245N-000450

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/7/08

## Sampling Information

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

Sample Collection: 1400 hrs

Sample Type: Composite - MI - Grab 10/24/08

Location: Plotted on Map Staked in Field

Sample Depth: -3.25 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured Surveyed GPS

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓</u> <u>TNT/RDX</u>	Ignitability
Water Level: FT	Metals (Selected)	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH: units	Nitrate / Nitrite	
Dissolved Oxygen: Mg/L	TPH DRO / HRO	
Redox Potential: mV	Propellants	
Turbidity: N.T.U.		

**Sample Description**

Dry brown clay w/ cobbles and congl. debris

Revised 3.25' 10/24

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Stan Laverge (Please Print)

Signature: Stan Laverge Date: 09/24/08

QC 10/24/08

Location ID: LL3EB10-SB-0235N-SU-0001-50

Date: 4/7/06

Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

1809APD

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	
Miscellaneous	Well Purging Form Yes - No				JMC	

Sample Collection: 1505 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map Staked in Field

Sample Depth: 0-36 FT (below surface)

If MI, # of increments taken: \_\_\_\_\_

Estimated - Measured - Surveyed

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)		Analytical Parameters				Other Parameters			
PID / FID Readings:		VOC				Corrosivity			
Background:	<u>0.2</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	<u>TNT/RDX</u>		Ignitability			
Water Level	FT	Metals (Selected)							
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.								

Sample Description

Brown silty clay

Refract @ 3.10' js 10/24

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Stanley (Please Print)

Signature: Stanley Date: 09/06/06

QC - js 10/24/06

# Field Sampling Report

Location ID: LLJEB10-SB-0145N5-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/7/04

## Sampling Information

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

Sample Collection: 1530 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓</u> <u>TNT/ROX</u>	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH units	Nitrate / Nitrite	
Dissolved Oxygen Mg / L	TPH DRO / HRO	
Redox Potential mV	Propellants	
Turbidity N.T.U.		

## Sample Description

DRY BROWN silty clay w/ cobbles and const debris

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: Xavier Sotelo (Please Print)

Reviewed by: Stan Lewis

Signature: Xavier Sotelo

Signature: Stan Lewis

Date: 09Apr04

QC. JS 10/24/00

LL3EB4X - EPA1-DUPE <sup>X-2</sup>  
 Location ID: EPA1-DUPE

# Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/8/06

## Sampling Information

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

Sample Collection: 1510 hrs      Sample Type: Composite - MI - Grab      Location: Plotted on Map Staked in Field  
 If MI, # of increments taken: \_\_\_\_\_  
 Sample Depth: 0 1 FT (below surface)      Decon: Dedicated - Each Day - Each Location      Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: _____ ppm	Explosives (Selected) <u>✓</u> <u>TNT/RDX</u>	Ignitability
Water Level _____ FT	Metals (Selected)	
Temperature _____ °C	Perchlorate	
Sp. Conductance: _____ uMHOs	PCBs	
pH _____ units	Nitrate / Nitrite	
Dissolved Oxygen _____ Mg / L	TPH DRO / HRO	
Redox Potential _____ mV	Propellants	
Turbidity _____ N.T.U.		

**Sample Description**  
silty clay pink residue under water

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: Xavier Sotelo (Please Print)  
 Signature: Xin Sot

Reviewed by: Stan Levenez (Please Print)  
 Signature: Stan Levenez Date: 10 April

QC - JS 10/24/06

Location ID: LL3EB4A-EPA2-DUPE

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/8/06

## Sampling Information

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

Sample Collection: 1515 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map Staked in Field

If MI, # of increments taken: \_\_\_\_\_

Estimated - Measured - Surveyed

Sample Depth 0-1 FT (below surface)Decor: Dedicated - Each Day - Each LocationField Parameters  
(at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:

Background: 0.0 ppm

VOC

SVOC

Corrosivity

Reactivity Sulfide/Cyanide

Sample:

ppm

Explosives (Selected)

✓ TNT/Rx

Ignitability

Water Level

FT

Metals (Selected)

Temperature

°C

Perchlorate

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.

## Sample Description

silty clay in pink water

## Split Sample

Split Sample ID:

Name:

Agency/Company:

Address:

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 ListedLogged By: XAVIER Soleda (Please Print)Reviewed by: Staple (Please Print)Signature: Xin SuSignature: Staple Date: 10 April

QC-JS 10/24/06

# Field Sampling Report

Location ID: LL3ED4A - EPA3 - DUPE

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/8/08

## Sampling Information

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

Sample Collection: 152 hrs

Sample Type: Composite - MI Grab

Location: Plotted on Map - Staked in Field

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: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: _____ ppm	Explosives (Selected) <u>✓</u> <u>TNT/ROX</u>	Ignitability
Water Level _____ FT	Metals (Selected)	
Temperature _____ °C	Perchlorate	
Sp. Conductance: _____ uMHOs	PCBs	
pH _____ units	Nitrate / Nitrite	
Dissolved Oxygen _____ Mg / L	TPH DRO / HRO	
Redox Potential _____ mV	Propellants	
Turbidity _____ N.T.U.		

## Sample Description

silty clay in pink water

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: Xavier Sotelo (Please Print)

Reviewed by: Sam Lewis (Please Print)

Signature: Xavier Sotelo

Signature: Sam Lewis Date: 04/08/08

QC - js 10/24/08

# Field Sampling Report

Location ID: LL3EB4A-SPA4-Dupe

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/8/06

## Sampling Information

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

Sample Collection: 150 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0 - 1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: _____ ppm	Explosives (Selected) <u>✓</u> <u>TNT/RDX</u>	Ignitability
Water Level _____ FT	Metals (Selected)	
Temperature _____ °C	Perchlorate	
Sp. Conductance: _____ uMHOs	PCBs	
pH _____ units	Nitrate / Nitrite	
Dissolved Oxygen _____ Mg / L	TPH DRO / HRO	
Redox Potential _____ mV	Propellants	
Turbidity _____ N.T.U.		

## Sample Description

Silty clay to wood debris

## 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

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Kayla Sotelo (Please Print)

Reviewed by: Stan Levey (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 10 April 06

QC - js 10/21/06

# Field Sampling Report

Location ID: LL3EAG-SB-0875N-001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/10/08

7/11/2008

## Sampling Information

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

Sample Collection: 1530 hrs  
17:00  
 Sample Depth: 0-4 FT (below surface)

Sample Type: Composite - MI - Grab 10/24/08  
 If MI, # of increments taken:  
 Decon: Dedicated - Each Day Each Location

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

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>2.6</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓</u> <u>INT/RDY</u>	Ignitability
Water Level: FT	Metals (Selected)	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH: units	Nitrate / Nitrite	
Dissolved Oxygen: Mg / L	TPH DRO / HRO	
Redox Potential: mV	Propellants	
Turbidity: N.T.U.		

**Sample Description**  
DRY BROWN SILTY CLAY w/ gravel wet @ 2.5  
ngs

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: Xavier Sobel (Please Print)

Signature: [Signature]

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 12 Apr 08

OC - js 10/24/08



# Field Sampling Report

Location ID: LL3 EB10-SB-0205N-001-10

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/10/06

1 12 Apr

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge	
Method	Bailer	Sample Bottle	Scoop	Trowel
	Pump	Bacon Bomb	Bowl	Hand Auger
			Push Probe <u>js 10/24/06</u>	Plastic Liner <input checked="" type="checkbox"/>
Type/Construction			Mattocks	
Miscellaneous	Well Purging Form Yes - No		JML	

Sample Collection: 0845 hrs

Sample Type: Composite - MI - Grab js 10/24/06

Location: Plotted on Map - Staked in Field

Sample Depth: 3.33 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed GA

Field Parameters (at time of sample)	Analytical Parameters		Other Parameters													
PID / FID Readings:	VOC		Corrosivity													
Background: <u>0.0</u> ppm	SVOC		Reactivity Sulfide/Cyanide													
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/>	<u>ENT/ROX</u>	Ignitability													
Water Level: FT	Metals (Selected)		<b>QA Samples</b> <table border="1"> <tr> <td>MS/MSD</td> <td>Yes / No</td> <td>NA</td> </tr> <tr> <td>Duplicate ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Equipment Rinse ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Trip Blank ID</td> <td></td> <td>NA</td> </tr> </table>		MS/MSD	Yes / No	NA	Duplicate ID		NA	Equipment Rinse ID		NA	Trip Blank ID		NA
MS/MSD	Yes / No	NA														
Duplicate ID		NA														
Equipment Rinse ID		NA														
Trip Blank ID		NA														
Temperature: °C	Perchlorate															
Sp. Conductance: uMHOs	PCBs															
pH: units	Nitrate / Nitrite															
Dissolved Oxygen: Mg / L	TPH DRO / HRO															
Redox Potential: mV	Propellants															
Turbidity: N.T.U.																

### Sample Description

brown sandy gravel w/cobbles

Revised @ 3.33' js 10/24

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: Xavier Sotelo (Please Print)

Reviewed by: Stan Lawer (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 12 Apr

WC js 10/24/06

Location ID: LL3 EB 10 - SB - 015 JV - 001-50 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/10/05 *AA WAP*

### Sampling Information

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

Sample Collection: 0940 hrs

Sample Type: Composite - MI - Grab *js 10/24/05*  
If MI, # of increments taken:

Location: Plotted on Map Staked in Field  
Estimated - Measured - Surveyed *205*

Sample Depth: 2.75 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.2</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/> <u>TNT/RDX</u>	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

### Sample Description

dry brown sand gravel w/ cobbles

Refused @ 2.75' js 10/24/05

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Stacy Lowery (Please Print)

Signature: Stacy Lowery Date: 4/10/05

QC - js 10/24/05

# Field Sampling Report

Location ID: LL3 EB10-SB-0225N-000150

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/10/06

## 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	
Miscellaneous	Well Purging Form Yes - No		dmc	

Sample Collection: 1000 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed (EP)

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<u>✓</u>	<u>TNT/RDX</u>	Ignitability		
Water Level	Metals (Selected)			QA Samples		
Temperature	Perchlorate			MS/MSD	Yes / No	NA
Sp. Conductance: uMHOs	PCBs			Duplicate ID		NA
pH	Nitrate / Nitrite			Equipment Rinse ID		NA
Dissolved Oxygen	TPH DRO / HRO			Trip Blank ID		NA
Redox Potential	Propellants					
Turbidity						

### Sample Description

brnsiky sand w/cobbles

Refusal @ 1.0' JS 10/24/06

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: V. A. Sater (Please Print)

Reviewed by: Stan Leverage (Please Print)

Signature: V. A. Sater

Signature: Stan Leverage Date: 4/10/06

QC - JS 10/24/06

# Field Sampling Report

Location ID: LL3 EB 10 - SB - 01354 - 001

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/10/08

## Sampling Information

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

Sample Collection: 1.15 hrs

Sample Type: Composite - MI - Grab 10/24/08

Location: Plotted on Map - Staked in Field

Sample Depth: 0 - 1.4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed GPS

## Field Parameters (at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings: Background: <u>0.0</u> ppm	VOC				Corrosivity			
	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	<u>✓</u>	<u>TNT / RDX</u>		Ignitability			
Water Level	Metals (Selected)							
Temperature	Perchlorate							
Sp. Conductance: uMHOs	PCBs				MS/MSD	Yes / No	NA	
pH	Nitrate / Nitrite				Duplicate ID		NA	
Dissolved Oxygen	TPH DRO / HRO				Equipment Rinse ID		NA	
Redox Potential	Propellants				Trip Blank ID		NA	
Turbidity								

## Sample Description

Brown sand w/ gravel and cobbles

Refusal @ 1.4' 10/24/08

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: Kavir Soto (Please Print)

Signature: [Signature]

Reviewed by: Stan Levens (Please Print)

Signature: [Signature] Date: 6/24/08

QC - 10/24/08

# Field Sampling Report

Location ID: LL3 EB13B -55-009SW-0001-56

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/10/06

## Sampling Information

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

Sample Collection: 1045 hrs  
 Sample Depth: 0.5 FT (below surface)

Sample Type: Composite - MI - Grab  
 If MI, # of increments taken: \_\_\_\_\_  
 Decon: Dedicated - Each Day - Each Location

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

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

### Sample Description

fill gravel w/ sand  
basal @ 0.5' J8 10/24/06

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: Xavier Solis (Please Print)

Signature: Xavier Solis

Reviewed by: Stan Kover (Please Print)

Signature: Stan Kover Date: 12 April

OC - J8 10/24/06

# Field Sampling Report

Location ID: LL3EB13-55-007 SN-0015

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/10/05

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe
Type/Construction			Mattocks
Miscellaneous	Well Purging Form Yes / No		

Sample Collection: 1100 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field  
Estimated - Measured - 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: Background: <u>0.2</u> ppm	VOC				Corrosivity			
	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	<u>TNT/ROX</u>		Ignitability			
Water Level: FT	Metals (Selected)							
Temperature: °C	Perchlorate							
Sp. Conductance: uMHOs	PCBs							
pH: units	Nitrate / Nitrite							
Dissolved Oxygen: Mg / L	TPH DRO / HRO							
Redox Potential: mV	Propellants							
Turbidity: N.T.U.								

## Sample Description

Silty clay w/ gravel and cobbles

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: Xavier G. G. G. (Please Print)

Signature: [Signature]

Reviewed By: [Signature] (Please Print)

Signature: [Signature] Date: 4/10/05

QC - 10/24/05

# Field Sampling Report

Location ID: LL3EB13A-SS-00850-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/10/08

## Sampling Information

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

Sample Collection: 110 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

If MI, # of increments taken: \_\_\_\_\_

Estimated - Measured - Surveyed

Sample Depth: 0 FT (below surface)

Decon: Dedicated - Each Day - Each Location

## Field Parameters (at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings: Background: <u>6.0</u> ppm	VOC				Corrosivity			
	SVOC				Reactivity Sulfide/Cyanide			
Sample: _____ ppm	Explosives (Selected)	<u>✓</u>	<u>TNT/ROX</u>		Ignitability			
Water Level _____ FT	Metals (Selected)							
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.								

## Sample Description

brown silty clay w/ 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: Xavier Sotelo (Please Print)

Reviewed by: [Signature] (Please Print)

Signature: [Signature]

Signature: [Signature] Date: April

QC - JS 10/24/08

# Field Sampling Report

Location ID: LL3EA5-SS-090 SN 001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/10/09

## Sampling Information

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

Sample Collection: 130 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0-0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓</u> <u>TNT/ROX</u>	Ignitability
Water Level: FT	Metals (Selected)	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH: units	Nitrate / Nitrite	
Dissolved Oxygen: Mg / L	TPH DRO / HRO	
Redox Potential: mV	Propellants	
Turbidity: N.T.U.		

## Sample Description

DRY Brown Silty Clay w/ gravel & organics

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: Xavier Sotelo (Please Print)

Reviewed by: Stanley (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 4/10/09

60- 10/24/08



# Field Sampling Report

Location ID: 143 E428-55-034 SU-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/10/08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1230 hrs      Sample Type: Composite - MI - Grab  
 If MI, # of increments taken: \_\_\_\_\_  
 Location: Plotted on Map - Staked in Field  
 Estimated - Measured - Surveyed  
 Sample Depth: 0.75 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: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: _____ ppm	Explosives (Selected)	<u>✓</u>	<u>TNT / RDX</u>	Ignitability		
Water Level _____ FT	Metals (Selected)					
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.						

**Sample Description**

Dry Brown silty clay w/ gravel

Refusal @ 0.75' js 10/21/08

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: Xavier Sotelo (Please Print)  
 Signature: Xavier Sotelo

Reviewed by: Jim Leverage (Please Print)  
 Signature: Jim Leverage Date: 4/24/08

QC - js 10/21/08

# Field Sampling Report

Location ID: LL3EA21-SS-0315N-000150

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/10/08

## 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	
Miscellaneous	Well Purging Form Yes - No					

Sample Collection: 124 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters															
PID / FID Readings:	VOC				Corrosivity															
Background: <u>0.2</u> ppm	SVOC				Reactivity Sulfide/Cyanide															
Sample: <u>0.2</u> ppm	Explosives (Selected)	<u>✓</u>	<u>TNT/ROX</u>		Ignitability															
Water Level <u>0.2</u> FT	Metals (Selected)				<b>QA Samples</b> <table border="1"> <tr> <td>MS/MSD</td> <td>Yes / No</td> <td>NA</td> </tr> <tr> <td>Duplicate ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Equipment Rinse ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Trip Blank ID</td> <td></td> <td>NA</td> </tr> </table>				MS/MSD	Yes / No	NA	Duplicate ID		NA	Equipment Rinse ID		NA	Trip Blank ID		NA
MS/MSD	Yes / No	NA																		
Duplicate ID		NA																		
Equipment Rinse ID		NA																		
Trip Blank ID		NA																		
Temperature <u>0.2</u> °C	Perchlorate																			
Sp. Conductance: <u>0.2</u> uMHOs	PCBs																			
pH <u>0.2</u> units	Nitrate / Nitrite																			
Dissolved Oxygen <u>0.2</u> Mg / L	TPH DRO / HRO																			
Redox Potential <u>0.2</u> mV	Propellants																			
Turbidity <u>0.2</u> N.T.U.																				

## Sample Description

Dry Brown silty clay w/ 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: Xavier Sobel (Please Print)

Reviewed by: Stan Leverage (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 12 April 08

60- 10/10/08

# Field Sampling Report

Location ID: LL3 EAT-55-030 SN-0001-S0

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/10/06

## Sampling Information

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

Sample Collection: 1255 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map Staked in Field

If MI, # of increments taken: \_\_\_\_\_

Estimated - Measured - Surveyed

Sample Depth: 0.9 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: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: _____ ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	<u>TNT/RDX</u>		Ignitability			
Water Level _____ FT	Metals (Selected)							
Temperature _____ °C	Perchlorate							
Sp. Conductance: _____ uMHOs	PCBs							
pH _____ units	Nitrate / Nitrite							
Dissolved Oxygen _____ Mg / L	TPH DRO / HRO							
Redox Potential _____ mV	Propellants							
Turbidity _____ N.T.U.								

### Sample Description

Brown silty clay w/ gravel

Munsell @ 0.9' JS 10/24/06

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: Kevin Sotelo (Please Print)

Reviewed by: Stan Levens (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 4/10/06

06 - JS 10/24/06

Location ID: LL3 EAG SB-08651-0001-50 **Field Sampling Report** RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH  
Date: 4/10/08 MA 12 Apr 08

### Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe <u>JS 10/24/08</u>
Type/Construction			Mattocks
Miscellaneous	Well Purging Form Yes - No		<u>JMC</u>

Sample Collection: 1515 hrs Sample Type: Composite - MI Grab JS 10/24/08 Location: Plotted on Map - Staked in Field  
Sample Depth: 2.25 FT (below surface) If MI, # of increments taken: 1 Estimated - Measured - Surveyed  
Decon: Dedicated Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters	
PID / FID Readings: Background: <u>1.8</u> ppm	VOC	Corrosivity	
Sample: ppm	SVOC	Reactivity Sulfide/Cyanide	
Water Level FT	Explosives (Selected) <u>✓</u> <u>TNT/RDX</u>	Ignitability	
Temperature °C	Metals (Selected)	<b>QA Samples</b>	
Sp. Conductance: uMHOs	Perchlorate		
pH units	PCBs		MS/MSD Yes / No NA
Dissolved Oxygen Mg / L	Nitrate / Nitrite		Duplicate ID NA
Redox Potential mV	TPH DRO / HRO		Equipment Rinse ID NA
Turbidity N.T.U.	Propellants	Trip Blank ID NA	

**Sample Description**  
Dry brown silty clay w/ gravel and coarse debris  
Subsail 0.25' JS 10/24/08

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: Xavier S. Leach (Please Print)  
Signature: Xavier S. Leach

Reviewed by: John Leach (Please Print)  
Signature: John Leach Date: 12 Apr 08

QC - JS 10/24/08

Location ID: LL3 EAG - SB - 089 SN - 000150 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/10/08

12 Apr 08

### Sampling Information

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

Sample Collection: 170 hrs  
Sample Depth: 2-4 FT (below surface)

Sample Type: Composite - MI - Grab  
If MI, # of increments taken: 1  
Decon: Dedicated - Each Day - Each Location

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

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>3.4</u> ppm	VOC	Corrosivity
Sample: ppm	SVOC	Reactivity Sulfide/Cyanide
Water Level: FT	Explosives (Selected) <u>✓</u> TNT / RDX	Ignitability
Temperature: °C	Metals (Selected)	
Sp. Conductance: uMHOs	Perchlorate	
pH: units	PCBs	
Dissolved Oxygen: Mg / L	Nitrate / Nitrite	
Redox Potential: mV	TPH DRO / HRO	
Turbidity: N.T.U.	Propellants	

**Sample Description**  
sandy gravel w/ clay fill

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**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: Xavier Soto (Please Print)  
Signature: Xavier Soto

Reviewed by: Steph Leverage (Please Print)  
Signature: Steph Leverage Date: 12 Apr

OC - js 10/24/08

Location ID: LL3 EA6-SB-0885N-0001/10 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/6/06

## Sampling Information

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

Sample Collection: 1726 hrsSample Type: Composite - MI - Grab 10/24/06  
If MI, # of increments taken: 1Location: Plotted on Map - Staked in Field  
Estimated - Measured - SurveyedSample Depth: 2.9 FT (below surface)

Decor: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>3.2</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓</u> <u>TNT/RDX</u>	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH units	Nitrate / Nitrite	
Dissolved Oxygen Mg / L	TPH DRO / HRO	
Redox Potential mV	Propellants	
Turbidity N.T.U.		

## Sample Description

wet silty gravel w/ clay wet @ 1' bgsRefusal @ 2.9' js 10/24/06

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 ListedLogged By: X. A. W. Jeter (Please Print)Signature: [Signature]Reviewed by: Stan Leverage (Please Print)Signature: [Signature] Date: 10/24/06QC - js 10/24/06

Location ID: LL3 FAC-SB-090 SW-001-SO

Date: 4/10/06

Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

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

Sample Collection: 1745 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

If MI, # of increments taken: \_\_\_\_\_

Estimated - Measured - Surveyed

Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>3.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: _____ ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	<u>TNT / RDX</u>	Ignitability		
Water Level _____ FT	Metals (Selected)					
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.						

<div>Sample Description</div> <div><u>Loose silty sand w/ gravel @ 2' bgs</u></div>	<div>Split Sample</div> <div>Split Sample ID: _____</div> <div>Name: _____</div> <div>Agency/Company: _____</div> <div>Address: _____</div> <div>QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks</div> <div>Parameters: <u>Same as Above - As Listed</u></div>
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Soil sample description should include:  
Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:  
Color Odor Sheen Turbidity

Logged By: Kevin Sobel (Please Print)

Reviewed by: John Fevery (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 6 Apr 06

QC - js 10/21/06

**RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH**

Date: 5/17/08

21 April

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

Sample Collection: 1745 hrs

Sample Type: Composite - MI - Grab

**Location:** Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: If MI, # of increments taken: \_\_\_\_\_  
Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

[illegible]

## Split Sample

dry to moist brown silty clay

Split Sample ID:

**Name:**

Agency/Company:

**Address:**

**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: Xavier Sotelo (Please Print)

Signature: [Signature]

Reviewed by: A. J. H. Lencina (Please Print)

Signature: [Signature] Date: 21 April

QC- Jo 10/24/06



## Field Sampling Report

Location ID: LL2 DB4A-SB-0195W-0001-S

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/17/08↑ APV

## 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	
Miscellaneous	Well Purging Form Yes - No		JMC	

Sample Collection: 1725 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in Field

If MI, # of increments taken: \_\_\_\_\_

Estimated - Measured - SurveyedSample 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: <u>0.2</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: _____ ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability		
Water Level _____ FT	Metals (Selected)					
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.						

## Sample Description

dry 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 ListedLogged By: Kavir Satchu (Please Print)Reviewed by: Stan Levers (Please Print)Signature: Kavir SatchuSignature: Stan Levers Date: 21 AprilDC - js ldm/lbs

# Field Sampling Report

Location ID: LL2 DB4A-SB-0195N-000150

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/17/08

## 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	
Miscellaneous	Well Purging Form Yes - No		JMC	

Sample Collection: 1645 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed  
6 PS

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters
PID / FID Readings:	VOC			Corrosivity
Background: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/RDX	Ignitability
Water Level	Metals (Selected)			
Temperature	Perchlorate			
Sp. Conductance:	PCBs			QA Samples
pH	Nitrate / Nitrite			MS/MSD
Dissolved Oxygen	TPH DRO / HRO			Yes / No
Redox Potential	Propellants			NA
Turbidity				Duplicate ID
				Equipment Rinse ID
				Trip Blank ID

Sample Description  
dry brown silty clay wet @ 3.9' bgs

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD, Duplicate, Top Blanks, Field Blanks

Parameters: Same as Above - As Listed

Logged By: Xavier Salda (Please Print)

Reviewed by: Stan Averez (Please Print)

Signature: Xavier Salda

Signature: Stan Averez Date: 21 Apr 08

QC Jack 4/11/08

# Field Sampling Report

Location ID: 622 DB44-SB-017 SW-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/17/09

## 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	
Miscellaneous	Well Purging Form Yes - No		JML	

Sample Collection: 1615 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

If MI, # of increments taken:

Estimated - Measured - 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: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability		
Water Level FT	Metals (Selected)					
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.						

## Sample Description

dry to moist soft to med. silty 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: Xavier Sotelo (Please Print)

Reviewed by: Alan Wong (Please Print)

Signature: Xavier Sotelo

Signature: Alan Wong Date: 2/18/09

QC - 8/10/24/08

# Field Sampling Report

Location ID: LL2 DB4A-SB-0165N-001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/17/08

M. & APV

## 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	
Miscellaneous	Well Purging Form Yes - No		J m c	

Sample Collection: 1600 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured Surveyed  
GRS

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters														
PID / FID Readings:	VOC				Corrosivity														
Background: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide														
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX		Ignitability														
Water Level: FT	Metals (Selected)				<b>QA Samples</b> <table border="1"> <tr> <td>MS/MSD</td> <td>Yes / No</td> <td>NA</td> </tr> <tr> <td>Duplicate ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Equipment Rinse ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Trip Blank ID</td> <td></td> <td>NA</td> </tr> </table>			MS/MSD	Yes / No	NA	Duplicate ID		NA	Equipment Rinse ID		NA	Trip Blank ID		NA
MS/MSD	Yes / No	NA																	
Duplicate ID		NA																	
Equipment Rinse ID		NA																	
Trip Blank ID		NA																	
Temperature: °C	Perchlorate																		
Sp. Conductance: uMHOs	PCBs																		
pH: units	Nitrate / Nitrite																		
Dissolved Oxygen: Mg / L	TPH DRO / HRO																		
Redox Potential: mV	Propellants																		
Turbidity: N.T.U.																			

### Sample Description

dry to moist brown s. clay 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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Stan Levers (Please Print)

Signature: Stan Levers Date: 2/2/08

DC- js 10/24/08

# Field Sampling Report

Location ID: LL2 DB4A-SB-015SH-0001-SD

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/17/2008

## Sampling Information

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

Sample Collection: 1430 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 3.5 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed  
6PS

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

### Sample Description

dry brown silty clay w/c concrete debris

Refused @ 3.5' by 10/21/08

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: John Swartz (Please Print)

Signature: John Swartz Date: 4/17/08

AL - 10/21/08

Date: 4/17/2008 AA 21APR

**Sampling Information**

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe
Type/Construction			Mattocks
Miscellaneous	Well Purging Form Yes - No		Plastic Liner <input checked="" type="checkbox"/>

Sample Collection: 1415 hrs

Sample Type: Composite - MI Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured 62 GR

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/>	Ignitability
Water Level	TNT/ RDX	
Temperature	Metals (Selected)	
Sp. Conductance:	Perchlorate	
pH	PCBs	
Dissolved Oxygen	Nitrate / Nitrite	
Redox Potential	TPH DRO / HRO	
Turbidity	Propellants	

**Sample Description**

dry brown silty clay

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**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: \_\_\_\_\_

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

Parameters: Same as Above - As Listed

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Logged By: AA versotelo (Please Print)

Signature: Kris Soto

Reviewed by: Alan Dwyer (Please Print)

Signature: Alan Dwyer Date: 21APR

QC - js 10/24/08

Location ID: LL DB4A-SB-013SN-000650 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/17/2008

## Sampling Information

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

Sample Collection: 1400 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 0-4 FT (below surface)Decon: Dedicated - Each Day - Each LocationEstimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0-0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen Mg/L	TPH DRO / HRO	Duplicate ID NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

## Sample Description

dark 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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: [Signature] (Please Print)Signature: [Signature]Signature: [Signature] Date: 21 April

QC - JS 10/24/08

# Field Sampling Report

Location ID: 1 LZ DB17-55-0024N-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/17/2008

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 0930 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

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

## Sample Description

dry brown silty clay w/ debris

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: Xavier Soto (Please Print)

Reviewed by: John Levens (Please Print)

Signature: Xavier Soto

Signature: John Levens Date: 21 Apr

QC - Jo Weller



Location ID: 112 DB20 - SS-0045N-0001-SU

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/17/2008

## Sampling Information

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

Sample Collection: 0950 hrsSample Type: Composite - MI - Grab  
If MI, # of increments taken: \_\_\_\_\_Location: Plotted on Map - Staked in Field  
Estimated - Measured - SurveyedSample 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: <u>0-0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level	Metals (Selected)	
Temperature	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen	TPH DRO / HRO	Duplicate ID NA
Redox Potential	Propellants	Equipment Rinse ID NA
Turbidity		Trip Blank ID NA

## Sample Description

DRY BROWN SILTY clay w/ coarse debris

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 ListedLogged By: Xavier Soleto (Please Print)Signature: [Signature]Reviewed by: [Signature]Signature: [Signature]Date: 2/18/08

QC - JS 10/24/08

Location ID: LL2 DB 25 - 85 - 0075N - 0001-80

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/17/2008

## Sampling Information

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

Sample Collection: 10/2 hrsSample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

If MI, # of increments taken: \_\_\_\_\_

Estimated - Measured - 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: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: _____ ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level _____ FT	Metals (Selected)	
Temperature _____ °C	Perchlorate	
Sp. Conductance: _____ uMHOs	PCBs	
pH _____ units	Nitrate / Nitrite	
Dissolved Oxygen _____ Mg/L	TPH DRO / HRO	
Redox Potential _____ mV	Propellants	
Turbidity _____ N.T.U.		

## Sample Description

dry brown silty clay w/ construction debris

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 ListedLogged By: Xavier Sotelo (Please Print)Signature: Xavier SoteloReviewed by: Stan Weng (Please Print)Signature: Stan Weng Date: 2 Apr 08

Q-8 10/24/08

# Field Sampling Report

Location ID: LL2 DB9A-55-00FSN-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/17/2008

## Sampling Information

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

Sample Collection: 1035 hrs      Sample Type: Composite - MI - Grab      Location: Plotted on Map - Staked in Field  
At 170878      If MI, # of increments taken: \_\_\_\_\_      Estimated - Measured - Surveyed  
Sample Depth: 0 - 1 FT (below surface)      Decon: Dedicated - Each Day - Each Location      SP

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
Sample: ppm	SVOC	Reactivity Sulfide/Cyanide
Water Level	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Temperature	Metals (Selected)	
Sp. Conductance: uMHOs	Perchlorate	
pH	PCBs	
Dissolved Oxygen	Nitrate / Nitrite	
Redox Potential	TPH DRO / HRO	
Turbidity	Propellants	

**Sample Description**  
DRY Brown silty clay w/ construction debris

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: Xavier Potelo (Please Print)  
Signature: Xavier Potelo

Reviewed by: John Koenig (Please Print)  
Signature: John Koenig Date: 2/14/08

QC - JB 10/4/08

# Field Sampling Report

Location ID: 4L2DB4A VP1-55-088 SW-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/17/2008

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 0.5 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

If MI, # of increments taken: \_\_\_\_\_

Estimated - Measured - 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: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide
Sample: _____ ppm	Explosives (Selected)	<input checked="" type="checkbox"/> TNT/ RDX		Ignitability
Water Level _____ FT	Metals (Selected)			
Temperature _____ °C	Perchlorate			
Sp. Conductance: _____ uMHOs	PCBs			
pH _____ units	Nitrate / Nitrite			
Dissolved Oxygen _____ Mg / L	TPH DRO / HRO			
Redox Potential _____ mV	Propellants			
Turbidity _____ N.T.U.				

## Sample Description

DRY BROWN SILTY clay w/ wood and construction debris

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: John Leverage (Please Print)

Signature: John Leverage Date: 2/2/08

QC - 10/2/08

# Field Sampling Report

Location ID: LL2-DB22-SS-006 SN-0021-510

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/17/2008

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe
Type/Construction			Mattocks
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 - 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: Background: <u>0-0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: _____ ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level _____ FT	Metals (Selected)	
Temperature _____ °C	Perchlorate	
Sp. Conductance: _____ uMHOs	PCBs	QA Samples
pH _____ units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen _____ Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential _____ mV	Propellants	Equipment Rinse ID NA
Turbidity _____ N.T.U.		Trip Blank ID NA

### Sample Description

DRY BROWN SILENTLY w/ construction debris

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: K. J. G. S. G. S. G. (Please Print)

Signature: [Signature]

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 21 April

QC - J8 1024100

# Field Sampling Report

Location ID: 112 DB4-SB-0365N-0001-50 11/21/08  
 Date: 4/18/08

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1550 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 Sample Depth: 0-4 FT (below surface) If MI, # of increments taken: 1 Estimated - Measured - Surveyed  
 Decon: Dedicated - Each Day - Each Location

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

Sample Description  
Silty sand to dry brown lean clay w/ boulders

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

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: Xavier Soto (Please Print)

Signature: Xavier Soto

Reviewed by: Stan Leven (Please Print)

Signature: Stan Leven Date: 21 APR 08

01-101924108

# Field Sampling Report

Location ID: 43DB4-Rt

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 18 Apr 08

Grab sample from elevator sump excavation sidewall

## Sampling Information (North Sump)

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

Sample Collection: 1530 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 3.5 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters			
PID / FID Readings:	VOC				Corrosivity			
Background: <u>0-0</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	X	TNT/ROX	X	Ignitability			
Water Level	Metals (Selected)							
Temperature	Perchlorate				QA Samples			
Sp. Conductance: uMHOs	PCBs				MS/MSD	Yes / No	NA	
pH	Nitrate / Nitrite				Duplicate ID		NA	
Dissolved Oxygen	TPH DRO / HRO				Equipment Rinse ID		NA	
Redox Potential	Propellants				Trip/Blank ID		NA	
Turbidity								

### Sample Description

Heavy red staining, possible energetics in stained zone, silt/sand with clay, soil is red br w/o staining, no odor, not plastic, MST, well sorted

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: Alan Leary (Please Print)

Reviewed by: Jennifer Shepard (Please Print)

Signature: Alan Leary

Signature: Jennifer Shepard Date: 10/24/08

QC John 11/11/08

# Field Sampling Report

Location ID: LL2DPH-SB-035-0001-0

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/18/08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1500 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓ TNT/RDX</u>	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
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.		

**Sample Description**

send to dry brown clay

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**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:

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Name:

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Agency/Company:

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Address:

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

Parameters: Same as Above - As Listed

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Logged By: Kaurer Sotelo (Please Print)

Signature: [Signature]

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 2/1/08

OC - js 10/21/08



# Field Sampling Report

Location ID: LL2DB4-SB-0345N-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/19/08

↑ 1.2  
2/1 Apr 08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1445 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters			
PID / FID Readings:	VOC				Corrosivity			
Background: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	✓	TNT/RDX		Ignitability			
Water Level FT	Metals (Selected)							
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.								

## Sample Description

Dry brown to gray lean 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: Kaiser Sotelo (Please Print)

Reviewed by: Stan Levensen (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 2/1 Apr 08

QC - 10/24/08

# Field Sampling Report

Location ID: LL4G20-SS-036 SN-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/18/08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 1200 hrs      Sample Type: Composite - MI - Grab      Location: Plotted on Map - Staked in Field  
 Sample Depth: 0-1 FT (below surface)      If MI, # of increments taken: 1      Estimated - Measured - Surveyed  
 Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters		
PID / FID Readings:	VOC				Corrosivity		
Background: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<u>✓</u>	<u>TNT/ROX</u>		Ignitability		
Water Level	Metals (Selected)						
Temperature	Perchlorate				QA Samples		
Sp. Conductance: uMHOs	PCBs				MS/MSD	Yes / No	NA
pH	Nitrate / Nitrite				Duplicate ID		NA
Dissolved Oxygen	TPH DRO / HRO				Equipment Rinse ID		NA
Redox Potential	Propellants				Trip Blank ID		NA
Turbidity							

**Sample Description**

moist brn clay w/ gravel and cobbles

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: John Savage (Please Print)

Signature: John Savage Date: 21 April

DC - for 10/11/08

# Field Sampling Report

Location ID: LL3 EB4A VPI-SS-035N-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/15/08

## Sampling Information

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

Sample Collection: 1145 hrs      Sample Type: Composite - MI Grab      Location: Plotted on Map - Staked in Field  
 Sample Depth: 0-1 FT (below surface)      If MI, # of increments taken: 1      Estimated - Measured - Surveyed  
 Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.2</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓</u> <u>TNT/RDX</u>	Ignitability
Water Level: FT	Metals (Selected)	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH: units	Nitrate / Nitrite	
Dissolved Oxygen: Mg / L	TPH DRO / HRO	
Redox Potential: mV	Propellants	
Turbidity: N.T.U.		

**Sample Description**  
brown silty sand w/ clay and debris

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: Kavir S. Garg (Please Print)

Signature: Kavir S. Garg

Reviewed by: Stan Kewenig (Please Print)

Signature: Stan Kewenig Date: 2/1/08

QC - 10/24/08

# Field Sampling Report

Location ID: LL2 DB4A-SB -0275N-0001 SD

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/18/08

AA  
21 Apr

## 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	
Miscellaneous	Well Purging Form Yes - No		JMC	

Sample Collection: 0955 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

## Field Parameters (at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:  
Background: 0.0 ppm

VOC

Corrosivity

SVOC

Reactivity Sulfide/Cyanide

Sample: ppm

Explosives (Selected)

✓ TNT/ROX

Ignitability

Water Level FT

Metals (Selected)

Temperature °C

Perchlorate

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.

## Sample Description

## Split Sample

dry to moist brown silty clay w/ construction debris

Split Sample ID:

Name:

Agency/Company:

Address:

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: Xavier Sotelo (Please Print)

Reviewed by: Stan Levens (Please Print)

Signature: Xavier Sotelo

Signature: Stan Levens Date: 21 Apr 08

OC- js 10/24/08

# Field Sampling Report

Location ID: LL2 DB4A-SB-028 SN-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/18/08

## 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	
Miscellaneous	Well Purging Form Yes - No		JMC	

Sample Collection: 0730 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

If MI, # of increments taken: \_\_\_\_\_

Estimated - Measured - 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: <u>0-0</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: _____ ppm	Explosives (Selected)	<u>✓</u>	<u>TNT/RDX</u>		Ignitability			
Water Level _____ FT	Metals (Selected)							
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.								

### Sample Description

dry brown silty clay

### 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

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Xavier Sotelo (Please Print)

Reviewed by: Stan Lawrence (Please Print)

Signature: Xavier Sotelo

Signature: Stan Lawrence Date: 21 April 2008

QC - JS 10/24/08

## Field Sampling Report

Location ID: LL2 DB4A-SB-0235N-0001-SD 182/181

**RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH**

Date: 4/18/08

### 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			
Miscellaneous	Well Purging Form Yes - No				JMC.			

Sample Collection: 0910 hrs

**Sample Type:** Composite - MI - Grab

**Location:** Plotted on Map - ~~Staked in Field~~

Sample Depth: 0-4 FT (below surface)

If MI, # of increments taken:  
Decon: ~~Dedicated~~ - Each Day - Each Location

Estimated - Measured - Surveyed

Estimated - Measured - Surveyed

Field Parameters (at time of sample)		Analytical Parameters				Other Parameters			
PID / FID Readings:		VOC				Corrosivity			
Background:	0.0 ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample:	ppm	Explosives (Selected)	✓	TNT/RDX		Ignitability			
Water Level	FT	Metals (Selected)							
Temperature	°C	Perchlorate				QA Samples			
Sp. Conductance:	µMHOs	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.								

### Sample Description

Sample Number	Sample Location	Sample Description
1	100 ft	brown silty clay w/ debris

## Split Sample

**Split Sample ID:**

**Name:**

Agency/Company:

**Address:**

**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/MSE - Duplicate - Trip Blanks - Field Blanks  
**Parameters:** Same as Above - As Listed

Logged By: Xavier Sotelo (Please Print)

Signature: *[Signature]*

Reviewed by: LEAH LEVINE (Please Print)

Signature: [Signature] Date: 7/1/00

ac-fs 10/24/08

Location ID: LL2 DB4A-SB-022 SN-0001-50 **Field Sampling Report**

**RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH**

AD  
21 Apr

Source	Groundwater / Product		Surface Water	Soils / Sediments / Sludge			
Method	Bailer		Sample Bottle	Scoop		Trowel	
	Pump		Bacon Bomb	Bowl		Hand Auger	
				Push Probe	JS 100	Plastic Liner	✓
Type/Construction				Mattocks			
Miscellaneous	Well Purging Form Yes - No			JMC			

Estimated - Measured - Surveyed

[illegible]

Sample: brown silty clay

*Color    Odor    Sheen    Turbidity*

**Split Sample ID:**

**Address:**

**QA/QC Provided:** MSMSD - Duplicate - Trip Blanks - Field Blanks  
**Parameters:** Same as Above - As Listed

Reviewed by: Stacy Lawrence (Please Print)

Signature: [Signature] Date: 1 April

QC- # 10/24/08

# Field Sampling Report

Location ID: L12 DB4A-SB-021 SN-001-S10

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/18/08

## 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	
Miscellaneous	Well Purging Form Yes - No		JMC	

Sample Collection: 0815 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed  
GPS

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<u>✓</u>	<u>INR/RDX</u>	Ignitability		
Water Level	Metals (Selected)					
Temperature	Perchlorate			QA Samples		
Sp. Conductance: uMHCs	PCBs			MS/MSD	Yes / No	NA
pH	Nitrate / Nitrite			Duplicate ID		NA
Dissolved Oxygen	TPH DRO / HRO			Equipment Rinse ID		NA
Redox Potential	Propellants			Trip Blank ID		NA
Turbidity						

**Sample Description**

dry brown silty clay

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**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: \_\_\_\_\_

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**QA/QC Provided:** MS/MSD - Duplicate - Trip Blanks - Field Blanks  
Parameters: Same as Above - As Listed

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Logged By: Xavier Sotelo (Please Print)

Reviewed by: John Leary (Please Print)

Signature: Xavier Sotelo

Signature: John Leary Date: 21 April

QC- 10/24/08



# Field Sampling Report

Location ID: LL2251A-SS-0338N-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/18/08

## Sampling Information

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

Sample Collection: 0910 hrs      Sample Type: Composite - MI - Grab      Location: Plotted on Map - Staked in Field  
 Sample Depth: 0-1 FT (below surface)      If MI, # of increments taken: 1      Estimated - Measured - Surveyed  
 Decon: Dedicated - Each Day - Each Location

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

**Sample Description**  
Silty sand 0.75 bgs to Lean 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: Xavier Sotelo (Please Print)      Reviewed by: Stan Lewis (Please Print)  
 Signature: Xavier Sotelo      Signature: Stan Lewis      Date: 2/18/08

QC - 10/24/08

Location ID: LL2251-SS-032SN-0001-50

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/18/08

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge	
Method	Bailer	Sample Bottle	Scoop	Trowel
	Pump	Bacon Bomb	Bowl	Hand Auger
			Push Probe	<input checked="" type="checkbox"/> Plastic Liner
Type/Construction			Mattocks	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 0900 hrsSample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

If MI, # of increments taken:

Estimated - Measured - SurveyedSample Depth: 0-1 FT (below surface)Decon: Dedicated - Each Day - Each LocationField Parameters  
(at time of sample)

## Analytical Parameters

## Other Parameters

## PID / FID Readings:

Background:

0.0 ppm

VOC

SVOC

Corrosivity

Reactivity Sulfide/Cyanide

Sample:

ppm

Explosives (Selected)

☒ TNT/ RDX

Ignitability

Water Level

FT

Metals (Selected)

Temperature

°C

Perchlorate

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.

## Sample Description

Silty sand 0.5 lbs to clay

## 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

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Xavier Setelo (Please Print)Reviewed by: Stan Leung (Please Print)Signature: Xavier SeteloSignature: Stan Leung Date: 2/18/08

QC- 10/21/00

# Field Sampling Report

Location ID: LL2 DB 8-SS-0319-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/18/08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 0845 hrs      Sample Type: Composite - MI - Grab  
 Sample Depth: 0-1 FT (below surface)      If MI, # of increments taken: \_\_\_\_\_  
 Decon: Dedicated - Each Day - Each Location      Location: Plotted on Map - Staked in Field  
 Estimated - Measured - Surveyed *663*

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters														
PID / FID Readings:	VOC				Corrosivity														
Background: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide														
Sample: _____ ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/RDX		Ignitability														
Water Level _____ FT	Metals (Selected)				<b>QA Samples</b> <table border="1"> <tr> <td>MS/MSD</td> <td>Yes / No</td> <td>NA</td> </tr> <tr> <td>Duplicate ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Equipment Rinse ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Trip Blank ID</td> <td></td> <td>NA</td> </tr> </table>			MS/MSD	Yes / No	NA	Duplicate ID		NA	Equipment Rinse ID		NA	Trip Blank ID		NA
MS/MSD	Yes / No	NA																	
Duplicate ID		NA																	
Equipment Rinse ID		NA																	
Trip Blank ID		NA																	
Temperature _____ °C	Perchlorate																		
Sp. Conductance: _____ uMHOs	PCBs																		
pH _____ units	Nitrate / Nitrite																		
Dissolved Oxygen _____ Mg/L	TPH DRO / HRO																		
Redox Potential _____ mV	Propellants																		
Turbidity _____ N.T.U.																			

**Sample Description**  
moist med stiff brown lean clay

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**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: \_\_\_\_\_

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QA/QC Provided: MS/MSD   Duplicate   Trip Blanks   Field Blanks  
 Parameters: Same as Above   As Listed

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Logged By: Xavier Sotelo (Please Print)  
 Signature: Xavier Sotelo

Reviewed by: [Signature] (Please Print)  
 Signature: [Signature] Date: 21 April

DC- 10/24/08

## Field Sampling Report

Location ID: LL2061-SS-0865N 0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/19/08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 0825 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 2-1 FT (below surface)If MI, # of increments taken:  
Decon: Dedicated - Each Day - Each LocationEstimated - Measured Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0-0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/RDX	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen Mg/L	TPH DRO / HRO	Duplicate ID NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

## Sample Description

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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: [Signature] (Please Print)Signature: [Signature]Signature: [Signature] Date: 21 APR 08

QC - js 10/24/08

# Field Sampling Report

Location ID: LL2 DB3-SS-0053N-0001-S

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/17/08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 0755 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

If MI, # of increments taken: \_\_\_\_\_

Estimated - Measured - 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:

Background: 0.0 ppm

VOC

SVOC

Corrosivity

Reactivity Sulfide/Cyanide

Sample: \_\_\_\_\_ ppm

Explosives (Selected)

TNT/ RDX

Ignitability

Water Level \_\_\_\_\_ FT

Metals (Selected)

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.

### Sample Description

Dry brown silty clay

### Split Sample

Split Sample ID: \_\_\_\_\_

Name: \_\_\_\_\_

Agency/Company: \_\_\_\_\_

Address: \_\_\_\_\_

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: Xavier Sotelo (Please Print)

Reviewed by: [Signature] (Please Print)

Signature: Xavier Sotelo

Signature: [Signature] Date: 2/1/08

DC- 78 10/24/08

Location ID: LL3E84A-SB-100SN-6001-Ss

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4-21-08

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump <u>N</u>	Bacon Bomb	Bowl
	<u>A</u>	<u>BP 4-21-08</u>	Push Probe
Type/Construction			Mattocks
Miscellaneous	Well Purging Form Yes - No		<u>JMC</u>

Sample Collection: 1120 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 0-4 FT (below surface)If MI, # of increments taken:  
Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>✓ RDX/TNT</u>	Ignitability <u>N</u>
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples <u>A</u>
pH units	Nitrate / Nitrite	MS/MSD Yes / No <u>BP</u> NA
Dissolved Oxygen Mg / L	TPH DRO / HRO	Duplicate ID <u>4-21-08</u> NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

## Sample Description

med stiff, dry, brown, silty to sandy clay  
trace gravel, w/ const debris

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 ListedLogged By: Brenda Pratt (Please Print)Reviewed by: Johanna Bartsch (Please Print)Signature: Brenda PrattSignature: Johanna Bartsch Date: 11/11/08

# Field Sampling Report

Location ID: LL3EB4A-SB-1015N-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4-21-08

## Sampling Information

Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump <u>N</u>	Bacon Bomb	Bowl
	<u>A</u>	<u>BP 4-21-08</u>	Push Probe
Type/Construction			Mattocks
Miscellaneous	Well Purging Form Yes - No		<u>JMC</u>

Sample Collection: 1200 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)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>X</u> <u>TNT/RDX</u>	Ignitability <u>N</u>
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH units	Nitrate / Nitrite	MS/MSD Yes / No <u>A</u> NA
Dissolved Oxygen Mg / L	TPH DRO / HRO	Duplicate ID <u>BP 4-21-08</u> NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

med. stiff, dry  
~~soft, moist~~, brown, silty to sandy clay  
trace gravel w/ const. debris  
BP  
4-21-08

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample ID: Split Sample

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: John Burdick (Please Print)

Signature: John Burdick Date: 11/11/08

Location ID: LL2 DB4 -53 -0445N -001 -50

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/23/08

## Sampling Information

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

Sample Collection: 1520 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 0 - 3.5 FT (below surface)Decon: Dedicated Each Day Each Location

Estimated - Measured - Surveyed

Field Parameters  
(at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/>	Ignitability
Water Level	Metals (Selected)	
Temperature	Perchlorate	
Sp. Conductance: uMHOs	PCBs	MS/MSD
pH	Nitrate / Nitrite	Duplicate ID
Dissolved Oxygen	TPH DRO / HRO	Equipment Rinse ID
Redox Potential	Propellants	Trip Blank ID
Turbidity		

## Sample Description

med. stiff, dry, brown clayRefusal @ 3.5' js 10/24/08

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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: [Signature] (Please Print)Signature: [Signature]Signature: [Signature] Date: 24 AprilQC - js 10/24/08



Location ID:

42 DB4-SB-0455N-0601-50

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date:

4/23/08

## 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			

Sample Collection: 1510 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: 0.0 ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	✓	TNT/ RDX	Ignitability		
Water Level	Metals (Selected)					
Temperature	Perchlorate			QA Samples		
Sp. Conductance: uMHOs	PCBs			MS/MSD	Yes / No	NA
pH	Nitrate / Nitrite			Duplicate ID:		NA
Dissolved Oxygen	TPH DRO / HRO			Equipment Rinse ID		NA
Redox Potential	Propellants			Trip Blank ID		NA
Turbidity						

## Sample Description

med. stiff, dry, brown clay w/ 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: Xavier Sotelo (Please Print)

Signature:

Xavier Sotelo

Reviewed by: (Please Print)

Signature:

J. S. Sotelo

Date:

21 April 08

QC - 10/21/08

Location ID: LL2 DB4 -5B - 0465N -0001-50 AT 2A AP

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/23/06

## Sampling Information

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

Sample Collection: 1455 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 0-4 FT (below surface)Decon: Dedicated Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH units	Nitrate / Nitrite	
Dissolved Oxygen Mg / L	TPH DRO / HRO	
Redox Potential mV	Propellants	
Turbidity N.T.U.		

## Sample Description

Med. stiff clay brown clay w/ 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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: Stan Leverage (Please Print)Signature: Xavier SoteloSignature: Stan Leverage Date: 4/23/06

QC - 10/24/06

## Field Sampling Report

Location ID: LL2 DB4-SB-047SN-001-50 29 April

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/23/08

## 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			

Sample Collection: 1420 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map Staked in FieldSample 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: <u>0-6</u> ppm	SVOC				Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX		Ignitability
Water Level FT	Metals (Selected)				
Temperature °C	Perchlorate				
Sp. Conductance: uMHOs	PCBs				QA Samples
pH units	Nitrate / Nitrite				MS/MSD Yes / No NA
Dissolved Oxygen Mg / L	TPH DRO / HRO				Duplicate ID NA
Redox Potential mV	Propellants				Equipment Rinse ID NA
Turbidity N.T.U.					Trip Blank ID NA

## Sample Description

med. stiff, dry, brown clay w/ 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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: Stan Kunk (Please Print)Signature: [Signature]Signature: [Signature] Date: 24 April

DC- JS 10/24/08

## Field Sampling Report

Location ID: LL2 DB4-SB-04FSW-0001-SB *29 Apr*

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/23/08

## 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			

Sample Collection: 1405 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 0-4 FT (below surface)Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

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

## Sample Description

med-stiff, moist brown clay w/ gravel and cobbles

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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: Stacy Levers (Please Print)Signature: Xavier SoteloSignature: Stacy Levers Date: 29 AprilQC - 10/10/08

Location ID: 112 DB4-SB-6495N-0001-50

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/23/08

## 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			

Sample Collection: 1350 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 0-4 FT (below surface)Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0-0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

Soft  
up to 100 to med stiff, dry, brown clay w/ gravel trace  
brick frags.

## Sample Description

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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: Stan Leung (Please Print)Signature: Xavier SoteloSignature: Stan Leung Date: 4/23/08QC: § 10/21/08

## Field Sampling Report

Location ID: LL2 DB84-SS-05950-0001-501

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/23/08

## Sampling Information

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

Sample Collection: 115 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 0-1 FT (below surface)If MI, # of increments taken:  
Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/RDX	Ignitability		
Water Level: FT	Metals (Selected)					
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.						

## Sample Description

Soft, dry, brown silty clay w/ gravel and debris

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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: [Signature] (Please Print)Signature: [Signature]Signature: [Signature] Date: 21 AprilQC- js 10/24/08

# Field Sampling Report

Location ID: LL2 DB10 VP2-55-056SN-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/23/08

## 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			

Sample Collection: 1100 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters
PID / FID Readings:	VOC			Corrosivity
Background: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability
Water Level	Metals (Selected)			
Temperature	Perchlorate			
Sp. Conductance: uMHOs	PCBs			QA Samples
pH	Nitrate / Nitrite			MS/MSD
Dissolved Oxygen	TPH DRO / HRO			Yes / No
Redox Potential	Propellants			NA
Turbidity				Duplicate ID
				Equipment Rinse ID
				Trip Blank ID
				NA

**Sample Description**  
Loose, moist dark brown gravel [Fill]  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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: Xavier Sotelo (Please Print)

Reviewed by: Stan Levens (Please Print)

Signature: Xavier Sotelo

Signature: Stan Levens Date: 21 Apr 08

QC- 4810/4/08

# Field Sampling Report

Location ID: LL2 DB/DVP1-SS-0574-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/23/08

## 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			

Sample Collection: 1110 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

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: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/RDX	Ignitability		
Water Level: FT	Metals (Selected)					
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.						

### Sample Description

Loose, dry, brown sandy gravel (fill)

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: Xavier Sotelo (Please Print)

Reviewed by: [Signature] (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 21 Apr 08

QC- 10/24/08



# Field Sampling Report

Location ID: 42 DB11-SS-0608N-001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/23/08

## 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			

Sample Collection: 640 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0.75 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability		
Water Level	Metals (Selected)					
Temperature	Perchlorate			QA Samples		
Sp. Conductance: uMHOs	PCBs			MS/MSD	Yes / No	NA
pH	Nitrate / Nitrite			Duplicate ID		NA
Dissolved Oxygen	TPH DRO / HRO			Equipment Rinse ID		NA
Redox Potential	Propellants			Trip Blank ID		NA
Turbidity						

### Sample Description

med. stiff, dry, brown clay w/ construction debris

Refuse 0.75' from surface

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: Xavier Sotelo (Please Print)

Reviewed by: John Lawrence (Please Print)

Signature: Xavier Sotelo

Signature: John Lawrence Date: 24 April

OC - js 10/24/08

# Field Sampling Report

Location ID: LL2DB4-SB-037SN-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/23/08

## 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					

Sample Collection: 1015 hrs

Sample Type: Composite - MI - Grab

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)	Analytical Parameters				Other Parameters															
PID / FID Readings:	VOC				Corrosivity															
Background: <u>0 - 2</u> ppm	SVOC				Reactivity Sulfide/Cyanide															
Sample: ppm	Explosives (Selected)	✓	TNT/RDX		Ignitability															
Water Level	Metals (Selected)				<b>QA Samples</b> <table border="1"> <tr> <td>MS/MSD</td> <td>Yes / No</td> <td>NA</td> </tr> <tr> <td>Duplicate ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Equipment Rinse ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Trip Blank ID</td> <td></td> <td>NA</td> </tr> </table>				MS/MSD	Yes / No	NA	Duplicate ID		NA	Equipment Rinse ID		NA	Trip Blank ID		NA
MS/MSD	Yes / No	NA																		
Duplicate ID		NA																		
Equipment Rinse ID		NA																		
Trip Blank ID		NA																		
Temperature	Perchlorate																			
Sp. Conductance:	PCBs																			
pH	Nitrate / Nitrite																			
Dissolved Oxygen	TPH DRO / HRO																			
Redox Potential	Propellants																			
Turbidity																				

### Sample Description

med. stiff, dry, brown clay w/ 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: Xavier Sotelo (Please Print)

Signature: [Signature]

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 29 Apr 08

QC - 10/24/08

# Field Sampling Report

Location ID: LL2 DB4 - SB - 039 SW - 0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/23/08

## 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			

Sample Collection: 1000 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

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: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	Ignitability
Water Level	Metals (Selected)	
Temperature	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH	Nitrate / Nitrite	MS/MSD
Dissolved Oxygen	TPH DRO / HRO	Yes / No
Redox Potential	Propellants	Duplicate ID
Turbidity		Equipment Rinse ID
		Trip Blank ID

### Sample Description

Loose, dry, brown gravelly sand w/ construction debris

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: Xavier Sotelo (Please Print)

Signature: [Signature]

Reviewed by: Stan Levens (Please Print)

Signature: [Signature] Date: 2/24/08

06- 88 10/24/08

## Field Sampling Report

Location ID: LL2 DB4 - SB - 0405N - 00150

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/23/08

## 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			

Sample Collection: 0920 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 1700108 - 2.9 FT (below surface)If MI, # of increments taken:  
Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

## Field Parameters

(at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:	VOC	Corrosivity
Background: <u>0.7</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: _____ ppm	Explosives (Selected) <input checked="" type="checkbox"/>	Ignitability
Water Level _____ FT	Metals (Selected)	
Temperature _____ °C	Perchlorate	
Sp. Conductance: _____ uMHOs	PCBs	QA Samples
pH _____ units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen _____ Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential _____ mV	Propellants	Equipment Rinse ID NA
Turbidity _____ N.T.U.		Trip Blank ID NA

## Sample Description

med. stiff, dry, brown clay w/ pebblesRefusal @ 2.9' J 10/24/08

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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: Stan Kewitz (Please Print)Signature: Xavier SoteloSignature: Stan Kewitz Date: 4/24/08

OC - J 10/24/08

Date: 4/23/08

**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				

Sample Collection: 0905 hrs

Sample Type: Composite - MI - Grab

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

Sample Depth: 170408-0-4 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: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	✓	TNT/ RDX	Ignitability		
Water Level	Metals (Selected)					
Temperature	Perchlorate			QA Samples		
Sp. Conductance: uMHOs	PCBs			MS/MSD	Yes / No	NA
pH	Nitrate / Nitrite			Duplicate ID		NA
Dissolved Oxygen	TPH DRO / HRO			Equipment Rinse ID		NA
Redox Potential	Propellants			Trip Blank ID		NA
Turbidity						

**Sample Description**

med. st, ff, dry, brown clay w/ cobbles

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Stan Winger (Please Print)

Signature: Stan Winger Date: 29 Apr

OC- J8 10/24/08

Date: 4/23/08

**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			

Sample Collection: 0855 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

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: Background: <u>0 - 0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

**Sample Description**

Soft, dry, brown lean clay w/ gravel

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**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: \_\_\_\_\_

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

Parameters: Same as Above As Listed

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Logged By: Xavier Sotelo (Please Print)

Reviewed by: Stan Laverge (Please Print)

Signature: Xavier Sotelo

Signature: Stan Laverge Date: 2/2/08

QC - js 10/21/08

Location ID: LL2DB4-SB-0435W-001-50 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/23/08

## Sampling Information

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

Sample Collection: 0840 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map Staked in FieldSample Depth: 10-4 FT (below surface)Decon: Dedicated - Each Day - Each LocationField Parameters  
(at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:	VOC				Corrosivity				
Background: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide				
Sample: _____ ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX		Ignitability				
Water Level _____ FT	Metals (Selected)								
Temperature _____ °C	Perchlorate								
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.									

## Sample Description

dry to moist, med. stiff brown lean clay w/ 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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: Stanley (Please Print)Signature: Xavier SoteloSignature: Stanley Date: 4/24/08

QC - J8 10/24/08

Location ID: LL2 DB29-SS-061SN-0001-SU

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/24/08

## Sampling Information

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

Sample Collection: 1635 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in Field

If MI, # of increments taken: \_\_\_\_\_

Estimated - Measured - Surveyed

Sample Depth: 1 FT (below surface)Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>00</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: _____ ppm	Explosives (Selected) <u>✓</u> TNT/ RDX	Ignitability
Water Level _____ FT	Metals (Selected)	
Temperature _____ °C	Perchlorate	
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.		

## Sample Description

dry brown clay, 100x

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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: Jim Leverage (Please Print)Signature: Xavier SoteloSignature: Jim Leverage Date: 4/24/08

QC - 10/24/08



## RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

**Date:** 4/24/08

### 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							

Sample Collection: 1640 hrs

Sample Type: Composite - MI - Grab

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

If MI, # of increments taken:

Sample Depth: 2-1 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:	ppm	Explosives (Selected)	✓	TNT/ RDX		Ignitability			
Water Level	FT	Metals (Selected)				<div>QA Samples</div> <div>MS/MSD</div> <div>Yes / No</div> <div>NA</div> <div>Duplicate ID</div> <div>NA</div> <div>Equipment Rinse ID</div> <div>NA</div> <div>Trip Blank ID</div> <div>NA</div>			
Temperature	°C	Perchlorate							
Sp. Conductance:	µMHOs	PCBs							
pH	units	Nitrate / Nitrite							
Dissolved Oxygen	Mg / L	TPH DRO / HRO							
Redox Potential	mV	Propellants							
Turbidity	N.T.U.								

### Sample Description

soft, dry brown clay

## Split Sample

Split Sample ID:

**Name:**

Agency/Company:

**Address:**

**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: Xavier Sotelo (Please Print)

Signature: Keri Jones

Reviewed by: Staff/Teacher (Please Print)

Signature: [Signature] Date: 2/1/20

QC- JS 10/24/08

# Field Sampling Report

Location ID: LL2DB13B-SS-062SN-0001-SD

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/24/08

## 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			

Sample Collection: 1710 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

If MI, # of increments taken: \_\_\_\_\_

Estimated - Measured - 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: <u>0.0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: _____ ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level _____ FT	Metals (Selected)	
Temperature _____ °C	Perchlorate	
Sp. Conductance: _____ uMHOs	PCBs	QA Samples
pH _____ units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen _____ Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential _____ mV	Propellants	Equipment Rinse ID NA
Turbidity _____ N.T.U.		Trip Blank ID NA

### Sample Description

Loose, dry, brown sandy gravel [Fill]

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Stan Keveng (Please Print)

Signature: Stan Keveng Date: 29 Apr 08

QC - Jo 10/24/08

# Field Sampling Report

Location ID: LL2DB13A-SS-0655N-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/24/08

## 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			

Sample Collection: 170 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0 - 1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
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.		

### Sample Description

loose, dry brown silty sand to brown 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: Xavier Sotelo (Please Print)

Signature: [Signature]

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 24 Apr 08

QC - 10/21/08

# Field Sampling Report

Location ID: LL2 DB13-SS-064 SN-0001-S0

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/24/08

## 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			

Sample Collection: 1650 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0 - 1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>0.5</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<u>✓</u>	TNT/ RDX	Ignitability		
Water Level	Metals (Selected)					
Temperature	Perchlorate			QA Samples		
Sp. Conductance: uMHOs	PCBs			MS/MSD	Yes / No	NA
pH	Nitrate / Nitrite			Duplicate ID		NA
Dissolved Oxygen	TPH DRO / HRO			Equipment Rinse ID		NA
Redox Potential	Propellants			Trip Blank ID		NA
Turbidity						

### Sample Description

Soft, dry, brown w/ stained gray soil, no odor

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: Xavier Sotelo (Please Print)

Reviewed by: Stan Levens (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 29 Apr 08

OC - JS 10/24/08

# Field Sampling Report

Location ID: LL3EB4A-SB-0708-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/24/08

## Sampling Information

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

Sample Collection: 1000 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 Sample Depth: 0 - 4 FT (below surface) If MI, # of increments taken: 1  
 Decon: Dedicated - Each Day - Each Location Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.0</u> ppm	VOC	Corrosivity
Sample: ppm	SVOC	Reactivity Sulfide/Cyanide
Water Level FT	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Temperature °C	Metals (Selected)	
Sp. Conductance: uMHOs	Perchlorate	
pH units	PCBs	
Dissolved Oxygen Mg / L	Nitrate / Nitrite	
Redox Potential mV	TPH DRO / HRO	
Turbidity N.T.U.	Propellants	

<p>Sample Description</p> <p><u>med. stiff to stiff dry brown clay w/ construction debris</u></p> <p>Soil sample description should include: Munsell Color Odor Staining Texture Sorting Plasticity Moisture</p> <p>Water sample description should include: Color Odor Sheen Turbidity</p>	<p>Split Sample ID:</p> <p>Name:</p> <p>Agency/Company:</p> <p>Address:</p> <p>QA/QC Provided: MS/MSD Duplicate - Trip Blanks - Field Blanks Parameters: Same as Above - As Listed</p>
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Logged By: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Shirley Leverage (Please Print)

Signature: Shirley Leverage Date: 27 Apr 08

QC - JS 10/24/08

# Field Sampling Report

Location ID: 143EB4A-SB-0715N-0001-50 *AL APW*

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/24/08

## 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			

Sample Collection: 0930 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

If MI, # of increments taken: 1

Estimated - Measured - Surveyed

Sample Depth: 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: <u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: <u>0.0</u> ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability		
Water Level	Metals (Selected)					
Temperature	Perchlorate			QA Samples		
Sp. Conductance:	PCBs			MS/MSD	Yes / No	NA
pH	Nitrate / Nitrite			Duplicate ID		NA
Dissolved Oxygen	TPH DRO / HRO			Equipment Rinse ID		NA
Redox Potential	Propellants			Trip Blank ID		NA
Turbidity						

## Sample Description

med. stiff. dry brown clay w/ construction debris

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: Xavier Sotelo (Please Print)

Signature: [Signature]

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 24 APR 08

QC - JS 10/24/08

# Field Sampling Report

Location ID: LL3 EB4A-SB-072 SN-0051-SO - 12 24 April

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 4/24/08

## 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					

Sample Collection: 0915 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)		Analytical Parameters			Other Parameters		
PID / FID Readings:		VOC			Corrosivity		
Background:	<u>0.0</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample:	ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability		
Water Level	FT	Metals (Selected)					
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.						

### Sample Description

med. stiff, dry, brown clay w/ cobbles and construction debris

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: Xavier Sotelo (Please Print)

Reviewed by: Sam Kwong (Please Print)

Signature: Xavier Sotelo

Signature: Sam Kwong Date: 24 April

OC- js 10/24/08

# Field Sampling Report

Location ID: LL2 DB27A-SS-066SN-0301-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 4/30/08

## Sampling Information

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

Sample Collection: 1745 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0 - 1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - GPS Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>0-0</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: _____ ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level _____ FT	Metals (Selected)	
Temperature _____ °C	Perchlorate	
Sp. Conductance: _____ uMHOs	PCBs	
pH _____ units	Nitrate / Nitrite	
Dissolved Oxygen _____ Mg / L	TPH DRO / HRO	
Redox Potential _____ mV	Propellants	
Turbidity _____ N.T.U.		

## Sample Description

Soft, dry brown sandy clay w/const. debris

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: Xavier Sotelo (Please Print)

Reviewed by: Stan Brown (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 06 May 08

cc - jo 10/24/08



# Field Sampling Report

Location ID: LL2DB27-SS-0685N-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 4/30/08

## 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					

Sample Collection: 1725 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field  
Estimated - 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: Background: <u>0.0</u> ppm	VOC				Corrosivity															
Sample: _____ ppm	SVOC				Reactivity Sulfide/Cyanide															
Water Level _____ FT	Explosives (Selected)	✓	TNT/RDX		Ignitability															
Temperature _____ °C	Metals (Selected)				<b>QA Samples</b> <table border="1"> <tr> <td>MS/MSD</td> <td>Yes / No</td> <td>NA</td> </tr> <tr> <td>Duplicate ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Equipment Rinse ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Trip Blank ID</td> <td></td> <td>NA</td> </tr> </table>				MS/MSD	Yes / No	NA	Duplicate ID		NA	Equipment Rinse ID		NA	Trip Blank ID		NA
MS/MSD	Yes / No	NA																		
Duplicate ID		NA																		
Equipment Rinse ID		NA																		
Trip Blank ID		NA																		
Sp. Conductance: _____ uMHOs	Perchlorate																			
pH _____ units	PCBs																			
Dissolved Oxygen _____ Mg / L	Nitrate / Nitrite																			
Redox Potential _____ mV	TPH DRO / HRO																			
Turbidity _____ N.T.U.	Propellants																			

**Sample Description**  
med. st. ff dry brown clay

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**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: Xavier Sotelo (Please Print)  
 Signature: [Signature]

Reviewed by: [Signature] (Please Print)  
 Signature: [Signature] Date: 06/04/08

QC - JS 10/24/08

# Field Sampling Report

Location ID: LL2 DB 10-SB-092 SW-0001

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 4/30/08

## 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					

Sample Collection: 1600 hrs

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

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

Sample Depth: 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: <u>0.00</u> ppm	SVOC				Reactivity Sulfide/Cyanide															
Sample: ppm	Explosives (Selected)	✓	TNT/ RDX		Ignitability															
Water Level: FT	Metals (Selected)				<b>QA Samples</b> <table border="1"> <tr> <td>MS/MSD</td> <td>Yes / No</td> <td>NA</td> </tr> <tr> <td>Duplicate ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Equipment Rinse ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Trip Blank ID</td> <td></td> <td>NA</td> </tr> </table>				MS/MSD	Yes / No	NA	Duplicate ID		NA	Equipment Rinse ID		NA	Trip Blank ID		NA
MS/MSD	Yes / No	NA																		
Duplicate ID		NA																		
Equipment Rinse ID		NA																		
Trip Blank ID		NA																		
Temperature: °C	Perchlorate																			
Sp. Conductance: uMHOs	PCBs																			
pH: units	Nitrate / Nitrite																			
Dissolved Oxygen: Mg / L	TPH DRO / HRO																			
Redox Potential: mV	Propellants																			
Turbidity: N.T.U.																				

### Sample Description

Brown sand & gravel w/ clay and debris

Refusal @ 2.9 ft 10/24/08

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: Xavier Sotelo (Please Print)

Signature: [Signature]

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 06 May 08

OC - J8 10/24/08

# Field Sampling Report

Location ID: 112 DB10-513-0945W - am-SN Job Meter

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 4/30/08

## 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	<input checked="" type="checkbox"/>
Type/Construction			Mattocks		JMC	<input checked="" type="checkbox"/>
Miscellaneous	Well Purging Form Yes - No					

Sample Collection: 1530 hrs

Sample Type: Composite - MI - Grab  
If MI, # of increments taken: 1

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

Sample Depth: 0-2.6 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: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide															
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/>	TNT/RDX			Ignitability															
Water Level: FT	Metals (Selected)				<b>QA Samples</b> <table border="1"> <tr> <td>MS/MSD</td> <td>Yes / No</td> <td>NA</td> </tr> <tr> <td>Duplicate ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Equipment Rinse ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Trip Blank ID</td> <td></td> <td>NA</td> </tr> </table>				MS/MSD	Yes / No	NA	Duplicate ID		NA	Equipment Rinse ID		NA	Trip Blank ID		NA
MS/MSD	Yes / No	NA																		
Duplicate ID		NA																		
Equipment Rinse ID		NA																		
Trip Blank ID		NA																		
Temperature: °C	Perchlorate																			
Sp. Conductance: uMHOs	PCBs																			
pH: units	Nitrate / Nitrite																			
Dissolved Oxygen: Mg/L	TPH DRO / HRO																			
Redox Potential: mV	Propellants																			
Turbidity: N.T.U.																				

### Sample Description

loose dry brown sandy gravel w/ cobbles clay E Fill

Debris at 2.1' of 10/24/08

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 06 May 08

QC - JS 10/24/08

# Field Sampling Report

Location ID: LL2 DB10-SB-093 SA-0001-06

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 4/30/08

## 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			

Sample Collection: 1220 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field  
Estimated - 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: Background: <u>0.0</u> ppm	VOC				Corrosivity															
Sample: ppm	SVOC				Reactivity Sulfide/Cyanide															
Water Level FT	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX		Ignitability															
Temperature °C	Metals (Selected)				<b>QA Samples</b> <table border="1"> <tr> <td>MS/MSD</td> <td>Yes / No</td> <td>NA</td> </tr> <tr> <td>Duplicate ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Equipment Rinse ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Trip Blank ID</td> <td></td> <td>NA</td> </tr> </table>				MS/MSD	Yes / No	NA	Duplicate ID		NA	Equipment Rinse ID		NA	Trip Blank ID		NA
MS/MSD	Yes / No	NA																		
Duplicate ID		NA																		
Equipment Rinse ID		NA																		
Trip Blank ID		NA																		
Sp. Conductance: uMHOs	Perchlorate																			
pH units	PCBs																			
Dissolved Oxygen Mg / L	Nitrate / Nitrite																			
Redox Potential mV	TPH DRO / HRO																			
Turbidity N.T.U.	Propellants																			

## Sample Description

dry, brown sandy clay w/ const. debris

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: Xavier Sotelo (Please Print)

Signature: [Signature]

Reviewed by: [Signature]

(Please Print)

Signature: [Signature]

Date: 06 May 08

QC - JS 10/24/08

# Field Sampling Report

Location ID: LL2DB10-SB-090

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 4/30/08

## 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			

Sample Collection: 125 hrs

Sample Type: Composite - MI - Grab

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

Sample Depth: 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: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide															
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/RDX		Ignitability															
Water Level: FT	Metals (Selected)				<b>QA Samples</b> <table border="1"> <tr> <td>MS/MSD</td> <td>Yes / No</td> <td>NA</td> </tr> <tr> <td>Duplicate ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Equipment Rinse ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Trip Blank ID</td> <td></td> <td>NA</td> </tr> </table>				MS/MSD	Yes / No	NA	Duplicate ID		NA	Equipment Rinse ID		NA	Trip Blank ID		NA
MS/MSD	Yes / No	NA																		
Duplicate ID		NA																		
Equipment Rinse ID		NA																		
Trip Blank ID		NA																		
Temperature: °C	Perchlorate																			
Sp. Conductance: uMHOs	PCBs																			
pH: units	Nitrate / Nitrite																			
Dissolved Oxygen: Mg/L	TPH DRO / HRO																			
Redox Potential: mV	Propellants																			
Turbidity: N.T.U.																				

### Sample Description

Loose, dry, brown sandy clay w/ construction debris

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: [Signature]

Signature: [Signature]

Date: 06 May 08

OL - JS 10/24/08

## Field Sampling Report

Location ID: LL2 DB10 -5B -091 SN-0001-10 *Ala May 08*

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 4/30/08

## 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					

Sample Collection: 1200 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map Staked in Field  
Estimated GPS SurveyedSample Depth: 2 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: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	✓	TNT/RDX		Ignitability			
Water Level FT	Metals (Selected)				<b>QA Samples</b> MS/MSD Yes / No NA Duplicate ID NA Equipment Rinse ID NA Trip Blank ID NA			
Temperature °C	Perchlorate							
Sp. Conductance: uMHOs	PCBs							
pH units	Nitrate / Nitrite							
Dissolved Oxygen Mg/L	TPH DRO / HRO							
Redox Potential mV	Propellants							
Turbidity N.T.U.								

## Sample Description

Loose dry brown sandy clay w/ const. debrisReusal @ 2.0' js 10/24/08

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 ListedLogged By: Xavier Sotelo (Please Print)Signature: Xavier SoteloReviewed by: Stan Levens (Please Print)Signature: Stan Levens Date: 06 May 08

QC - js 10/24/08

Location ID: LL3E04-SB-0485N-0001-50 **Field Sampling Report**

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 4/30/08

### 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					

Sample Collection: 1100 hrs

Sample Type: Composite - MI - Grab

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

Sample Depth: 0-3 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: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide															
Sample: ppm	Explosives (Selected)	✓	TNT/ RDX		Ignitability															
Water Level FT	Metals (Selected)				<b>QA Samples</b> <table border="1"> <tr> <td>MS/MSD</td> <td>Yes / No</td> <td>NA</td> </tr> <tr> <td>Duplicate ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Equipment Rinse ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Trip Blank ID</td> <td></td> <td>NA</td> </tr> </table>				MS/MSD	Yes / No	NA	Duplicate ID		NA	Equipment Rinse ID		NA	Trip Blank ID		NA
MS/MSD	Yes / No	NA																		
Duplicate ID		NA																		
Equipment Rinse ID		NA																		
Trip Blank ID		NA																		
Temperature °C	Perchlorate																			
Sp. Conductance: uMHOs	PCBs																			
pH units	Nitrate / Nitrite																			
Dissolved Oxygen Mg / L	TPH DRO / HRO																			
Redox Potential mV	Propellants																			
Turbidity N.T.U.																				

### Sample Description

dry brown sandy gravel [Fill]

Reused @ 3.0' for 10/24/08

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: Xavier Sotelo (Please Print)

Signature: Xim Sotelo

Reviewed by: Stan Avergh (Please Print)

Signature: Stan Avergh Date: 06 May 08

QC - for 10/24/08

# Field Sampling Report

Location ID: LL3 EB4-SB-0475N-0001 12/24/08

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 4/30/08

## 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					

Sample Collection: 0.30 hrs

Sample Type: Composite - MI - Grab

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

Sample Depth: 2.9 FT (below surface)

Decon: Dedicated - Each Day Each Location

### Field Parameters (at time of sample)

### Analytical Parameters

### Other Parameters

PID / FID Readings:

Background: 0.0 ppm

VOC

SVOC

Sample: 0.0 ppm

Explosives (Selected)

TNT/RDX

Water Level FT

Metals (Selected)

Temperature °C

Perchlorate

Sp. Conductance: uMHOs

PCBs

pH units

Nitrate / Nitrite

Dissolved Oxygen Mg / L

TPH DRO / HRO

Redox Potential mV

Propellants

Turbidity N.T.U.

### QA Samples

MS/MSD

Yes / No

NA

Duplicate ID

NA

Equipment Rinse ID

NA

Trip Blank ID

NA

### Sample Description

dense, dry, brown sandy gravel [fill] w/ cobbles

Munsell @ 2A' JS 12/24/08

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Stan Kover (Please Print)

Signature: Stan Kover Date: 06/04/08

QC - JS 12/24/08



# Field Sampling Report

Location ID: LL3EB4-SB-0515N-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 4/30/08

## 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					

Sample Collection: 1300 hrs

Sample Type: Composite - MI Grab

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

Sample Depth: 3.25 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: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide															
Sample: _____ ppm	Explosives (Selected)	✓	TNT/RDX		Ignitability															
Water Level _____ FT	Metals (Selected)				<b>QA Samples</b> <table border="1"> <tr> <td>MS/MSD</td> <td>Yes / No</td> <td>NA</td> </tr> <tr> <td>Duplicate ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Equipment Rinse ID</td> <td></td> <td>NA</td> </tr> <tr> <td>Trip Blank ID</td> <td></td> <td>NA</td> </tr> </table>				MS/MSD	Yes / No	NA	Duplicate ID		NA	Equipment Rinse ID		NA	Trip Blank ID		NA
MS/MSD	Yes / No	NA																		
Duplicate ID		NA																		
Equipment Rinse ID		NA																		
Trip Blank ID		NA																		
Temperature _____ °C	Perchlorate																			
Sp. Conductance: _____ uMHOs	PCBs																			
pH _____ units	Nitrate / Nitrite																			
Dissolved Oxygen _____ Mg/L	TPH DRO / HRO																			
Redox Potential _____ mV	Propellants																			
Turbidity _____ N.T.U.																				

## Sample Description

dense, dry, brown sandy Gravel (Fill)

Refusal @ 3.25' JS 10/24/08

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Stan K. Hengst (Please Print)

Signature: Stan K. Hengst Date: 4/30/08

QC - JS 10/24/08

Location ID: LL3EB4-SB-0495N-0001-50 *js 10/21/08*

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 4/30/08

### 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					

Sample Collection: 0445 hrs  
Sample Depth: 0-3 FT (below surface)

Sample Type: Composite - MI - Grab  
If MI, # of increments taken:  
Decon: Dedicated - Each Day - Each Location

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

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters			
PID / FID Readings:	VOC				Corrosivity			
Background: <u>0.0</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	✓	TNT/RDX		Ignitability			
Water Level: FT	Metals (Selected)				QA Samples			
Temperature: °C	Perchlorate							
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.								

Sample Description  
dense, dry, brown sandy gravel [Fill]  
Refusal @ 3.0' js 10/21/08

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

Water sample description should include:  
Color Odor Sheen Turbidity

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks  
Parameters: Same as Above - As Listed

Logged By: Xavier Sotelo (Please Print)  
Signature: Xavier Sotelo

Reviewed by: [Signature] (Please Print)  
Signature: [Signature] Date: 06/05/08

QC - js 10/21/08

# Field Sampling Report

Location ID: 122DA6-SB-073SN-0001-S0

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/1/2008

*js10/24/08*

## 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	<input checked="" type="checkbox"/>
Type/Construction			Mattocks	JMC	<input checked="" type="checkbox"/>
Miscellaneous	Well Purging Form Yes - No				

Sample Collection: 1545 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in field  
Estimated GPS Surveyed

Sample Depth: 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: <u>NA</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability		
Water Level	Metals (Selected)					
Temperature	Perchlorate			QA Samples		
Sp. Conductance: uMHOs	PCBs			MS/MSD	Yes / No	NA
pH	Nitrate / Nitrite			Duplicate ID		NA
Dissolved Oxygen	TPH DRO / HRO			Equipment Rinse ID		NA
Redox Potential	Propellants			Trip Blank ID		NA
Turbidity						

## Sample Description

Loose with brown clay L.F. 117

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: Xavier Sotelo (Please Print)

Reviewed by: [Signature] (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 13 May 08

QC- js 10/24/08

# Field Sampling Report

Location ID: LL2-086-SB-076 SN-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/12/2008 5/7/2008

## 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			

Sample Collection: 154 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day Each Location

Estimated - GPS Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters
PID / FID Readings:	VOC			Corrosivity
Background: <u>NR</u> ppm	SVOC			Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability
Water Level	Metals (Selected)			
Temperature	Perchlorate			
Sp. Conductance: uMHOs	PCBs			QA Samples
pH	Nitrate / Nitrite			MS/MSD
Dissolved Oxygen	TPH DRO / HRO			Yes / No
Redox Potential	Propellants			NA
Turbidity				Duplicate ID
				Equipment Rinse ID
				Trip Blank ID

## Sample Description

Loose, dry brown clay I.F.I.L.D.

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: Xavier Sotelo (Please Print)

Reviewed by: Stanley (Please Print)

Signature: Xavier Sotelo

Signature: Stanley Date: 5/12/08

QC - 5/12/08

Location ID: LL2 DAB-SB-074 SN-0001-50

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/4/20085/7/2008

## Sampling Information

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

Sample Collection: 1525 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 190-200 FT (below surface)Decon: Dedicated - Each Day - Each LocationField Parameters  
(at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:	VOC	Corrosivity
Background: <u>NA</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/>	Ignitability
Water Level: FT	Metals (Selected)	
Temperature: °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	MS/MSD
pH	Nitrate / Nitrite	Duplicate ID
Dissolved Oxygen: Mg / L	TPH DRO / HRO	Equipment Rinse ID
Redox Potential: mV	Propellants	Trip Blank ID
Turbidity: N.T.U.		

## Sample Description

Loose dry brown clay

## 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

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Xavier Sotelo (Please Print)Reviewed by: John Deverge (Please Print)Signature: Xavier SoteloSignature: John Deverge Date: 5/7/2008QC - 5/10/2008

# Field Sampling Report

Location ID: LL2 DAG-SB-0775N-0001-S0

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/7/2008

10/24/08

## 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			

Sample Collection: 1510 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - GPS Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters
PID / FID Readings:	VOC			Corrosivity
Background: <u>NA</u> ppm	SVOC			Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability
Water Level	Metals (Selected)			
Temperature	Perchlorate			
Sp. Conductance: uMHOs	PCBs			QA Samples
pH	Nitrate / Nitrite			MS/MSD
Dissolved Oxygen	TPH DRO / HRO			Yes / No
Redox Potential	Propellants			NA
Turbidity				Duplicate ID
				Equipment Rinse ID
				Trip Blank ID
				NA

Sample Description

Loose, dry brown clay

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

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Xavier Sotelo (Please Print)

Reviewed by: [Signature] (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 13 May 08

QC - 10/24/08

# Field Sampling Report

Location ID: LL2 DAG-SB-075N-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/7/2008

*fs 10/24/08*

## 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			

Sample Collection: 145 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0 - 4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - GPS Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters
PID / FID Readings:	VOC			Corrosivity
Background: <u>NA</u> ppm	SVOC			Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability
Water Level	Metals (Selected)			
Temperature	Perchlorate			
Sp. Conductance: uMHOs	PCBs			
pH	Nitrate / Nitrite			
Dissolved Oxygen	TPH DRO / HRO			
Redox Potential	Propellants			
Turbidity				

## Sample Description

Loose dry brown 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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Stan Levenson (Please Print)

Signature: Stan Levenson Date: 13 May 08

*QC- fs 10/24/08*

Location ID: LL2DA21-SS-071SV-001

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/11/2008 5/7/2008

## Sampling Information

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

Sample Collection: 700 hrsSample Type: Composite - MI - GrLocation: Plotted on Map - Staked in FieldSample Depth: 0-1 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - GPS Surveyed

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

## Sample Description

med. stiff dry brown clay [Fill]

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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: Stan Blevins (Please Print)Signature: Xavier SoteloSignature: Stan Blevins Date: 13 May 08QC - 10/24/08



Location ID: L62DA7-SS-0705N-0001  
Date: 5/7/2008

# Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

## Sampling Information

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

Sample Collection: 1145 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field  
Estimated - 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: <u>NA</u> ppm	SVOC			Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability
Water Level	Metals (Selected)			
Temperature	Perchlorate			
Sp. Conductance: uMHOs	PCBs			
pH	Nitrate / Nitrite			
Dissolved Oxygen	TPH DRO / HRO			
Redox Potential	Propellants			
Turbidity				

## Sample Description

med. stiff, dry brown clay [FILL]

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: Xavier Sotelo (Please Print)

Signature: [Signature]

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 5/7/08

QC- js 10/24/08

# Field Sampling Report

Location ID: LL2DB27C-SS-0690001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/17/2008 5/7/2008

Sampling Information			
Source	Groundwater / Product	Surface Water	Soils / Sediments / Sludge
Method	Bailer	Sample Bottle	Scoop
	Pump	Bacon Bomb	Bowl
			Push Probe
Type/Construction			Mattocks
Miscellaneous	Well Purging Form Yes - No		JMC

Sample Collection: 1100 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 Sample Depth: 1 FT (below surface) If MI, # of increments taken: 1 Estimated - GPS Surveyed  
 Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>NA</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: <u>NA</u> ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/RDX	Ignitability
Water Level	Metals (Selected)	
Temperature	Perchlorate	
Sp. Conductance:	PCBs	QA Samples
pH	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen	TPH DRO / HRO	Duplicate ID NA
Redox Potential	Propellants	Equipment Rinse ID NA
Turbidity		Trip Blank ID NA

Sample Description  
med. stiff dry brown clay [fine]

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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Stan Lewis (Please Print)

Signature: Stan Lewis Date: 13 May 08

QC - JS 10/24/08

## Field Sampling Report

Location ID: LL2 DAS-SS-0855N-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/2/2008 5/8/08

## 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			

Sample Collection: 1715 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 0-1 FT (below surface)Decon: Dedicated - Each Day - Each LocationEstimated - GPS Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>~ A</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability		
Water Level: FT	Metals (Selected)					
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.						

## Sample Description

Soft, moist, brown clay w/dubricsHandwritten: 10/10/08

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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: Stan Lewis (Please Print)Signature: [Signature]Signature: [Signature] Date: 12/10/08OC- 10/10/08

## Field Sampling Report

Location ID: 42 DB 802-SS-001SN-0001-30

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/27/2008 5/31/08

## 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			

Sample Collection: 1640 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 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: NA ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

## Sample Description

soft, wet brown gravelly clay [filled]

Reusal @ 1.0' JS 10/24/08

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: Xavier Sotelo (Please Print)

Reviewed by: [Signature] (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 12/10/08

QC- JS 10/24/08

Location ID: LL2DB 9-SS-055 SW-0001-50 *for 10/1/08* **Field Sampling Report** RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio  
 Date: 5/27/2008 5/8/08

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

Sample Collection: 16/10 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 Sample Depth: 0-1 FT (below surface) If MI, # of increments taken:          Estimated - GPS Surveyed  
 Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>NA</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability		
Water Level FT	Metals (Selected)					
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.						

**Sample Description**  
med. stiff, moist, brown clay w/ debris

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**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: Xavier Sotelo (Please Print)  
 Signature: Xavier Sotelo

Reviewed by: Stan Leary (Please Print)  
 Signature: Stan Leary Date: 13/hey 0

*OC for 10/1/08*

# Field Sampling Report

Location ID: LL2 DB10-SB-0965N-0001-70

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 5/8/08

## 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			

Sample Collection: 1515 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-2 FT (below surface)

Decon: Dedicated - Each Day Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>NA</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability		
Water Level	Metals (Selected)					
Temperature	Perchlorate			QA Samples		
Sp. Conductance: uMHOs	PCBs			MS/MSD	Yes / No	NA
pH	Nitrate / Nitrite			Duplicate ID		NA
Dissolved Oxygen	TPH DRO / HRO			Equipment Rinse ID		NA
Redox Potential	Propellants			Trip Blank ID		NA
Turbidity						

### Sample Description

Loose, moist sandy gravel [fill]

Revised @ 2.0' 5/10/08

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: Xavier Sotelo (Please Print)

Reviewed by: Shan Kleveng (Please Print)

Signature: Xavier Sotelo

Signature: Shan Kleveng Date: 5/8/08

QC- 5/10/08

# Field Sampling Report

Location ID: 442 DA28A-SS-079 SN-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 5/8/08

## 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			

Sample Collection: 1020 hrs      Sample Type: Composite - MI - Grab      Location: Plotted on Map - Staked in Field  
 Sample Depth: 0-1 FT (below surface)      If MI, # of increments taken: 1      Estimated - Measured - Surveyed  
 Decon: Dedicated - Each Day - Each Location

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>NA</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<u>✓</u> TNT/ RDX		Ignitability		
Water Level: FT	Metals (Selected)					
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.						

**Sample Description**  
Soft, wet brown gravelly clay [Fill]

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**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: \_\_\_\_\_

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QA/QC Provided: MS/MSD / Duplicate - Trip Blanks - Field Blanks  
 Parameters: Same as Above - As Listed

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Logged By: Xavier Sotelo (Please Print)      Reviewed by: [Signature] (Please Print)  
 Signature: [Signature]      Signature: [Signature]      Date: 5/8/08

QC - js 10/24/08

# Field Sampling Report

Location ID: LL 2 D46A-SB-0845N-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, OH

Date: 5/8/00

## 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	<u>UNC</u>
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 0930 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed  
OPS

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

## Sample Description

V. soft, wet brown clay w/ gravel [Fill]

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: XAVIER SOTELO (Please Print)

Reviewed by: [Signature] (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 5/8/00

QC - js 10/24/00



# Field Sampling Report

Location ID: LL2 D+6A - SB - 0835N - 0001 - 50 *8/10/2008*

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/1/2008 5/8/08

## Sampling Information

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

Sample Collection: 1000 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 2-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - GPS Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>NA</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH units	Nitrate / Nitrite	
Dissolved Oxygen Mg / L	TPH DRO / HRO	
Redox Potential mV	Propellants	
Turbidity N.T.U.		

**Sample Description**  
soft, wet brown, gravelly clay [Fill]

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: Xavier Sotelo (Please Print)

Reviewed by: Ben Puring (Please Print)

Signature: Xavier Sotelo

Signature: Ben Puring Date: 12/10/08

QC - 10/24/08

## Field Sampling Report

Location ID: LL2 DAGA-SB-0825W-0001.S0

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/1/2008 5/1/08

## Sampling Information

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

Sample Collection: 0915 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated GPS SurveyedField Parameters  
(at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:	VOC				Corrosivity			
Background: ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/RDX		Ignitability			
Water Level: FT	Metals (Selected)	<input checked="" type="checkbox"/>						
Temperature: °C	Perchlorate							
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.								

## Sample Description

## Split Sample

Fill mat'l @ top to 1.5 ft bgs to gravelly clay

Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks  
Parameters: Same as Above - As Listed

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Xavier Sotelo (Please Print)Reviewed by: [Signature] (Please Print)Signature: [Signature]Signature: [Signature] Date: 5/1/08QC- 5/1/2008

# Field Sampling Report

Location ID: LL2 DAGA-SB-081SN-000150

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/1/2008 5/8/08

## Sampling Information

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

Sample Collection: 1015 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map Staked in Field

Sample Depth: 20-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - GPS Surveyed

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

## Sample Description

Soft, wet brown clay w/ gravel (fine)

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: Xavier Sotelo (Please Print)

Reviewed by: [Signature] (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 5/8/08

QC - js 10/24/08

## Field Sampling Report

Location ID: LL2 DAGA-SB-0802-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/17/2008 5/18/08

## 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			

Sample Collection: 0900 hrsSample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)If MI, # of increments taken:         
Decon: Dedicated - Each Day - Each LocationEstimated GPS Surveyed:       

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>NA</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability		
Water Level	Metals (Selected)					
Temperature	Perchlorate			QA Samples		
Sp. Conductance: uMHOs	PCBs			MS/MSD	Yes / No	NA
pH	Nitrate / Nitrite			Duplicate ID		NA
Dissolved Oxygen	TPH DRO / HRO			Equipment Rinse ID		NA
Redox Potential	Propellants			Trip Blank ID		NA
Turbidity						

## Sample Description

soft wet brown 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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: [Signature] (Please Print)Signature: [Signature]Signature: [Signature] Date: 13/10/08QC- 10/24/08

## Field Sampling Report

Location ID: 420B10-Screen 1

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 16 May 08

## Sampling Information

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

Sample Collection: 1410 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map Staked in FieldSample Depth: 0.0 to 1.0 FT (below surface)Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0.00</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>X TNT/RDX</u>	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen Mg/L	TPH DRO / HRO	Duplicate ID NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

## Sample Description

Med br sandy silt, Ast. no oda, dt red to  
reddish br staining in Area (Explosives)  
Not plastic

0.0 to 1.0' probe sample in visual impact area

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 ListedLogged By: Alan J. Long (Please Print)Reviewed by: Jennifer Shepard (Please Print)Signature: Alan J. LongSignature: J. Shepard Date: 16/23/08

Location ID: 112DB10-Screened

## Field Sampling Report

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 16 May 08

## Sampling Information

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

Sample Collection: 146 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map Staked in FieldSample Depth: 0-0 to 1.0 FT (below surface)Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>0-1</u> ppm	VOC	Corrosivity
	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <u>X TNT/ROX</u>	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	
pH units	Nitrate / Nitrite	
Dissolved Oxygen Mg / L	TPH DRO / HRO	
Redox Potential mV	Propellants	
Turbidity N.T.U.		

## Sample Description

Medium sandy silt, Mt, no odor, altered  
stain area from explosives, not plastic

0-0 to 1.0' probe sample in visual impact area

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 Long (Please Print)Signature: John LongReviewed by: Jennifer Shepard (Please Print)Signature: J. Shepard Date: 10/23/08

## Field Sampling Report

Location ID: 112 DBD - Schen3

RVAAP Sub-Slab Sample and Removal, Ravenna, OH

Date: 10/16/08

## 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	
Miscellaneous	Well Purging Form Yes - No			

Sample Collection: 162 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map Staked in Field

Sample Depth: 0.0 to 0.5 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - Measured - Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: 0-0 ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	X	TNT/RDX	Ignitability		
Water Level: FT	Metals (Selected)					
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.						

## Sample Description

4th Medley Sandy silt, Mt, At Ed Stam m area (Explosives), not plastic

Surface sample in impacted area where bulk explosives were removed

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: Stan Swenz (Please Print)

Reviewed by: Jennifer Shepard (Please Print)

Signature: Stan Swenz

Signature: Jfs Shepard Date: 10/23/08

ation ID: LL2 DB4A-SB-0245R-0001-SO

# Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/2/2008

5/2/08

JS 28/MAY

## 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			

Sample Collection: 1515 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - GPS Surveyed

## Field Parameters (at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:	VOC				Corrosivity			
Background: <u>NA</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX		Ignitability			
Water Level: FT	Metals (Selected)							
Temperature: °C	Perchlorate							
Sp. Conductance: uMHOs	PCBs				QA Samples			
pH: units	Nitrate / Nitrite				MS/MSD	Yes / No	NA	
Dissolved Oxygen: Mg / L	TPH DRO / HRO				Duplicate ID		NA	
Redox Potential: mV	Propellants				Equipment Rinse ID		NA	
Turbidity: N.T.U.					Trip Blank ID		NA	

## Sample Description

moist, soft to med. stiff brown sandy clay w/ gravel and debris.

## 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

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: Stanover (Please Print)

Signature: Stanover Date: 28/MAY/08

QC- JS 10/24/08



# Field Sampling Report

Location ID: LL2 DB4A- S13 -025 -SN-0001-SO

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/22/2008

5/21/08

## 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			

Sample Collection: 1445 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - GPS Surveyed

Field Parameters (at time of sample)	Analytical Parameters				Other Parameters			
PID / FID Readings:	VOC				Corrosivity			
Background: <u>NA</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX		Ignitability			
Water Level: FT	Metals (Selected)							
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.								

## Sample Description

moist to wet soft brown clay to 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: Xavier Sotelo (Please Print)

Signature: Xavier Sotelo

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 5/21/08

QC- 58 10/24/08

# Field Sampling Report

Location ID: LL2DB4-SB-026SW-0001-S

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/2/2008 5/2/08

## 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			

Sample Collection: 1400 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 2-4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - GPS Surveyed

## Field Parameters (at time of sample)

## Analytical Parameters

## Other Parameters

PID / FID Readings:	VOC				Corrosivity			
Background: <u>NA</u> ppm	SVOC				Reactivity Sulfide/Cyanide			
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX		Ignitability			
Water Level: FT	Metals (Selected)							
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.								

## Sample Description

moist, silt, brown clay w/ gravel

## 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

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Xavier Sotelo (Please Print)

Reviewed by: Stan Leverage (Please Print)

Signature: Xavier Sotelo

Signature: Stan Leverage Date: 28 May 08

QC - 88 10/24/08

## Field Sampling Report

Location ID: LL2DB4-SB-038SW-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/22/08 5/22/08

## 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			

Sample Collection: 1150 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map Staked in FieldSample Depth: 170 cm 10-4 FT (below surface)Decon: Dedicated - Each Day - Each Location

Estimated - GPS Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>NA</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/>	TNT/ RDX		Ignitability		
Water Level FT	Metals (Selected)					
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.						

## Sample Description

Soft moist to wet brown clay w/debris

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 ListedLogged By: Xavier Sotelo (Please Print)Reviewed by: Stan Levenson (Please Print)Signature: [Signature]Signature: [Signature] Date: 5/22/08

OC - js 10/29/08

# Field Sampling Report

Location ID: LL2 DB10 SB-103 SN-0001-SO

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/22/08

## Sampling Information

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

Sample Collection: 1015 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 2.55 FT (below surface)

Decon: Dedicated - Each Day Each Location

Estimated GPS Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings: Background: <u>NA</u> ppm	VOC	Corrosivity
Sample: ppm	SVOC	Reactivity Sulfide/Cyanide
Water Level: FT	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Temperature: °C	Metals (Selected)	
Sp. Conductance: uMHOs	Perchlorate	
pH: units	PCBs	
Dissolved Oxygen: Mg / L	Nitrate / Nitrite	
Redox Potential: mV	TPH DRO / HRO	
Turbidity: N.T.U.	Propellants	

Sample Description  
Loose to stiff, dry, sand to clay [Fill]  
Retained @ 2.55' is wash

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

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: Xavier Sotelo (Please Print)

Signature: [Signature]

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 5/23/08

QC. js 10/23/08

## Field Sampling Report

Location ID: LL2 DB10-S3-102-S4-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/22/08 5/22/08

## Sampling Information

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

Sample Collection: 1000 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

If MI, # of increments taken:

Estimated GPS Surveyed

Sample Depth: -2 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: NA ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
Sp. Conductance: uMHOs	PCBs	QA Samples
pH units	Nitrate / Nitrite	MS/MSD Yes / No NA
Dissolved Oxygen Mg / L	TPH DRO / HRO	Duplicate ID NA
Redox Potential mV	Propellants	Equipment Rinse ID NA
Turbidity N.T.U.		Trip Blank ID NA

## Sample Description

stiff, moist brown clay w/ gravel [Fill]

Refusal @ 2.0' JS 10/23/08

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: Xavier Sotelo (Please Print)

Reviewed by: Alan Jerny (Please Print)Signature: Xavier SoteloSignature: Alan Jerny Date: 28 May 08

QC- JS 10/23/08

Date: 5/22/2008 5/22/08

**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			

Sample Collection: 0945 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map Staked in Field

Sample Depth: 0-4 FT (below surface)

Decon: Dedicated - Each Day Each Location

Estimated - GPS Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters
PID / FID Readings:	VOC			Corrosivity
Background: <u>NA</u> ppm	SVOC			Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability
Water Level	Metals (Selected)			
Temperature	Perchlorate			
Sp. Conductance: uMHOs	PCBs			QA Samples
pH	Nitrate / Nitrite			MS/MSD
Dissolved Oxygen	TPH DRO / HRO			Yes / No
Redox Potential	Propellants			NA
Turbidity				Duplicate ID
				Equipment Rinse ID
				Trip Blank ID
				NA

**Sample Description**

st. ff, moist, brown clay w/ gravel (fill) to native

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**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:

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

Parameters: Same as Above - As Listed

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Logged By: Xavier Sotelo (Please Print)

Reviewed by: Stan Levens (Please Print)

Signature: Xavier Sotelo

Signature: Stan Levens Date: 5/23/08

QC- 18 10/23/08

# Field Sampling Report

Location ID: LL20310-SB-10050-001-50  
 Date: 5/22/08

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

## Sampling Information

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

Sample Collection: 0935 hrs Sample Type: Composite - MI - Grab Location: Plotted on Map - Staked in Field  
 Sample Depth: 2 FT (below surface) If MI, # of increments taken: 1  
 Decon: Dedicated - Each Day - Each Location Estimated - GPS Surveyed

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

Sample Description  
Stiff, moist, brown clay w/ gravel/rubblies [F, LL]  
Refusal @ 2.0' JS 10/23/08

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample ID: \_\_\_\_\_

Name: \_\_\_\_\_

Agency/Company: \_\_\_\_\_

Address: \_\_\_\_\_

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks  
 Parameters: Same as Above - As Listed

Logged By: Xavier Sotelo (Please Print)

Signature: [Signature]

Reviewed by: [Signature] (Please Print)

Signature: [Signature] Date: 5/22/08

QC - JS 10/23/08

# Field Sampling Report

Location ID: LL2DB10-SB-0495-000

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/22/08

NA 98 MAY

## Sampling Information

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

Sample Collection: 0920 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field

Sample Depth: 0 - 4 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - GPS Surveyed

Field Parameters (at time of sample)	Analytical Parameters	Other Parameters
PID / FID Readings:	VOC	Corrosivity
Background: <u>NA</u> ppm	SVOC	Reactivity Sulfide/Cyanide
Sample: ppm	Explosives (Selected) <input checked="" type="checkbox"/> TNT/ RDX	Ignitability
Water Level FT	Metals (Selected)	
Temperature °C	Perchlorate	
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.		

## Sample Description

Stiff, moist, brown sand to clay w/ gravel [Fill]

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: Xavier Sotelo (Please Print)

Reviewed by: [Signature] (Please Print)

Signature: [Signature]

Signature: [Signature] Date: 5/28/08

QC- 98 10/23/08



Location ID: L2DB10-SB-098SW-0051-50

## Field Sampling Report

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/22/20085/22/08

## Sampling Information

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

Sample Collection: 0400 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in Field

If MI, # of increments taken: \_\_\_\_\_

Estimated - GPS SurveyedSample 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:

Background:

NA ppm

VOC

SVOC

Sample:

ppm

Explosives (Selected)

TNT/ RDX

Water Level

FT

Metals (Selected)

Temperature

°C

Perchlorate

Sp. Conductance:

uMHOs

PCBs

pH

units

Nitrate / Nitrite

Dissolved Oxygen

Mg / L

TPH DRO / HRO

Redox Potential

mV

Propellants

Turbidity

N.T.U.

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 sand to clay [Fill]

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: Xavier Sotelo (Please Print)Signature: Xavier SoteloReviewed by: Stan Jovera

(Please Print)

Signature: Stan JoveraDate: 28 May 08GC-JS 10/23/08

## Field Sampling Report

Location ID: LL20B10-SB-9734-001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/2/2008 5/21/08

## 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			

Sample Collection: 1145 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 0-1.5' FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - GPS Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>NA</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/RDX	Ignitability		
Water Level	Metals (Selected)					
Temperature	Perchlorate			QA Samples		
Sp. Conductance: uMHOs	PCBs			MS/MSD	Yes / No	NA
pH	Nitrate / Nitrite			Duplicate ID		NA
Dissolved Oxygen	TPH DRO / HRO			Equipment Rinse ID		NA
Redox Potential	Propellants			Trip Blank ID		NA
Turbidity						

## Sample Description

stiff, moist brown clay w/ sand and debris [Fill]Refusal @ 1.5' JS 10/23/08

Split Sample ID:

Split Sample

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks  
Parameters: Same as Above - As Listed

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Xavier Sotelo (Please Print)Reviewed by: Stan Leven (Please Print)Signature: Xavier SoteloSignature: Stan Leven Date: 28 May 08

QC - JS 10/23/08

## Field Sampling Report

Location ID: LL2 DB10 - SB - 0965N - 0001 - 50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/2/2008 5/21/08

## Sampling Information

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

Sample Collection: 1515 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 0-2.8 FT (below surface)

Decon: Dedicated - Each Day - Each Location

Estimated - GPS Surveyed

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

## Sample Description

stiff, moist, brown clay w/sand gravel and debris [File]Refusal @ 2.8 ft 10/23/08

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Split Sample ID:

Split Sample:

Name:

Agency/Company:

Address:

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

Parameters: Same as Above - As Listed

Logged By: Xavier Sotelo (Please Print)Reviewed by: Stan Kory (Please Print)Signature: Xin SoteloSignature: Stan Kory Date: 8/1/08QC - J8 10/23/08

## Field Sampling Report

Location ID: LL2 DB30-SS-1045N-0001-50

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/22/08

## 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			

Sample Collection: 11/15 hrsSample Type: Composite - MI - GrabLocation: Plotted on Map - Staked in FieldSample Depth: 0-1 FT (below surface)Decon: Dedicated - Each Day - Each LocationEstimated - GPS Surveyed

Field Parameters (at time of sample)	Analytical Parameters			Other Parameters		
PID / FID Readings:	VOC			Corrosivity		
Background: <u>NA</u> ppm	SVOC			Reactivity Sulfide/Cyanide		
Sample: ppm	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX	Ignitability		
Water Level	Metals (Selected)					
Temperature	Perchlorate			QA Samples		
Sp. Conductance: uMHOs	PCBs			MS/MSD	Yes / No	NA
pH	Nitrate / Nitrite			Duplicate ID		NA
Dissolved Oxygen	TPH DRO / HRO			Equipment Rinse ID		NA
Redox Potential	Propellants			Trip Blank ID		NA
Turbidity						

## Sample Description

Soft, moist, brown clay w/ debris

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 ListedLogged By: Xavier Sotelo (Please Print)Signature: Xavier SoteloReviewed by: Stan Lowinger (Please Print)Signature: Stan Lowinger Date: 5/23/08QC - 10/23/08

# Field Sampling Report

Location ID: LL2DB4VP1-SS-08150-0001-S0

RVAAP LL 2, 3, and 4 Sub-Slab Sample, Ravenna, Ohio

Date: 5/22/08

## Sampling Information

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

Sample Collection: 1100 hrs

Sample Type: Composite - MI - Grab

Location: Plotted on Map - Staked in Field  
Estimated - 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: Background: <u>NA</u> ppm	VOC				Corrosivity			
Sample: ppm	SVOC				Reactivity Sulfide/Cyanide			
Water Level FT	Explosives (Selected)	<input checked="" type="checkbox"/>	TNT/ RDX		Ignitability			
Temperature °C	Metals (Selected)							
Sp. Conductance: uMHOs	Perchlorate							
pH units	PCBs							
Dissolved Oxygen Mg / L	Nitrate / Nitrite							
Redox Potential mV	TPH DRO / HRO							
Turbidity N.T.U.	Propellants							

## Sample Description

## Split Sample

Soft, wet, brown clay

## Split Sample ID:

Name:

Agency/Company:

Address:

QA/QC Provided: MS/MSD - Duplicate - Trip Blanks - Field Blanks  
Parameters: Same as Above - As Listed

Soil sample description should include:

Munsell Color Odor Staining Texture Sorting Plasticity Moisture

Water sample description should include:

Color Odor Sheen Turbidity

Logged By: Xavier Sotelo (Please Print)

Reviewed by: Alan Jennings (Please Print)

Signature: Xavier Sotelo

Signature: Alan Jennings Date: 5/23/08

DC- js 10/23/08

**APPENDIX D**  
**Technical Change Memoranda**



# Memorandum

MARCH 31, 2008

Ms. Eileen Mohr  
Project Manager  
Ohio Environmental Protection Agency  
2110 E. Aurora Rd.  
Twinsburg, Ohio 44087

**SUBJECT: LOAD LINE 4 TECHNICAL CHANGE IN DIRECTION FOR THE SUB-SLAB  
SCREENING SAMPLING AT THE RAVENNA ARMY AMMUNITION PLANT**

Dear Ms. Mohr:

The U S Army Corps of Engineers (USACE) has contracted URS Corporation (URS) to conduct sub slab sampling and potential removal of earth fill materials at Load Lines 2, 3, and 4 at the Ravenna Army Ammunition Plant (RVAAP). The scope of work includes sub-slab TNT/RDX screening sampling, MI confirmatory sub-slab sampling, and earth fill removal (if necessary) to Load Line 4.

The field sampling effort for sub-slab materials began in March 2008 and will proceed until all slabs are removed.

**TECHNICAL CHANGES TO THE PROJECT SCOPE OF WORK:**

The following changes to the technical work for the sub slab screening sampling were undertaken based upon site conditions encountered at Load Line 4.

**Load Line 4**

**1. SUB- SLAB SCREENING SAMPLING:**

*Issue:* The project Scope of Work (USACE) and Work Plan specify that the sub-slab screening samples be collected from each building footprint within 7 days after slab removal. The screening samples are to be collected from a designated grid configuration in high priority buildings and biased to any visual indications of potential impact in medium and low priority buildings. If there are no visual indications of impact in medium and low priority buildings, then the screening sample is to be collected at the center of the footprint or biased to areas where the slab integrity was suspect due to cracks etc. Based upon site conditions encountered, the sample grid or sample locations may be covered by standing water. Two issues result from the standing water:

- 1) The pre-determined locations for the 4-foot cores and/or 0.0 to 1.0 foot samples cannot be installed as indicated in the Work Plan due to standing water.

5550 Blazer Parkway  
Suite 175  
Dublin, Ohio 43017  
614.726.3500

- 2) A full visual inspection of the building footprint is not possible due to standing water. Therefore the sample locations cannot be biased to potential visually impacted areas.

These conditions have been encountered to date at Load Line 4 buildings G-7, G-11, G-15 and to a minor degree at G-8. The sample locations at these buildings were adjusted to allow sampling in areas without standing surface water.

G-7 – The sample was collected from 0.0 to 1.0 feet bgs on the south side of the footprint due to standing water.

G-8 – The sample grid was established as per the SOW except that several sample locations were skewed slightly out of the exact location due to standing water. The basic configuration of the grid was maintained for the 0.0 to 4.0 feet bgs cores.

G-11 – The sample was collected from 0.0 to 1.0 bgs on the north side of the footprint due to standing water.

G-15 – The two 0.0 to 4.0 feet cores were collected from two areas that were above the level of standing surface water. The samples were located at the central northwest and east central portions of the bldg foot print.

Technical Change: The sub slab screening samples were collected in available locations not covered with standing water as close to the intended location as possible. Every attempt was made to collect the screening samples at the locations specified in the Work Plan.

The visual survey for these buildings will be conducted at a later date after the standing water has subsided. If the field screen analytical data reveal no exceedances of respective cleanup goals, but visual indicators of contamination are observed during the follow-up visual survey, additional field screen sample(s) will be collected from the suspect areas, with approval from the USACE and Ohio EPA.

In the future, the MKM visual survey documentation sheets for each building will be used to plan sampling and document any visually impacted areas if standing water is encountered. This information will be used to direct either sampling or future visual inspections. Any deviations from the locations designated in the Work Plan will be documented in a Technical change memorandum.

URS, through the USACE will keep you informed of any issues or specifics regarding this work as they arise. Should you have any questions or comments regarding these issues, please do not hesitate to call me at 614 787 4711 or Jo Ann Bartsch at 216 622 2229.

Respectfully,  
URS Group, Inc.

Stan Levenger  
Technical Project Manager



Approval Signature, USACE - \_\_\_\_\_ Cynthia A. Ries

Title - \_\_\_\_\_

Date: \_\_\_\_\_

Approval Signature Ohio EPA - \_\_\_\_\_ Eileen Mohr

Title - \_\_\_\_\_

Date - \_\_\_\_\_

Attachments

cc: Cindy Ries, USACE  
Mark Patterson, RVAAP BRAC  
Jo Ann Bartsch, URS



"Eileen Mohr" <eileen.mohr@epa.state.oh.us>

04/10/2008 01:38 PM

To <Stan\_Levenger@URSCorp.com>

cc "Eileen Mohr" <eileen.mohr@epa.state.oh.us>, "Todd Fisher" <todd.fisher@epa.state.oh.us>, <Jo\_Ann\_Bartsch@URSCorp.com>

bcc

Subject Re: RVAAP Technical Change Memo

Looks good. Thanks Stan.

Eileen T. Mohr  
Project Manager  
Division of Emergency and Remedial Response  
2110 East Aurora Road  
Twinsburg, OH 44087  
330-963-1221  
330-487-0769 (FAX)  
email: Eileen.Mohr@epa.state.oh.us

>>> <Stan\_Levenger@URSCorp.com> 4/9/2008 1:13 PM >>>

Eileen, The Technical Change Memo 001 is attached. I have also attached Cindy's signature page. Please feel free to notify if you have any questions or concerns. Thanks Stan LevengerURS, Dublin 614 726 3575 Cell 614 787 4711

This e-mail and any attachments are confidential. If you receive this message in error or are not the intended recipient, you should not retain, distribute, disclose or use any of this information and you should destroy the e-mail and any attachments or copies.

APRIL 17, 2008

Ms. Eileen Mohr  
Project Manager  
Ohio Environmental Protection Agency  
2110 E. Aurora Rd.  
Twinsburg, Ohio 44087

**SUBJECT: LOAD LINE 3 TECHNICAL CHANGE FOR THE SUB-SLAB SCREENING  
SAMPLING AT THE RAVENNA ARMY AMMUNITION PLANT**

Dear Ms. Mohr:

The U S Army Corps of Engineers (USACE) has contracted URS Corporation (URS) to conduct sub slab sampling and potential removal of earth fill materials at Load Lines 2, 3, and 4 at the Ravenna Army Ammunition Plant (RVAAP). The scope of work includes sub-slab TNT/RDX screening sampling, MI sub-slab sampling, and earth fill removal (if necessary) to Load Line 4.

The field sampling effort for sub-slab materials began in March 2008 and will proceed until all slabs are removed.

**TECHNICAL CHANGES TO THE PROJECT SCOPE OF WORK:**

The following changes to the technical work for the sub slab screening sampling were undertaken based upon site conditions encountered at Load Line 3.

**Load Line 3**

**1. SUB- SLAB SCREENING SAMPLING:**

*Issue:* The project Scope of Work (USACE) and Work Plan specify that the sub-slab screening samples be collected from each building footprint within 7 days after slab removal. The screening samples are to be collected from a designated grid configuration in high priority buildings and biased to any visual indications of potential impact in medium and low priority buildings. Based upon site conditions encountered, the sample grid or sample locations may be covered by stockpiled demolition debris. Two issues result from the stockpiled demolition debris:

- 1) Several SOW locations for the 4-foot core samples cannot be installed as indicated in the Work Plan due to stockpiled demolition debris remaining staged on the bldg footprint at EB-4 and EB-4A. The buildings were cleared by BRAC for sampling but the remaining debris obstructs sample collection.

5550 Blazer Parkway  
Suite 175  
Dublin, Ohio 43017  
614.726.3500

- 2) A full visual inspection of the building footprint is not possible due to the debris pile. Therefore the sample locations cannot be biased to potential visually impacted areas if necessary.

These conditions have been encountered to date at Load Line 3 high priority buildings EB-4 and EB-4A. The remaining sample locations not obstructed at these buildings were collected within the 7 day window.

Technical Change: The sub slab screening samples have been collected in locations not covered with demolition debris. The remaining sample locations (EB-4, 3 samples total, and EB-4A, 4 samples total) will be collected as soon as the locations are accessible. It is anticipated that the debris will be removed the week of April 14 based upon conversations with BRAC. The visual survey for these buildings will be conducted prior to the soil screening sampling.

Any further deviations from the locations designated in the Work Plan will be documented in a Technical Change memorandum.

URS, through the USACE, will keep you informed of any issues or specifics regarding this work as they arise. Should you have any questions or comments regarding these issues, please do not hesitate to call me at 614 787 4711 or Jo Ann Bartsch at 216 622 2229.

Respectfully,  
URS Group, Inc.

Stan Levenger  
Technical Project Manager

Approval Signature, USACE - \_\_\_\_\_ Cynthia A. Ries

Title - \_\_\_\_\_

Date: \_\_\_\_\_

Approval Signature Ohio EPA - \_\_\_\_\_ Eileen Mohr

Title - \_\_\_\_\_

Date - \_\_\_\_\_

cc: Cindy Ries, USACE  
Mark Patterson, RVAAP BRAC  
Jo Ann Bartsch, URS



"Eileen Mohr" <eileen.mohr@epa.state.oh.us>

04/22/2008 12:59 PM

To "Todd Fisher" <todd.fisher@epa.state.oh.us>,  
<Stan\_Levenger@URSCorp.com>,  
<Cynthia.A.Ries@usace.army.mil>  
cc "Eileen Mohr" <eileen.mohr@epa.state.oh.us>,  
<Jo\_Ann\_Bartsch@URSCorp.com>

bcc

Subject Re: Technical change memo #2 RVASAP subslab

Technical change acceptable to Ohio EPA.

Eileen T. Mohr  
Project Manager  
Division of Emergency and Remedial Response  
2110 East Aurora Road  
Twinsburg, OH 44087  
330-963-1221  
330-487-0769 (FAX)  
email: Eileen.Mohr@epa.state.oh.us

>>> <Stan\_Levenger@URSCorp.com> 4/17/2008 10:51 PM >>>  
Eileen/Todd,

Technical change memo #2 for the meltpours at LL 3 is attached. Please feel free to contact Cindy or URS if you have any questions or comments.  
Thanks

Stan Levenger  
URS, Dublin  
Office 614 726 3575  
Cell 614 787 4711

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# Memorandum

MAY 20, 2008

Ms. Eileen Mohr  
Project Manager  
Ohio Environmental Protection Agency  
2110 E. Aurora Rd.  
Twinsburg, Ohio 44087

**SUBJECT: TECHNICAL CHANGE MEMO #3 - LOAD LINE 4 TECHNICAL CHANGE IN SCOPE OF WORK FOR THE SUB-SLAB SCREENING SAMPLING AT THE RAVENNA ARMY AMMUNITION PLANT**

Dear Ms. Mohr:

The U S Army Corps of Engineers (USACE) has contracted URS Corporation (URS) to conduct sub slab sampling and potential removal of earth fill materials at Load Lines 2, 3, and 4 at the Ravenna Army Ammunition Plant (RVAAP). The scope of work includes sub-slab TNT/RDX screening sampling, MI sub slab sampling, and earth fill removal (if necessary) to Load Line 4.

The field sampling effort for sub-slab materials began in March 2008 and will proceed until all slabs are removed.

**TECHNICAL CHANGES TO THE PROJECT SCOPE OF WORK:**

The following changes to the technical work for the sub slab soil screening sampling were undertaken based upon site conditions encountered at Load Line 4.

**Load Line 4**

**1. SUB- SLAB SOIL SCREENING SAMPLING:**

*Issue:* The project Scope of Work (USACE) and Work Plan specify that the sub-slab screening samples be collected from each building footprint. The demolition contractor (Pika) was unable to locate the slab for bldg G-14. An investigation of all available records and figures was conducted to determine the location of the bldg slab. In conjunction with the records review, a field investigation was also conducted to search for the bldg slab. Based upon the review, it has been determined that the original slab for bldg G-14 was replaced during construction of the newer bldg G-13A. The G-13A footprint covers an area that includes the former G-14 footprint. Resulting issue as follows:

- 1) The SOW requires a soil screening sample from under the bldg G-14 slab. The bldg was replaced by newer construction of G-13A so sampling of the G-14 footprint is not possible.

5550 Blazer Parkway  
Suite 175  
Dublin, Ohio 43017  
614.726.3500

Technical Change: The sub slab screening sample for bldg G-14 will not be collected. However a soil screening sample has been collected for G-13A which occupied an area that included the former bldg G-14 footprint.

URS, through the USACE will keep you informed of any issues or specifics regarding this work as they arise. Should you have any questions or comments regarding these issues, please do not hesitate to call me at 614-787-4711 or Jo Ann Bartsch at 216 622 2229.

Respectfully,  
URS Group, Inc.

Stan Levenger  
Technical Project Manager

Approval Signature, USACE - \_\_\_\_\_ Cynthia A. Ries

Title - \_\_\_\_\_

Date: \_\_\_\_\_

Approval Signature Ohio EPA - \_\_\_\_\_ Eileen Mohr

Title - \_\_\_\_\_

Date - \_\_\_\_\_

Attachments

cc: Cindy Ries, USACE  
Mark Patterson, RVAAP BRAC  
Jo Ann Bartsch, URS





"Eileen Mohr" <eileen.mohr@epa.state.oh.us>

05/22/2008 12:51 PM

To "Todd Fisher" <todd.fisher@epa.state.oh.us>,  
<Stan\_Levenger@URSCorp.com>

cc "Eileen Mohr" <eileen.mohr@epa.state.oh.us>,  
<joevann@frontiernet.net>,  
<Jo\_Ann\_Bartsch@URSCorp.com>, "Cynthia A LRL Ric  
bcc

Subject Re: Technical Memo #3 - RVAAP Sub Slab Soil Samplin  
2, 3, and 4

Sounds good to me. Thanks.

Eileen T. Mohr  
Project Manager  
Division of Emergency and Remedial Response  
2110 East Aurora Road  
Twinsburg, OH 44087  
330-963-1221  
330-487-0769 (FAX)  
email: Eileen.Mohr@epa.state.oh.us

>>> <Stan\_Levenger@URSCorp.com> 5/20/2008 3:33 PM >>>  
Eileen,

Technical memo #3 for the LL 2, 3, and 4 Sub Slab Sample Project is attached  
for review. The USACE has approved and the signature page is to follow.

Stan Levenger  
URS, Dublin  
Office 614 726 3575  
Cell 614 787 4711

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**APPENDIX E**  
**Field Screening Laboratory Calculations**

**APPENDIX E-1**  
**TNT Results**

**TNT Soil Test Worksheet  
RVAAP**

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs <sup>Initial</sup>	Abs <sup>sample</sup>	Result	TNT Conc. (ppm) (Cleanup Level: 1646 ppm)	Comments
LL4-G5-SS-001SN-0001-SO	3/14/2008	14:30	3/14/2008	1	0.011	0.012	-0.99	ND	
LL4-G5-SS-001SN-0001-SO-DUP	3/14/2008	14:30	3/14/2008	1	0.006	0.002	-0.68	ND	
LL2-DB4-SS-001SN-0001-SO	3/21/2008	11:05	3/21/2008	1	0.209	0.537	-9.26	ND	
LL2-DB4-SS-001SN-0002-SO	3/21/2008	11:08	3/21/2008	1	0.077	0.356	1.49	1.5	
LL2-DB4-SS-002SN-0001-SO	3/21/2008	11:10	3/21/2008	1	0.036	0.185	1.27	1.3	
LL2-DB4-SS-002SN-0002-SO	3/21/2008	11:13	3/21/2008	1	0.031	0.132	0.25	ND	
LL3-EB10-SS-001SN-0001-SO	3/21/2008	10:15	3/21/2008	1	0.012	0.053	0.15	ND	
LL3-EB10-SS-001SN-0002-SO	3/21/2008	10:18	3/21/2008	1	0.007	0.009	-0.59	ND	
LL3-EB10-SS-001SN-0002-SO-DUP	3/21/2008	10:18	3/21/2008	1	0.003	0.012	0.00	ND	
LL3-EB10-SS-002SN-0001-SO	3/21/2008	10:20	3/21/2008	1	0.024	0.092	-0.12	ND	
LL3-EB10-SS-002SN-0002-SO	3/21/2008	10:23	3/21/2008	1	0.010	0.025	-0.46	ND	
LL3-EB10-SS-003SN-0001-SO	3/21/2008	10:25	3/21/2008	1	0.028	0.072	-1.24	ND	
LL3-EB10-SS-003SN-0002-SO	3/21/2008	10:28	3/21/2008	1	0.003	0.010	-0.06	ND	
LL4-G4-SS-002SN-0001-SO	3/21/2008	14:40	3/21/2008	1	0.010	0.015	-0.77	ND	
LL4-G7-SS-003SN-0001-SO	3/21/2008	14:35	3/21/2008	1	0.003	0.011	-0.03	ND	
LL4-G12-SS-016SN-0001-SO	3/21/2008	14:58	3/21/2008	1	0.002	0.005	-0.09	ND	Sample ID corrected
LL4-G13VP1-SS-017SN-0001-SO	3/21/2008	15:40	3/21/2008	1	0.002	0.007	-0.03	ND	Outside footprint/red dust
LL4-G8-SB-004SN-0001-SO	3/21/2008	15:15	3/21/2008	1	0.003	0.029	0.53	ND	
LL4-G8-SB-004SN-0002-SO	3/21/2008	15:15	3/21/2008	1	0.014	0.017	-1.21	ND	
LL4-G8-SB-004SN-0003-SO	3/21/2008	15:15	3/21/2008	1	0.013	0.015	-1.15	ND	
LL4-G8-SB-004SN-0004-SO	3/21/2008	15:15	3/21/2008	1	0.011	0.013	-0.96	ND	
LL4-G8-SB-004SN-0005-SO	3/21/2008	15:15	3/21/2008	1	0.011	0.016	-0.87	ND	
LL4-G8-SB-005SN-0001-SO	3/21/2008	15:30	3/21/2008	1	0.043	0.083	-2.76	ND	
LL4-G8-SB-005SN-0002-SO	3/21/2008	15:30	3/21/2008	1	0.273	0.541	-17.06	ND	
LL4-G8-SB-005SN-0003-SO	3/21/2008	15:30	3/21/2008	1	0.017	0.045	-0.71	ND	
LL4-G8-SB-005SN-0004-SO	3/21/2008	15:30	3/21/2008	1	0.022	0.040	-1.49	ND	
LL4-G8-SB-005SN-0005-SO	3/21/2008	15:30	3/21/2008	1	0.054	0.099	-3.62	ND	
LL4-G8-SB-006SN-0001-SO	3/21/2008	15:50	3/24/2008	1	0.004	0.004	-0.37	ND	
LL4-G8-SB-006SN-0002-SO	3/21/2008	15:50	3/24/2008	1	0.002	0.002	-0.19	ND	
LL4-G8-SB-006SN-0003-SO	3/21/2008	15:50	3/24/2008	1	0.003	0.003	-0.28	ND	
LL4-G8-SB-006SN-0004-SO	3/21/2008	15:50	3/24/2008	1	0.004	0.004	-0.37	ND	
LL4-G8-SB-006SN-0005-SO	3/21/2008	15:50	3/24/2008	1	0.001	0.002	-0.06	ND	
LL4-G8-SB-007SN-0001-SO	3/21/2008	18:15	3/24/2008	1	0.002	0.006	-0.06	ND	
LL4-G8-SB-007SN-0002-SO	3/21/2008	18:15	3/24/2008	1	0.001	0.004	0.00	ND	
LL4-G8-SB-007SN-0003-SO	3/21/2008	18:15	3/24/2008	1	0.003	0.004	-0.25	ND	
LL4-G8-SB-007SN-0004-SO	3/21/2008	18:15	3/24/2008	1	0.003	0.004	-0.25	ND	
LL4-G8-SB-007SN-0005-SO	3/21/2008	18:15	3/24/2008	1	0.002	0.004	-0.12	ND	
LL4-G8-SB-008SN-0001-SO	3/21/2008	16:30	3/24/2008	1	0.002	0.004	-0.12	ND	
LL4-G8-SB-008SN-0001-SO-DUP	3/21/2008	16:30	3/24/2008	1	0.000	0.002	0.06	ND	
LL4-G8-SB-008SN-0002-SO	3/21/2008	16:30	3/24/2008	1	0.001	0.002	-0.06	ND	
LL4-G8-SB-008SN-0003-SO	3/21/2008	16:30	3/24/2008	1	0.003	0.002	-0.31	ND	
LL4-G8-SB-008SN-0004-SO	3/21/2008	16:30	3/24/2008	1	0.001	0.002	-0.06	ND	
LL4-G8-SB-008SN-0005-SO	3/21/2008	16:30	3/24/2008	1	0.003	0.004	-0.25	ND	
LL4-G8-SB-009SN-0001-SO	3/21/2008	16:45	3/24/2008	1	0.002	0.007	-0.03	ND	
LL4-G8-SB-009SN-0002-SO	3/21/2008	16:45	3/24/2008	1	0.001	0.004	0.00	ND	
LL4-G8-SB-009SN-0003-SO	3/21/2008	16:45	3/24/2008	1	0.002	0.004	-0.12	ND	
LL4-G8-SB-009SN-0004-SO	3/21/2008	16:45	3/24/2008	1	0.002	0.004	-0.12	ND	
LL4-G8-SB-009SN-0005-SO	3/21/2008	16:45	3/24/2008	1	0.003	0.004	-0.25	ND	
LL4-G8-SB-010SN-0001-SO	3/21/2008	17:05	3/24/2008	1	0.006	0.007	-0.53	ND	
LL4-G8-SB-010SN-0002-SO	3/21/2008	17:05	3/24/2008	1	0.006	0.008	-0.50	ND	
LL4-G8-SB-010SN-0003-SO	3/21/2008	17:05	3/24/2008	1	0.007	0.013	-0.46	ND	
LL4-G8-SB-010SN-0004-SO	3/21/2008	17:05	3/24/2008	1	0.001	0.001	-0.09	ND	
LL4-G8-SB-010SN-0005-SO	3/21/2008	17:05	3/24/2008	1	0.000	0.000	0.00	ND	
LL4-G8-SB-011SN-0001-SO	3/21/2008	17:20	3/24/2008	1	0.006	0.014	-0.31	ND	
LL4-G8-SB-011SN-0002-SO	3/21/2008	17:20	3/24/2008	1	0.000	0.039	1.21	1.2	
LL4-G8-SB-011SN-0003-SO	3/21/2008	17:20	3/24/2008	1	0.005	0.017	-0.09	ND	
LL4-G8-SB-011SN-0004-SO	3/21/2008	17:20	3/24/2008	1	0.001	0.005	0.03	ND	
LL4-G8-SB-011SN-0005-SO	3/21/2008	17:20	3/24/2008	1	0.002	0.005	-0.09	ND	
LL4-G8-SB-012SN-0001-SO	3/21/2008	18:35	3/24/2008	1	0.002	0.004	-0.12	ND	
LL4-G8-SB-012SN-0001-SO-DUP	3/21/2008	18:35	3/24/2008	1	0.001	0.002	-0.06	ND	

**TNT Soil Test Worksheet  
RVAAP**

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs <sup>Initial</sup>	Abs <sup>sample</sup>	Result	TNT Conc. (ppm) (Cleanup Level: 1646 ppm)	Comments
LL4-G8-SB-012SN-0002-SO	3/21/2008	18:35	3/24/2008	1	0.008	0.023	-0.28	ND	
LL4-G8-SB-012SN-0003-SO	3/21/2008	18:35	3/24/2008	1	0.010	0.105	2.01	2.0	
LL4-G8-SB-012SN-0004-SO	3/21/2008	18:35	3/24/2008	1	0.000	0.002	0.06	ND	
LL4-G8-SB-012SN-0005-SO	3/21/2008	18:35	3/24/2008	1	0.002	0.003	-0.15	ND	
LL4-G8-SB-013SN-0001-SO	3/21/2008	17:25	3/24/2008	1	0.002	0.006	-0.06	ND	
LL4-G8-SB-013SN-0002-SO	3/21/2008	17:25	3/24/2008	1	0.005	0.010	-0.31	ND	
LL4-G8-SB-013SN-0003-SO	3/21/2008	17:25	3/24/2008	1	0.004	0.005	-0.34	ND	
LL4-G8-SB-013SN-0004-SO	3/21/2008	17:25	3/24/2008	1	0.006	0.007	-0.53	ND	
LL4-G8-SB-013SN-0005-SO	3/21/2008	17:25	3/24/2008	1	0.006	0.009	-0.46	ND	
LL4-G8-SB-014SN-0001-SO	3/21/2008	18:25	3/24/2008	1	0.001	0.002	-0.06	ND	
LL4-G8-SB-014SN-0002-SO	3/21/2008	18:25	3/24/2008	1	0.000	0.001	0.03	ND	
LL4-G8-SB-014SN-0003-SO	3/21/2008	18:25	3/24/2008	1	0.001	0.002	-0.06	ND	
LL4-G8-SB-014SN-0004-SO	3/21/2008	18:25	3/24/2008	1	0.001	0.002	-0.06	ND	
LL4-G8-SB-014SN-0005-SO	3/21/2008	18:25	3/24/2008	1	0.000	0.002	0.06	ND	
LL4-G8-SB-015SN-0001-SO	3/21/2008	18:00	3/24/2008	1	0.000	0.016	0.50	ND	
LL4-G8-SB-015SN-0001-SO-DUP	3/21/2008	18:00	3/24/2008	1	0.001	0.004	0.00	ND	
LL4-G8-SB-015SN-0002-SO	3/21/2008	18:00	3/24/2008	1	0.009	0.017	-0.59	ND	
LL4-G8-SB-015SN-0003-SO	3/21/2008	18:00	3/24/2008	1	0.004	0.005	-0.34	ND	
LL4-G8-SB-015SN-0004-SO	3/21/2008	18:00	3/24/2008	1	0.006	0.012	-0.37	ND	
LL4-G8-SB-015SN-0005-SO	3/21/2008	18:00	3/24/2008	1	0.004	0.006	-0.31	ND	
LL4G9-SB-033SN-0001-SO	3/28/2008	1010	3/28/2008	1	0.002	0.012	0.12	ND	
LL4G9-SB-033SN-0002-SO	3/28/2008	1010	3/28/2008	1	0.001	0.045	1.27	1.3	Slightly Blue
LL4G9-SB-033SN-0003-SO	3/28/2008	1010	3/28/2008	1	0.000	0.007	0.22	ND	
LL4G9-SB-033SN-0004-SO	3/28/2008	1010	3/28/2008	1	0.000	0.015	0.46	ND	Blue Tint
LL4G9-SB-033SN-0005-SO	3/28/2008	1010	3/28/2008	1	0.001	0.005	0.03	ND	
LL4G9-SB-034SN-0001-SO	3/28/2008	1000	3/28/2008	1	0.002	0.002	-0.19	ND	
LL4G9-SB-034SN-0002-SO	3/28/2008	1000	3/28/2008	1	0.002	0.006	-0.06	ND	
LL4G9-SB-034SN-0003-SO	3/28/2008	1000	3/28/2008	1	0.000	0.001	0.03	ND	
LL4G9-SB-034SN-0004-SO	3/28/2008	1000	3/28/2008	1	0.001	0.012	0.25	ND	
LL4G9-SB-034SN-0005-SO	3/28/2008	1000	3/28/2008	1	0.000	0.001	0.03	ND	
LL4G11-SS-023SN-0001-SO	3/28/2008	1058	3/28/2008	1	0.002	0.012	0.12	ND	
LL4G13A-SS-019SN-0001-SO	3/28/2008	1230	3/28/2008	1	0.001	0.005	0.03	ND	
LL4G13V2-SS-030SN-0001-SO	3/28/2008	1223	3/28/2008	1	0.001	0.001	-0.09	ND	
LL4G17-SS-026SN-0001-SO	3/28/2008	1150	3/28/2008	1	0.011	0.030	-0.43	ND	
LL4G13-SS-020SN-0001-SO	3/28/2008	1240	3/28/2008	1	0.001	0.004	0.00	ND	
LL4G15-SB-031SN-0001-SO	3/28/2008	1137	3/28/2008	1	0.001	0.002	-0.06	ND	Sample ID corrected
LL4G15-SB-031SN-0002-SO	3/28/2008	1137	3/28/2008	1	0.000	0.002	0.06	ND	Sample ID corrected
LL4G15-SB-031SN-0003-SO	3/28/2008	1137	3/28/2008	1	0.000	0.003	0.09	ND	Sample ID corrected
LL4G15-SB-031SN-0004-SO	3/28/2008	1137	3/28/2008	1	0.002	0.004	-0.12	ND	Sample ID corrected
LL4G15-SB-031SN-0005-SO	3/28/2008	1137	3/28/2008	1	0.002	0.003	-0.15	ND	Sample ID corrected
LL4G15-SB-032SN-0001-SO	3/28/2008	1147	3/28/2008	1	0.005	0.007	-0.40	ND	Sample ID corrected
LL4G15-SB-032SN-0002-SO	3/28/2008	1147	3/28/2008	1	0.003	0.009	-0.09	ND	Sample ID corrected
LL4G15-SB-032SN-0003-SO	3/28/2008	1147	3/28/2008	1	0.001	0.001	-0.09	ND	Sample ID corrected
LL4G15-SB-032SN-0004-SO	3/28/2008	1147	3/28/2008	1	0.001	0.003	-0.03	ND	Sample ID corrected
LL4G15-SB-032SN-0005-SO	3/28/2008	1147	3/28/2008	1	0.002	0.004	-0.12	ND	Sample ID corrected
LL4G15-SB-032SN-0005-SO-DUP	3/28/2008	1147	3/28/2008	1	0.002	0.003	-0.15	ND	Sample ID corrected
EB4A	3/28/2008	1848	3/28/2008	1	0.018	1.210			Reanalyzed 4/3.K135
LL4G13VP1-SS-018SN-0001-SO	3/28/2008	1420	3/31/2008	1	0.010	0.028	-0.37	ND	
LL4G12A-SS-022SN-0001-SO	3/28/2008	1440	3/31/2008	1	0.002	0.004	-0.12	ND	
LL4G12VP1-SS-025SN-0001-SO	3/28/2008	1455	3/31/2008	1	0.002	0.010	0.06	ND	
LL4G8VP1-SS-024SN-0001-SO	3/28/2008	1515	3/31/2008	1	0.002	0.009	0.03	ND	
LL4G16-SS-021SN-0001-SO	3/28/2008	1540	3/31/2008	1	0.002	0.006	-0.06	ND	
LL4G2-SS-029SN-0001-SO	3/28/2008	1600	3/31/2008	1	0.006	0.008	-0.50	ND	
LL4G6A-SS-028SN-0001-SO	3/28/2008	1620	3/31/2008	1	0.006	0.012	-0.37	ND	
LL3EB22-SS-003SN-0001-SO	3/28/2008	1755	3/31/2008	1	0.005	0.010	-0.31	ND	
LL3EA6A-SB-081SN-0001-SO	3/28/2008	1830	3/31/2008	1	0.017	0.144	2.35	2.4	
LL3EA6A-SB-081SN-0002-SO	3/28/2008	1830	3/31/2008	1	0.004	0.006	-0.31	ND	
LL3EA6A-SB-081SN-0003-SO	3/28/2008	1830	3/31/2008	1	0.006	0.006	-0.56	ND	
LL3EA6A-SB-081SN-0004-SO	3/28/2008	1830	3/31/2008	1	0.006	0.013	-0.34	ND	
LL3EA6A-SB-081SN-0005-SO	3/28/2008	1830	3/31/2008	1	0.002	0.009	0.03	ND	
LL3EA6A-SB-081SN-0005-SO-DUP	3/28/2008	1830	3/31/2008	1	0.003	0.008	-0.12	ND	
LL3EA6A-SB-082SN-0001-SO	3/28/2008	1900	3/31/2008	1	0.114	3.413			Needs re-ext/dilution
LL3EA6A-SB-082SN-0001-SO RE	3/28/2008	1900	4/3/2008	50	0.001	0.471	722.9	723	
LL3EA6A-SB-082SN-0002-SO	3/28/2008	1900	3/31/2008	1	0.002	0.022	0.43	ND	
LL3EA6A-SB-082SN-0003-SO	3/28/2008	1900	3/31/2008	1	0.006	0.963	29.07	29.1	

**TNT Soil Test Worksheet  
RVAAP**

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs <sup>Initial</sup>	Abs <sup>sample</sup>	Result	TNT Conc. (ppm) (Cleanup Level: 1646 ppm)	Comments
LL3EA6A-SB-082SN-0004-SO	3/28/2008	1900	3/31/2008	1	0.111	3.352			Needs re-ext/dilution
LL3EA6A-SB-082SN-0004-SO RE	3/28/2008	1900	4/3/2008	150	0.002	0.874	4021.7	4022	
LL3EA6A-SB-082SN-0005-SO	3/28/2008	1900	3/31/2008	1	0.005	3.304			Needs re-ext/dilution
LL3EA6A-SB-082SN-0005-SO RE	3/28/2008	1900	4/3/2008	150	0.001	0.811	3747.7	3748	
LL3EA6A-SB-083SN-0001-SO	3/28/2008	1910	3/31/2008	1	0.013	0.132	2.48	2.5	
LL3EA6A-SB-083SN-0002-SO	3/28/2008	1910	3/31/2008	1	0.002	0.029	0.65	ND	
LL3EA6A-SB-083SN-0003-SO	3/28/2008	1910	3/31/2008	1	0.008	0.832	24.77	24.8	
LL3EA6A-SB-083SN-0004-SO	3/28/2008	1910	3/31/2008	1	0.010	1.782			Needs re-ext/dilution
LL3EA6A-SB-083SN-0004-SO RE	3/28/2008	1910	4/3/2008	10	0.001	0.085	25.08	25.1	
LL3EA6A-SB-083SN-0005-SO	3/28/2008	1910	3/31/2008	1	0.002	0.758	23.22	23.2	
LL3EA6A-SB-084SN-0001-SO	3/28/2008	1925	3/31/2008	1	0.002	0.182	5.39	5.4	
LL3EA6A-SB-084SN-0002-SO	3/28/2008	1925	3/31/2008	1	0.011	0.012	-0.99	ND	
LL3EA6A-SB-084SN-0003-SO	3/28/2008	1925	3/31/2008	1	0.034	0.052	-2.60	ND	
LL3EA6A-SB-084SN-0004-SO	3/28/2008	1925	3/31/2008	1	0.042	0.134	-1.05	ND	
LL3EA6A-SB-084SN-0005-SO	3/28/2008	1925	3/31/2008	1	0.075	0.158	-4.40	ND	
LL3EA6A-SB-085SN-0001-SO	3/28/2008	1940	3/31/2008	1	0.011	0.014	-0.93	ND	
LL3EA6A-SB-085SN-0002-SO	3/28/2008	1940	3/31/2008	1	0.006	0.009	-0.46	ND	
LL3EA6A-SB-085SN-0003-SO	3/28/2008	1940	3/31/2008	1	0.000	0.006	0.19	ND	
LL3EA6A-SB-085SN-0004-SO	3/28/2008	1940	3/31/2008	1	0.000	0.001	0.03	ND	
LL3EA6A-SB-085SN-0005-SO	3/28/2008	1940	3/31/2008	1	0.003	0.004	-0.25	ND	
LL3EA6A-SB-085SN-0005-SO-DUP	3/28/2008	1940	3/31/2008	1	0.034	0.130	-0.19	ND	
LL3EA28A-SS-054SN-0001-SO	3/28/2008	1950	3/31/2008	1	0.013	3.225			Needs re-ext/dilution
LL3EA28A-SS-054SN-0001-SO RE	3/28/2008	1950	4/3/2008	50	0.003	0.203	295.7	296	
LL351A-SS-055SN-0001-SO	3/28/2008	1925	3/31/2008	1	0.019	0.113	1.15	1.1	
LL3EB8-SS-004SN-0001-SO	3/28/2008	1616	3/31/2008	1	0.036	0.064	-2.48	ND	
LL3EB3-SS-078SN-0001-SO	3/28/2008	1845	3/31/2008	1	0.018	0.028	-1.36	ND	
LL4G18-SS-027SN-0001-SO	3/28/2008	1140	3/31/2008	1	0.023	0.023	-2.14	ND	
LL3EB2-SS-002SN-0001-SO	3/28/2008	1855	3/31/2008	1	0.023	0.027	-2.01	ND	
LL3EB19-SS-001SN-0001-SO	3/28/2008	1905	3/31/2008	1	0.022	0.023	-2.01	ND	
LL351-SS-005SN-0001-SO	3/28/2008	1920	3/31/2008	1	0.116	0.167	-9.20	ND	
EB4A Conf. Sample	3/28/2008	1848	3/31/2008	1	0.025	1.754			Needs re-ext/dilution
EB4A RE	3/28/2008	1848	4/3/2008	10	0.003	0.074	19.20	19.2	
LL4G6-SS-035SN-0001-SO	4/2/2008	853	4/3/2008	1	0.002	0.005	-0.09	ND	
LL4G19-SS-037SN-0001-SO	4/2/2008	915	4/3/2008	1	0.001	0.010	0.19	ND	
LL4G19A-SS-038SN-0001-SO	4/2/2008	925	4/3/2008	1	0.003	0.016	0.12	ND	
LL4G10-SS-039SN-0001-SO	4/2/2008	1000	4/3/2008	1	0.013	0.040	-0.37	ND	
LL3EB20-SS-079SN-0001-SO	4/2/2008	1024	4/3/2008	1	0.005	0.009	-0.34	ND	
LL3EB25-SS-077SN-0001-SO	4/2/2008	1050	4/3/2008	1	0.115	1.249			Needs dilution
LL3EB25-SS-077SN-0001-SO DL	4/2/2008	1050	4/3/2008	10	0.018	0.535	143.34	143.3	
LL3EB9A-SS-076SN-0001-SO	4/2/2008	1100	4/3/2008	1	0.011	0.020	-0.74	ND	
LL3EB9A-SS-076SN-0001-SO DUP	4/2/2008	1100	4/3/2008	1	0.009	0.017	-0.59	ND	
LL3EB4A-SB-061SN-0001-SO	4/3/2008	1330	4/3/2008	1	0.001	0.003	-0.03	ND	
LL3EB4A-SB-061SN-0002-SO	4/3/2008	1330	4/3/2008	1	0.001	0.001	-0.09	ND	
LL3EB4A-SB-061SN-0003-SO	4/3/2008	1330	4/3/2008	1	0.001	0.001	-0.09	ND	
LL3EB4A-SB-061SN-0004-SO	4/3/2008	1330	4/3/2008	1	0.000	0.020	0.62	ND	
LL3EB4A-SB-061SN-0005-SO	4/3/2008	1330	4/3/2008	1	0.002	0.002	-0.19	ND	
LL3EB9A-SS-032SN-0001-SO	4/3/2008	1020	4/3/2008	1	0.004	0.011	-0.15	ND	
LL3EB4A-SB-062SN-0001-SO	4/3/2008	1310	4/3/2008	1	0.002	0.004	-0.12	ND	
LL3EB4A-SB-062SN-0002-SO	4/3/2008	1310	4/3/2008	1	0.001	0.003	-0.03	ND	
LL3EB4A-SB-062SN-0003-SO	4/3/2008	1310	4/3/2008	1	0.002	0.003	-0.15	ND	
LL3EB4A-SB-062SN-0004-SO	4/3/2008	1310	4/3/2008	1	0.002	0.003	-0.15	ND	
LL3EB4A-SB-062SN-0005-SO	4/3/2008	1310	4/3/2008	1	0.000	0.001	0.03	ND	
LL3EB4A-SB-063SN-0001-SO	4/3/2008	1215	4/3/2008	1	0.023	0.094	0.06	ND	
LL3EB4A-SB-063SN-0002-SO	4/3/2008	1215	4/3/2008	1	0.000	0.002	0.06	ND	
LL3EB4A-SB-063SN-0003-SO	4/3/2008	1215	4/3/2008	1	0.001	0.002	-0.06	ND	
LL3EB4A-SB-063SN-0004-SO	4/3/2008	1215	4/3/2008	1	0.000	0.002	0.06	ND	
LL3EB4A-SB-063SN-0005-SO	4/3/2008	1215	4/3/2008	1	0.000	0.001	0.03	ND	
LL3EB4A-SB-064SN-0001-SO	4/3/2008	1230	4/3/2008	1	0.001	0.085	2.51	2.5	
LL3EB4A-SB-064SN-0002-SO	4/3/2008	1230	4/3/2008	1	0.000	0.003	0.09	ND	
LL3EB4A-SB-064SN-0003-SO	4/3/2008	1230	4/3/2008	1	0.002	0.005	-0.09	ND	
LL3EB4A-SB-064SN-0004-SO	4/3/2008	1230	4/3/2008	1	0.002	0.004	-0.12	ND	
LL3EB4A-SB-064SN-0005-SO	4/3/2008	1230	4/3/2008	1	0.000	0.003	0.09	ND	
LL3EB4A-SB-073SN-0001-SO	4/3/2008	1300	4/3/2008	1	0.007	0.039	0.34	ND	
LL3EB4A-SB-073SN-0002-SO	4/3/2008	1300	4/3/2008	1	0.002	0.016	0.25	ND	
LL3EB4A-SB-073SN-0003-SO	4/3/2008	1300	4/3/2008	1	0.001	0.003	-0.03	ND	

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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs <sup>-initial</sup>	Abs <sup>-sample</sup>	Result	TNT Conc. (ppm) (Cleanup Level: 1646 ppm)	Comments
LL3EB4A-SB-073SN-0004-SO	4/3/2008	1300	4/3/2008	1	0.001	0.002	-0.06	ND	
LL3EB4A-SB-073SN-0004-SO DUP	4/3/2008	1300	4/3/2008	1	0.002	0.003	-0.15	ND	
LL3EB4A-SB-073SN-0005-SO	4/3/2008	1300	4/4/2008	1	0.003	0.004	-0.25	ND	
LL3EB4VP1-SS-033SN-0001-SO	4/3/2008	1030	4/4/2008	1	0.003	0.003	-0.28	ND	
LL3EB10VP1-SS-028SN-0001-SO	4/3/2008	930	4/4/2008	1	0.017	0.033	-1.08	ND	
LL3EB10VP2-SS-029SN-0001-SO	4/3/2008	940	4/4/2008	1	0.038	0.145	-0.22	ND	
LL3EB4A-SB-058SN-0001-SO	4/3/2008	1540	4/4/2008	1	0.014	1.303			Needs dilution
LL3EB4A-SB-058SN-0001-SO DL	4/3/2008	1540	4/4/2008	10	0.003	0.146	41.49	41.5	
LL3EB4A-SB-058SN-0002-SO	4/3/2008	1540	4/4/2008	1	0.018	0.506	13.44	13.4	
LL3EB4A-SB-058SN-0003-SO	4/3/2008	1540	4/4/2008	1	0.037	3.268			Needs dilution
LL3EB4A-SB-058SN-0003-SO DL	4/3/2008	1540	4/4/2008	100	0.000	0.088	272.45	272	
LL3EB4A-SB-058SN-0004-SO	4/3/2008	1540	4/4/2008	1	0.039	3.308			Needs dilution
LL3EB4A-SB-058SN-0004-SO DL	4/3/2008	1540	4/4/2008	100	0.003	0.131	368.42	368	
LL3EB4A-SB-058SN-0005-SO	4/3/2008	1540	4/4/2008	1	0.018	3.305			Needs dilution
LL3EB4A-SB-058SN-0005-SO DL	4/3/2008	1540	4/4/2008	100	0.000	0.230	712.07	712	
LL3EB4A-SB-058SN-0005-SO DUP	4/3/2008	1540	4/4/2008	1	0.002	1.510			Needs dilution
LL3EB4A-SB-058SN-0005-SO DUP DL	4/3/2008	1540	4/4/2008	2	0.003	0.721	43.90	43.9	
LL3EB4A-SB-059SN-0001-SO	4/3/2008	1630	4/4/2008	1	0.037	1.589			Needs dilution
LL3EB4A-SB-059SN-0001-SO DL	4/3/2008	1630	4/4/2008	10	0.004	0.184	52.01	52.0	
LL3EB4A-SB-059SN-0002-SO	4/3/2008	1630	4/4/2008	1	0.057	0.761	16.50	16.5	
LL3EB4A-SB-059SN-0003-SO	4/3/2008	1630	4/4/2008	1	0.009	0.020	-0.50	ND	
LL3EB4A-SB-059SN-0004-SO	4/3/2008	1630	4/4/2008	1	0.000	0.004	0.12	ND	
LL3EB4A-SB-059SN-0005-SO	4/3/2008	1630	4/4/2008	1	0.001	0.003	-0.03	ND	
LL3EB4A-SB-060SN-0001-SO	4/3/2008	1545	4/4/2008	1	0.000	0.002	0.06	ND	
LL3EB4A-SB-060SN-0002-SO	4/3/2008	1545	4/4/2008	1	0.001	0.003	-0.03	ND	
LL3EB4A-SB-060SN-0003-SO	4/3/2008	1545	4/4/2008	1	0.001	0.003	-0.03	ND	
LL3EB4A-SB-060SN-0004-SO	4/3/2008	1545	4/4/2008	1	0.001	0.002	-0.06	ND	
LL3EB4A-SB-060SN-0005-SO	4/3/2008	1545	4/4/2008	1	0.001	0.003	-0.03	ND	
LL3EB4A-SB-065SN-0001-SO	4/3/2008	1715	4/4/2008	1	0.003	0.007	-0.15	ND	
LL3EB4A-SB-065SN-0002-SO	4/3/2008	1715	4/4/2008	1	0.003	0.007	-0.15	ND	
LL3EB4A-SB-065SN-0003-SO	4/3/2008	1715	4/4/2008	1	0.004	0.008	-0.25	ND	
LL3EB4A-SB-065SN-0004-SO	4/3/2008	1715	4/4/2008	1	0.001	0.003	-0.03	ND	
LL3EB4A-SB-065SN-0005-SO	4/3/2008	1715	4/4/2008	1	0.000	0.032	0.99	1.0	
LL3EB4A-SB-066SN-0001-SO	4/3/2008	1740	4/4/2008	1	0.032	0.630	15.54	15.5	
LL3EB4A-SB-066SN-0002-SO	4/3/2008	1740	4/4/2008	1	0.031	0.033	-2.82	ND	
LL3EB4A-SB-066SN-0003-SO	4/3/2008	1740	4/4/2008	1	0.032	0.035	-2.88	ND	
LL3EB4A-SB-066SN-0004-SO	4/3/2008	1740	4/4/2008	1	0.033	0.035	-3.00	ND	
LL3EB4A-SB-066SN-0005-SO	4/3/2008	1740	4/4/2008	1	0.033	0.035	-3.00	ND	
LL3EB4A-SB-066SN-0005-SO DUP	4/3/2008	1740	4/4/2008	1	0.051	0.054	-4.64	ND	
LL3EB4A-SB-067SN-0001-SO	4/3/2008	1700	4/4/2008	1	0.068	3.197			Needs dilution
LL3EB4A-SB-067SN-0001-SO DL	4/3/2008	1700	4/4/2008	50	0.005	0.169	230.65	231	
LL3EB4A-SB-067SN-0002-SO	4/3/2008	1700	4/4/2008	1	0.053	0.059	-4.74	ND	
LL3EB4A-SB-067SN-0003-SO	4/3/2008	1700	4/4/2008	1	0.054	0.057	-4.92	ND	
LL3EB4A-SB-067SN-0004-SO	4/3/2008	1700	4/4/2008	1	0.014	0.016	-1.24	ND	
LL3EB4A-SB-067SN-0005-SO	4/3/2008	1700	4/4/2008	1	0.015	0.016	-1.36	ND	
LL3EB4A-SB-068SN-0001-SO	4/3/2008	1645	4/4/2008	1	0.015	0.065	0.15	ND	
LL3EB4A-SB-068SN-0002-SO	4/3/2008	1645	4/4/2008	1	0.015	0.024	-1.11	ND	
LL3EB4A-SB-068SN-0003-SO	4/3/2008	1645	4/4/2008	1	0.014	0.022	-1.05	ND	
LL3EB4A-SB-068SN-0004-SO	4/3/2008	1645	4/4/2008	1	0.018	0.038	-1.05	ND	
LL3EB4A-SB-068SN-0005-SO	4/3/2008	1645	4/4/2008	1	0.015	0.028	-0.99	ND	
LL3EB4A-SB-069SN-0001-SO	4/3/2008	1755	4/4/2008	1	0.018	0.178	3.28	3.3	
LL3EB4A-SB-069SN-0002-SO	4/3/2008	1755	4/4/2008	1	0.014	0.050	-0.19	ND	
LL3EB4A-SB-069SN-0003-SO	4/3/2008	1755	4/4/2008	1	0.020	0.117	1.15	1.1	
LL3EB4A-SB-069SN-0004-SO	4/3/2008	1755	4/4/2008	1	0.021	0.106	0.68	ND	
LL3EB4A-SB-069SN-0005-SO	4/3/2008	1755	4/4/2008	1	0.016	0.088	0.74	0.7	
LL3EB4-SB-040SN-0001-SO	4/4/2008	1145	4/7/2008	1	0.000	0.039	1.21	1.2	
LL3EB4-SB-040SN-0002-SO	4/4/2008	1145	4/7/2008	1	0.000	0.004	0.12	ND	
LL3EB4-SB-040SN-0003-SO	4/4/2008	1145	4/7/2008	1	0.003	0.015	0.09	ND	
LL3EB4-SB-040SN-0004-SO	4/4/2008	1145	4/7/2008	1	0.000	0.002	0.06	ND	
LL3EB4-SB-040SN-0005-SO	4/4/2008	1145	4/7/2008	1	0.001	0.019	0.46	ND	blue tint
LL3EB4-SB-038SN-0001-SO	4/4/2008	1000	4/7/2008	1	0.000	0.043	1.33	1.3	
LL3EB4-SB-038SN-0002-SO	4/4/2008	1000	4/7/2008	1	0.001	0.315	9.63	9.6	
LL3EB4-SB-038SN-0003-SO	4/4/2008	1000	4/7/2008	1	0.000	0.001	0.03	ND	
LL3EB4-SB-038SN-0004-SO	4/4/2008	1000	4/7/2008	1	0.002	0.006	-0.06	ND	
LL3EB4-SB-038SN-0005-SO	4/4/2008	1000	4/7/2008	1	0.000	0.002	0.06	ND	

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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs <sup>Initial</sup>	Abs <sup>sample</sup>	Result	TNT Conc. (ppm) (Cleanup Level: 1646 ppm)	Comments
LL3EB4-SB-037SN-0001-SO	4/4/2008	945	4/7/2008	1	0.016	0.138	2.29	2.3	
LL3EB4-SB-037SN-0002-SO	4/4/2008	945	4/7/2008	1	0.011	0.576	16.47	16.5	
LL3EB4-SB-037SN-0003-SO	4/4/2008	945	4/7/2008	1	0.013	0.246	6.01	6.0	
LL3EB4-SB-037SN-0004-SO	4/4/2008	945	4/7/2008	1	0.005	0.285	8.20	8.2	
LL3EB4-SB-037SN-0005-SO	4/4/2008	945	4/7/2008	1	0.001	0.246	7.49	7.5	
LL3EB4-SB-039SN-0001-SO	4/4/2008	1130	4/7/2008	1	0.001	0.022	0.56	ND	
LL3EB4-SB-039SN-0001-SO DUP	4/4/2008	1130	4/7/2008	1	0.002	0.016	0.25	ND	
LL3EB4-SB-039SN-0002-SO	4/4/2008	1130	4/7/2008	1	0.002	0.009	0.03	ND	
LL3EB4-SB-039SN-0003-SO	4/4/2008	1130	4/7/2008	1	0.003	0.016	0.12	ND	
LL3EB4-SB-039SN-0004-SO	4/4/2008	1130	4/7/2008	1	0.002	0.025	0.53	ND	
LL3EB4-SB-039SN-0005-SO	4/4/2008	1130	4/7/2008	1	0.002	0.019	0.34	ND	
LL3EB4-SB-041SN-0001-SO	4/4/2008	1200	4/7/2008	1	0.012	0.053	0.15	ND	
LL3EB4-SB-041SN-0002-SO	4/4/2008	1200	4/7/2008	1	0.008	0.078	1.42	1.4	
LL3EB4-SB-041SN-0003-SO	4/4/2008	1200	4/7/2008	1	0.013	3.280			Needs dilution
LL3EB4-SB-041SN-0003-SO DL	4/4/2008	1200	4/7/2008	10	0.001	0.551	169.35	169	
LL3EB4-SB-041SN-0004-SO	4/4/2008	1200	4/7/2008	1	0.010	0.090	1.55	1.5	
LL3EB4-SB-041SN-0005-SO	4/4/2008	1200	4/7/2008	1	0.009	0.075	1.21	1.2	
LL3EB4-SB-042SN-0001-SO	4/4/2008	1535	4/7/2008	1	0.082	3.428			Needs dilution
LL3EB4-SB-042SN-0001-SO DL	4/4/2008	1535	4/7/2008	100	0.002	0.577	1761.61	1762	Reextract TNT to confirm
LL3EB4-SB-042SN-0001-SO RE	4/4/2008	1535	4/7/2008	500	0.001	0.243	3699.69	3700	Reextraction
LL3EB4-SB-042SN-0002-SO	4/4/2008	1535	4/7/2008	1	0.004	1.461			Needs dilution
LL3EB4-SB-042SN-0002-SO DL	4/4/2008	1535	4/7/2008	5	0.002	0.349	52.79	52.8	
LL3EB4-SB-042SN-0003-SO	4/4/2008	1535	4/7/2008	1	0.009	3.490			Needs dilution
LL3EB4-SB-042SN-0003-SO DL	4/4/2008	1535	4/7/2008	100	0.001	0.234	712.07	712	
LL3EB4-SB-042SN-0004-SO	4/4/2008	1535	4/7/2008	1	0.051	3.343			Needs dilution
LL3EB4-SB-042SN-0004-SO DL	4/4/2008	1535	4/7/2008	100	0.001	0.369	1130.03	1130	
LL3EB4-SB-042SN-0005-SO	4/4/2008	1535	4/7/2008	1	0.004	2.989			Needs dilution
LL3EB4-SB-042SN-0005-SO DL	4/4/2008	1535	4/7/2008	25	0.001	0.152	114.55	115	
LL3EB4-SB-043SN-0001-SO	4/4/2008	1435	4/7/2008	2.5	0.001	0.018	1.08	1.1	
LL3EB4-SB-043SN-0002-SO	4/4/2008	1435	4/7/2008	1	0.001	0.004	0.00	ND	
LL3EB4-SB-043SN-0003-SO	4/4/2008	1435	4/7/2008	1	0.001	0.003	-0.03	ND	
LL3EB4-SB-043SN-0004-SO	4/4/2008	1435	4/7/2008	1	0.001	0.003	-0.03	ND	
LL3EB4-SB-043SN-0004-SO DUP	4/4/2008	1435	4/7/2008	1	0.001	0.006	0.06	ND	
LL3EB4-SB-043SN-0005-SO	4/4/2008	1435	4/7/2008	1	0.002	0.024	0.50	ND	
LL3EB4-SB-044SN-0001-SO	4/4/2008	1400	4/7/2008	1	0.009	0.230	6.01	6.0	
LL3EB4-SB-044SN-0002-SO	4/4/2008	1400	4/7/2008	1	0.008	0.241	6.47	6.5	
LL3EB4-SB-044SN-0003-SO	4/4/2008	1400	4/7/2008	1	0.004	0.106	2.79	2.8	
LL3EB4-SB-044SN-0004-SO	4/4/2008	1400	4/7/2008	1	0.008	0.087	1.70	1.7	
LL3EB4-SB-044SN-0005-SO	4/4/2008	1400	4/7/2008	1	0.005	0.033	0.40	ND	
LL3EB4-SB-045SN-0001-SO	4/4/2008	1030	4/7/2008	1	0.039	0.049	-3.31	ND	
LL3EB4-SB-045SN-0002-SO	4/4/2008	1030	4/7/2008	1	0.007	0.043	0.46	ND	
LL3EB4-SB-045SN-0003-SO	4/4/2008	1030	4/7/2008	1	0.003	0.018	0.19	ND	
LL3EB4-SB-045SN-0004-SO	4/4/2008	1030	4/7/2008	1	0.001	0.002	-0.06	ND	
LL3EB4-SB-045SN-0005-SO	4/4/2008	1030	4/7/2008	1	0.001	0.002	-0.06	ND	
LL3EB4-SB-046SN-0001-SO	4/4/2008	1015	4/7/2008	1	0.001	0.042	1.18	1.2	
LL3EB4-SB-046SN-0002-SO	4/4/2008	1015	4/7/2008	1	0.001	0.005	0.03	ND	
LL3EB4-SB-046SN-0003-SO	4/4/2008	1015	4/7/2008	1	0.000	0.001	0.03	ND	
LL3EB4-SB-046SN-0004-SO	4/4/2008	1015	4/7/2008	1	0.000	0.002	0.06	ND	
LL3EB4-SB-046SN-0005-SO	4/4/2008	1015	4/7/2008	1	0.000	0.001	0.03	ND	
LL3EB4-SB-050SN-0001-SO	4/4/2008	1415	4/7/2008	1	0.005	0.090	2.17	2.2	
LL3EB4-SB-050SN-0002-SO	4/4/2008	1415	4/7/2008	1	0.006	0.010	-0.43	ND	
LL3EB4-SB-050SN-0003-SO	4/4/2008	1415	4/7/2008	1	0.012	0.149	3.13	3.1	
LL3EB4-SB-050SN-0003-SO DUP	4/4/2008	1415	4/7/2008	1	0.012	0.136	2.72	2.7	
LL3EB4-SB-050SN-0004-SO	4/4/2008	1415	4/7/2008	1	0.005	0.005	-0.46	ND	
LL3EB4-SB-050SN-0005-SO	4/4/2008	1415	4/7/2008	1	0.026	0.198	2.91	2.9	
LL3EB4-SB-052SN-0001-SO	4/4/2008	1515	4/7/2008	1	0.006	0.006	-0.56	ND	
LL3EB4-SB-052SN-0002-SO	4/4/2008	1515	4/7/2008	1	0.040	0.163	0.09	ND	
LL3EB4-SB-052SN-0003-SO	4/4/2008	1515	4/7/2008	1	0.020	0.249	5.23	5.2	
LL3EB4-SB-052SN-0004-SO	4/4/2008	1515	4/7/2008	1	0.030	0.145	0.77	0.8	
LL3EB4-SB-052SN-0005-SO	4/4/2008	1515	4/7/2008	1	0.032	0.126	-0.06	ND	
LL3EA6A-SB-082SN-0001-SO S2	4/4/2008	1900	4/9/2008	100	0.004	0.574	1727.55		Orig samp: 723
LL3EA6A-SB-082SN-0002-SO S2	4/4/2008	1900	4/9/2008	1	0.006	0.496	14.61	14.6	ND
LL3EA6A-SB-082SN-0003-SO S2	4/4/2008	1900	4/9/2008	1	0.002	0.036	0.87	0.9	29.1
LL3EA6A-SB-082SN-0004-SO S2	4/4/2008	1900	4/9/2008	10	0.003	0.678	206.19	206	4022
LL3EA6A-SB-082SN-0005-SO S2	4/4/2008	1900	4/9/2008	500	0.003	0.265	3916.41	3916	3748



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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs <sup>initial</sup>	Abs <sup>sample</sup>	Result	TNT Conc. (ppm) (Cleanup Level: 1646 ppm)	Comments
LL3EB10-SB-014SN-0001-SO	4/7/2008	1530	4/9/2008	1	0.001	0.002	-0.06	ND	
LL3EB10-SB-014SN-0001-SO-DUP	4/7/2008	1530	4/9/2008	1	0.003	0.003	-0.28	ND	
LL3EB10-SB-014SN-0002-SO	4/7/2008	1530	4/9/2008	1	0.000	0.002	0.06	ND	
LL3EB10-SB-014SN-0003-SO	4/7/2008	1530	4/9/2008	1	0.002	0.004	-0.12	ND	
LL3EB10-SB-014SN-0004-SO	4/7/2008	1530	4/9/2008	1	0.001	0.002	-0.06	ND	
LL3EB10-SB-014SN-0005-SO	4/7/2008	1530	4/9/2008	1	0.001	0.002	-0.06	ND	
LL3EB10-SB-016SN-0001-SO	4/7/2008	1030	4/9/2008	1	0.030	0.052	-2.11	ND	
LL3EB10-SB-016SN-0002-SO	4/7/2008	1030	4/9/2008	1	0.000	0.000	0.00	ND	
LL3EB10-SB-016SN-0003-SO	4/7/2008	1030	4/9/2008	1	0.000	0.001	0.03	ND	
LL3EB10-SB-016SN-0004-SO	4/7/2008	1030	4/9/2008	1	0.001	0.002	-0.06	ND	
LL3EB10-SB-016SN-0005-SO	4/7/2008	1030	4/9/2008	1	0.000	0.002	0.06	ND	
LL3EB10-SB-018SN-0001-SO	4/7/2008	955	4/9/2008	1	0.002	0.010	0.06	ND	
LL3EB10-SB-018SN-0002-SO	4/7/2008	955	4/9/2008	1	0.002	0.007	-0.03	ND	
LL3EB10-SB-018SN-0003-SO	4/7/2008	955	4/9/2008	1	0.001	0.010	0.19	ND	
LL3EB10-SB-018SN-0004-SO	4/7/2008	955	4/9/2008	1	0.003	0.013	0.03	ND	
LL3EB10-SB-018SN-0005-SO	4/7/2008	955	4/9/2008	1	0.005	0.014	-0.19	ND	
LL3EB10-SB-025SN-0001-SO	4/7/2008	1010	4/9/2008	1	0.022	0.044	-1.36	ND	
LL3EB10-SB-025SN-0002-SO	4/7/2008	1010	4/9/2008	1	0.004	0.009	-0.22	ND	
LL3EB10-SB-025SN-0003-SO	4/7/2008	1010	4/9/2008	1	0.000	0.000	0.00	ND	
LL3EB10-SB-025SN-0004-SO	4/7/2008	1010	4/9/2008	1	0.001	0.003	-0.03	ND	
LL3EB10-SB-025SN-0005-SO	4/7/2008	1010	4/9/2008	1	0.003	0.007	-0.15	ND	
LL3EB10-SB-026SN-0001-SO	4/7/2008	920	4/9/2008	1	0.001	0.001	-0.09	ND	
LL3EB10-SB-026SN-0002-SO	4/7/2008	920	4/9/2008	1	0.008	0.010	-0.68	ND	
LL3EB10-SB-026SN-0003-SO	4/7/2008	920	4/9/2008	1	0.001	0.001	-0.09	ND	
LL3EB10-SB-026SN-0004-SO	4/7/2008	920	4/9/2008	1	0.000	0.001	0.03	ND	
LL3EB10-SB-026SN-0005-SO	4/7/2008	920	4/9/2008	1	0.008	0.008	-0.74	ND	
LL3EB10-SB-019SN-0001-SO	4/7/2008	1340	4/9/2008	1	0.004	0.011	-0.15	ND	
LL3EB10-SB-019SN-0002-SO	4/7/2008	1340	4/9/2008	1	0.008	0.021	-0.34	ND	
LL3EB10-SB-019SN-0003-SO	4/7/2008	1340	4/9/2008	1	0.001	0.002	-0.06	ND	
LL3EB10-SB-019SN-0004-SO	4/7/2008	1340	4/9/2008	1	0.001	0.002	-0.06	ND	
LL3EB10-SB-019SN-0004-SO-DUP	4/7/2008	1340	4/9/2008	1	0.001	0.002	-0.06	ND	
LL3EB10-SB-019SN-0005-SO	4/7/2008	1340	4/9/2008	1	0.001	0.003	-0.03	ND	
LL3EB10-SB-024SN-0001-SO	4/7/2008	1400	4/9/2008	1	0.012	0.018	-0.93	ND	
LL3EB10-SB-024SN-0002-SO	4/7/2008	1400	4/9/2008	1	0.016	0.018	-1.42	ND	
LL3EB10-SB-024SN-0003-SO	4/7/2008	1400	4/9/2008	1	0.001	0.004	0.00	ND	
LL3EB10-SB-024SN-0004-SO	4/7/2008	1400	4/9/2008	1	0.000	0.001	0.03	ND	
LL3EB10-SB-024SN-0005-SO	4/7/2008	1400	4/9/2008	1	0.002	0.005	-0.09	ND	
LL3EB10-SB-023SN-0001-SO	4/7/2008	1505	4/9/2008	2	0.011	0.036	-0.50	ND	
LL3EB10-SB-023SN-0002-SO	4/7/2008	1505	4/9/2008	1	0.323	0.315	-30.25	ND	
LL3EB10-SB-023SN-0003-SO	4/7/2008	1505	4/9/2008	1	0.002	0.004	-0.12	ND	
LL3EB10-SB-023SN-0004-SO	4/7/2008	1505	4/9/2008	1	0.003	0.005	-0.22	ND	
LL3EB10-SB-023SN-0005-SO	4/7/2008	1505	4/9/2008	1	0.002	0.003	-0.15	ND	
LL3EB10-SB-017SN-0001-SO	4/7/2008	1115	4/9/2008	1	0.000	0.001	0.03	ND	
LL3EB10-SB-017SN-0002-SO	4/7/2008	1115	4/9/2008	1	0.002	0.002	-0.19	ND	
LL3EB10-SB-017SN-0003-SO	4/7/2008	1115	4/9/2008	1	0.003	0.004	-0.25	ND	
LL3EB10-SB-021SN-0001-SO	4/7/2008	1600	4/9/2008	1	0.017	0.027	-1.27	ND	
LL3EB10-SB-021SN-0002-SO	4/7/2008	1600	4/9/2008	1	0.021	0.059	-0.77	ND	
LL3EB10-SB-021SN-0003-SO	4/7/2008	1600	4/9/2008	1	0.023	0.036	-1.73	ND	
LL3EB10-SB-021SN-0003-SO-DUP	4/7/2008	1600	4/9/2008	1	0.021	0.063	-0.65	ND	
LL3EB11-SS-011SN-0001-SO	4/4/2008	1510	4/9/2008	1	0.008	0.010	-0.68	ND	
LL3EB8A-SS-006SN-0001-SO	4/4/2008	1520	4/9/2008	1	0.008	0.008	-0.74	ND	
LL3EB4A URS-EPA 1	4/8/2008	1510	4/9/2008	1000	0.000	1.049			Needs dilution
LL3EB4A URS-EPA 1 DL	4/8/2008	1510	4/9/2008	2000	0.011	0.527	29907.12	29907	
LL3EB4A URS-EPA 2	4/8/2008	1515	4/9/2008	10	0.005	0.205	57.28	57.3	
LL3EB4A URS-EPA 3	4/8/2008	1515	4/9/2008	10	0.029	2.644			Needs dilution
LL3EB4A URS-EPA 3 DL	4/8/2008	1520	4/9/2008	100	0.001	0.115	343.65	344	
LL3EB4A URS-EPA 4	4/8/2008	1520	4/9/2008	100	0.004	0.744	2253.87	2254	
LL3EB10-SB-013SN-0001-SO	4/10/2008	1015	4/10/2008	1	0.184	0.315	-13.03	ND	
LL3EB10-SB-013SN-0002-SO	4/10/2008	1015	4/10/2008	1	0.001	0.003	-0.03	ND	
LL3EB10-SB-015SN-0001-SO	4/10/2008	940	4/10/2008	1	0.056	0.098	-3.90	ND	
LL3EB10-SB-015SN-0002-SO	4/10/2008	940	4/10/2008	1	0.007	0.011	-0.53	ND	
LL3EB10-SB-015SN-0003-SO	4/10/2008	940	4/10/2008	1	0.003	0.004	-0.25	ND	
LL3EB10-SB-015SN-0004-SO	4/10/2008	940	4/10/2008	1	0.001	0.002	-0.06	ND	
LL3EB10-SB-020SN-0001-SO	4/10/2008	845	4/10/2008	1	0.005	0.017	-0.09	ND	
LL3EB10-SB-020SN-0002-SO	4/10/2008	845	4/10/2008	1	0.007	0.017	-0.34	ND	

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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs <sup>Initial</sup>	Abs <sup>sample</sup>	Result	TNT Conc. (ppm) (Cleanup Level: 1646 ppm)	Comments
LL3EB10-SB-020SN-0003-SO	4/10/2008	845	4/10/2008	1	0.005	0.013	-0.22	ND	
LL3EB10-SB-020SN-0004-SO	4/10/2008	845	4/10/2008	1	0.003	0.007	-0.15	ND	
LL3EB10-SB-020SN-0005-SO	4/10/2008	845	4/10/2008	1	0.005	0.014	-0.19	ND	
LL3EB10-SB-022SN-0001-SO	4/10/2008	1000	4/10/2008	1	0.046	0.085	-3.07	ND	
LL3EB10-SB-022SN-0002-SO	4/10/2008	1000	4/10/2008	1	0.006	0.016	-0.25	ND	
LL3EA5-SS-080SN-0001-SO	4/10/2008	1130	4/10/2008	1	0.002	0.004	-0.12	ND	
LL3EA7-SS-030SN-0001-SO	4/10/2008	1255	4/10/2008	1	0.001	0.004	0.00	ND	
LL3EA7-SS-030SN-0001-SO DUP	4/10/2008	1255	4/10/2008	1	0.009	0.009	-0.84	ND	
LL3EA21-SS-031SN-0001-SO	4/10/2008	1240	4/10/2008	1	0.002	0.008	0.00	ND	
LL3EA28-SS-034SN-0001-SO	4/10/2008	1230	4/10/2008	1	0.022	3.128			Needs dilution
LL3EA28-SS-034SN-0001-SO DL	4/10/2008	1230	4/10/2008	100	0.001	0.053	151.70	152	Too dilute
LL3EA28-SS-034SN-0001-SO DL2	4/10/2008	1230	4/10/2008	10	0.004	0.654	197.52	198	
LL3EB13-SS-007SN-0001-SO	4/10/2008	1100	4/10/2008	1	0.010	0.014	-0.80	ND	
LL3EB13A-SS-008SN-0001-SO	4/10/2008	1110	4/10/2008	1	0.011	0.043	-0.03	ND	
LL3EB13B-SS-009SN-0001-SO	4/10/2008	1045	4/10/2008	1	0.009	0.015	-0.65	ND	
LL3EA6-SB-086SN-0001-SO	4/10/2008	1515	4/10/2008	1	0.001	0.002	-0.06	ND	
LL3EA6-SB-086SN-0002-SO	4/10/2008	1515	4/10/2008	1	0.004	0.006	-0.31	ND	
LL3EA6-SB-086SN-0002-SO DUP	4/10/2008	1515	4/10/2008	1	0.000	0.001	0.03	ND	
LL3EA6-SB-086SN-0003-SO	4/10/2008	1515	4/10/2008	1	0.000	0.000	0.00	ND	
LL3EA6-SB-086SN-0004-SO	4/10/2008	1515	4/10/2008	1	0.000	0.005	0.15	ND	
LL3EA6-SB-087SN-0001-SO	4/10/2008	1530	4/10/2008	1	0.006	0.020	-0.12	ND	
LL3EA6-SB-087SN-0002-SO	4/10/2008	1530	4/10/2008	1	0.036	0.064	-2.48	ND	
LL3EA6-SB-087SN-0003-SO	4/10/2008	1530	4/10/2008	1	0.023	0.155	1.95	2.0	
LL3EA6-SB-087SN-0004-SO	4/10/2008	1530	4/10/2008	1	0.010	0.022	-0.56	ND	
LL3EA6-SB-087SN-0005-SO	4/10/2008	1530	4/10/2008	1	0.085	0.093	-7.65	ND	
LL3EA6-SB-088SN-0001-SO	4/10/2008	1725	4/10/2008	1	0.041	0.069	-2.94	ND	
LL3EA6-SB-088SN-0002-SO	4/10/2008	1725	4/10/2008	1	0.022	0.070	-0.56	ND	
LL3EA6-SB-088SN-0003-SO	4/10/2008	1725	4/10/2008	1	0.003	0.006	-0.19	ND	
LL3EA6-SB-088SN-0004-SO	4/10/2008	1725	4/10/2008	1	0.003	0.012	0.00	ND	
LL3EA6-SB-089SN-0001-SO	4/10/2008	1700	4/10/2008	1	0.000	0.038	1.18	1.2	
LL3EA6-SB-089SN-0002-SO	4/10/2008	1700	4/10/2008	1	0.029	1.797			Needs dilution
LL3EA6-SB-089SN-0002-SO DL	4/10/2008	1700	4/10/2008	10	0.002	0.163	47.99	48.0	
LL3EA6-SB-089SN-0003-SO	4/10/2008	1700	4/10/2008	1	0.010	2.673			Needs dilution
LL3EA6-SB-089SN-0003-SO DL	4/10/2008	1700	4/10/2008	50	0.000	0.073	113.00	113	
LL3EA6-SB-089SN-0004-SO	4/10/2008	1700	4/10/2008	1	0.005	0.846	25.57	25.6	
LL3EA6-SB-089SN-0005-SO	4/10/2008	1700	4/10/2008	1	0.020	3.264			Needs dilution
LL3EA6-SB-089SN-0005-SO DL	4/10/2008	1700	4/10/2008	100	0.004	1.683			Needs dilution
LL3EA6-SB-089SN-0005-SO DL2	4/10/2008	1700	4/10/2008	1000	0.000	0.157	4860.68	4861	
LL3EA6-SB-090SN-0001-SO	4/10/2008	1745	4/10/2008	1	0.002	0.007	-0.03	ND	
LL3EA6-SB-090SN-0002-SO	4/10/2008	1745	4/10/2008	1	0.000	0.001	0.03	ND	
LL3EA6-SB-090SN-0003-SO	4/10/2008	1745	4/10/2008	1	0.000	0.000	0.00	ND	
LL3EA6-SB-090SN-0004-SO	4/10/2008	1745	4/10/2008	1	0.005	0.026	0.19	ND	
LL3EA6-SB-090SN-0005-SO	4/10/2008	1745	4/10/2008	1	0.000	0.007	0.22	ND	
LL3EA6-SB-090SN-0005-SO DUP	4/10/2008	1745	4/10/2008	1	0.001	0.009	0.15	ND	
LL2DB4A-SB-013SN-0001-SO	4/17/2008	1400	4/17/2008	1	0.000	0.005	0.15	ND	
LL2DB4A-SB-013SN-0002-SO	4/17/2008	1400	4/17/2008	1	0.000	0.011	0.34	ND	
LL2DB4A-SB-013SN-0003-SO	4/17/2008	1400	4/17/2008	1	0.005	0.007	-0.40	ND	
LL2DB4A-SB-013SN-0004-SO	4/17/2008	1400	4/17/2008	1	0.000	0.000	0.00	ND	
LL2DB4A-SB-013SN-0005-SO	4/17/2008	1400	4/17/2008	1	0.000	0.001	0.03	ND	
LL2DB4A-SB-014SN-0001-SO	4/17/2008	1415	4/17/2008	1	0.001	0.014	0.31	ND	
LL2DB4A-SB-014SN-0002-SO	4/17/2008	1415	4/17/2008	1	0.000	0.000	0.00	ND	
LL2DB4A-SB-014SN-0003-SO	4/17/2008	1415	4/17/2008	1	0.007	0.041	0.40	ND	
LL2DB4A-SB-014SN-0004-SO	4/17/2008	1415	4/17/2008	1	0.007	0.039	0.34	ND	
LL2DB4A-SB-014SN-0005-SO	4/17/2008	1415	4/17/2008	1	0.003	0.018	0.19	ND	
LL2DB4A-SB-015SN-0001-SO	4/17/2008	1430	4/17/2008	1	0.003	0.005	-0.22	ND	
LL2DB4A-SB-015SN-0002-SO	4/17/2008	1430	4/17/2008	1	0.023	0.029	-1.95	ND	
LL2DB4A-SB-015SN-0003-SO	4/17/2008	1430	4/17/2008	1	0.004	0.007	-0.28	ND	
LL2DB4A-SB-015SN-0004-SO	4/17/2008	1430	4/17/2008	1	0.008	0.009	-0.71	ND	
LL2DB4AVP1-SS-088SN-0001-SO	4/17/2008	1050	4/17/2008	1	0.000	0.003	0.09	ND	
LL2DB9A-SS-008SN-0001-SO	4/17/2008	1035	4/17/2008	1	0.008	0.020	-0.37	ND	
LL2DB19-SS-002SN-0001-SO	4/17/2008	930	4/17/2008	1	0.015	0.032	-0.87	ND	
LL2DB20-SS-004SN-0001-SO	4/17/2008	950	4/17/2008	1	0.000	0.012	0.37	ND	
LL2DB22-SS-006SN-0001-SO	4/17/2008	1210	4/17/2008	1	0.000	0.001	0.03	ND	
LL2DB25-SS-007SN-0001-SO	4/17/2008	1010	4/17/2008	1	0.020	0.107	0.84	0.8	
LL2DB2-SS-003SN-0001-SO	4/11/2008	1610	4/17/2008	1	0.025	0.044	-1.73	ND	

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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs <sup>Initial</sup>	Abs <sup>sample</sup>	Result	TNT Conc. (ppm) (Cleanup Level: 1646 ppm)	Comments
LL2DB4A-SB-013SN-0001-SO-DUP	4/17/2008	1400	4/17/2008	1	0.002	0.002	-0.19	ND	
LL2DB4A-SB-016SN-0001-SO	4/17/2008	1600	4/18/2008	1	0.033	3.201			Needs dilution
LL2DB4A-SB-016SN-0001-SO DL	4/17/2008	1600	4/18/2008	10	0.003	0.487	147.06	147	
LL2DB4A-SB-016SN-0002-SO	4/17/2008	1600	4/18/2008	10	0.016	0.711	200.31	200	
LL2DB4A-SB-016SN-0003-SO	4/17/2008	1600	4/18/2008	1	0.007	0.030	0.06	ND	
LL2DB4A-SB-016SN-0004-SO	4/17/2008	1600	4/18/2008	1	0.005	0.063	1.33	1.3	
LL2DB4A-SB-016SN-0005-SO	4/17/2008	1600	4/18/2008	1	0.004	0.049	1.02	1.0	
LL2DB4A-SB-017SN-0001-SO	4/17/2008	1615	4/18/2008	1	0.008	0.105	2.26	2.3	
LL2DB4A-SB-017SN-0002-SO	4/17/2008	1615	4/18/2008	1	0.005	0.286	8.24	8.2	
LL2DB4A-SB-017SN-0003-SO	4/17/2008	1615	4/18/2008	1	0.008	0.244	6.56	6.6	
LL2DB4A-SB-017SN-0004-SO	4/17/2008	1615	4/18/2008	1	0.004	0.095	2.45	2.4	
LL2DB4A-SB-017SN-0005-SO	4/17/2008	1615	4/18/2008	1	0.001	0.030	0.80	0.8	
LL2DB4A-SB-018SN-0001-SO	4/17/2008	1645	4/18/2008	1	0.052	1.222			Needs dilution
LL2DB4A-SB-018SN-0001-SO DL	4/17/2008	1645	4/18/2008	10	0.004	0.130	35.29	35.3	
LL2DB4A-SB-018SN-0002-SO	4/17/2008	1645	4/18/2008	1	0.014	3.294			Needs dilution
LL2DB4A-SB-018SN-0002-SO DL	4/17/2008	1645	4/18/2008	100	0.003	0.139	393.19	393	
LL2DB4A-SB-018SN-0003-SO	4/17/2008	1645	4/18/2008	1	0.008	3.244			Needs dilution
LL2DB4A-SB-018SN-0003-SO DL	4/17/2008	1645	4/18/2008	100	0.005	0.162	439.63	440	
LL2DB4A-SB-018SN-0004-SO	4/17/2008	1645	4/18/2008	1	0.006	0.415	12.11	12.1	
LL2DB4A-SB-018SN-0005-SO	4/17/2008	1645	4/18/2008	1	0.005	0.006	-0.43	ND	
LL2DB4A-SB-019SN-0001-SO	4/17/2008	1725	4/18/2008	1	0.004	0.008	-0.25	ND	
LL2DB4A-SB-019SN-0002-SO	4/17/2008	1725	4/18/2008	1	0.002	0.004	-0.12	ND	
LL2DB4A-SB-019SN-0003-SO	4/17/2008	1725	4/18/2008	1	0.004	0.006	-0.31	ND	
LL2DB4A-SB-019SN-0004-SO	4/17/2008	1725	4/18/2008	1	0.002	0.003	-0.15	ND	
LL2DB4A-SB-019SN-0005-SO	4/17/2008	1725	4/18/2008	1	0.002	0.008	0.00	ND	
LL2DB4A-SB-019SN-0005-SO DUP	4/17/2008	1725	4/18/2008	1	0.002	0.006	-0.06	ND	
LL2DB4A-SB-020SN-0001-SO	4/17/2008	1745	4/18/2008	1	0.002	0.069	1.89	1.9	
LL2DB4A-SB-020SN-0002-SO	4/17/2008	1745	4/18/2008	1	0.002	0.754	23.10	23.1	
LL2DB4A-SB-020SN-0003-SO	4/17/2008	1745	4/18/2008	1	0.002	0.132	3.84	3.8	
LL2DB4A-SB-020SN-0004-SO	4/17/2008	1745	4/18/2008	1	0.002	0.005	-0.09	ND	
LL2DB4A-SB-020SN-0005-SO	4/17/2008	1745	4/18/2008	1	0.002	0.003	-0.15	ND	
LL2DB4A-SB-021SN-0001-SO	4/17/2008	815	4/18/2008	1	0.006	0.026	0.06	ND	
LL2DB4A-SB-021SN-0002-SO	4/17/2008	815	4/18/2008	1	0.005	0.005	-0.46	ND	
LL2DB4A-SB-021SN-0003-SO	4/17/2008	815	4/18/2008	1	0.010	0.015	-0.77	ND	
LL2DB4A-SB-021SN-0004-SO	4/17/2008	815	4/18/2008	1	0.027	0.062	-1.42	ND	
LL2DB4A-SB-021SN-0005-SO	4/17/2008	815	4/18/2008	1	0.012	0.020	-0.87	ND	
LL2DB4A-SB-022SN-0001-SO	4/17/2008	845	4/18/2008	1	0.001	0.003	-0.03	ND	
LL2DB4A-SB-022SN-0002-SO	4/17/2008	845	4/18/2008	1	0.005	0.010	-0.31	ND	
LL2DB4A-SB-022SN-0003-SO	4/17/2008	845	4/18/2008	1	0.002	0.014	0.19	ND	
LL2DB4A-SB-022SN-0004-SO	4/17/2008	845	4/18/2008	1	0.000	0.004	0.12	ND	
LL2DB4A-SB-022SN-0005-SO	4/17/2008	845	4/18/2008	1	0.000	0.001	0.03	ND	
LL2DB4A-SB-023SN-0001-SO	4/17/2008	910	4/18/2008	1	0.002	0.009	0.03	ND	
LL2DB4A-SB-023SN-0002-SO	4/17/2008	910	4/18/2008	1	0.000	0.005	0.15	ND	
LL2DB4A-SB-023SN-0003-SO	4/17/2008	910	4/18/2008	1	0.000	0.001	0.03	ND	
LL2DB4A-SB-023SN-0004-SO	4/17/2008	910	4/18/2008	1	0.000	0.000	0.00	ND	
LL2DB4A-SB-023SN-0005-SO	4/17/2008	910	4/18/2008	1	0.001	0.001	-0.09	ND	
LL2DB4A-SB-020SN-0005-SO DUP	4/17/2008	1745	4/18/2008	1	0.003	0.005	-0.22	ND	
LL2-2-51-SS-032SN-0001-SO	4/18/2008	900	4/18/2008	1	0.003	0.010	-0.06	ND	
LL2-2-51A-SS-033SN-0001-SO	4/18/2008	910	4/18/2008	1	0.008	0.093	1.89	1.9	Blue Tint
LL2DB8-SS-031SN-0001-SO	4/18/2008	845	4/18/2008	1	0.001	0.006	0.06	ND	
LL2DB3-SS-005SN-0001-SO	4/18/2008	755	4/18/2008	1	0.004	0.009	-0.22	ND	
LL2DC1-SS-086SN-0001-SO	4/18/2008	825	4/18/2008	1	0.037	0.065	-2.57	ND	
LL2DB4A-SB-027SN-0001-SO	4/18/2008	955	4/18/2008	1	0.000	0.003	0.09	ND	
LL2DB4A-SB-027SN-0002-SO	4/18/2008	955	4/18/2008	1	0.000	0.003	0.09	ND	
LL2DB4A-SB-027SN-0003-SO	4/18/2008	955	4/18/2008	1	0.000	0.001	0.03	ND	
LL2DB4A-SB-027SN-0004-SO	4/18/2008	955	4/18/2008	1	0.002	0.003	-0.15	ND	
LL2DB4A-SB-027SN-0005-SO	4/18/2008	955	4/18/2008	1	0.006	0.007	-0.53	ND	
LL2DB4A-SB-028SN-0001-SO	4/18/2008	930	4/18/2008	1	0.017	2.360			Needs dilution
LL2DB4A-SB-028SN-0001-SO DL	4/18/2008	930	4/18/2008	10	0.004	0.250	72.45	72.4	
LL2DB4A-SB-028SN-0002-SO	4/18/2008	930	4/18/2008	1	0.014	0.580	16.22	16.2	
LL2DB4A-SB-028SN-0003-SO	4/18/2008	930	4/18/2008	1	0.003	0.822	25.08	25.1	
LL2DB4A-SB-028SN-0004-SO	4/18/2008	930	4/18/2008	1	0.000	0.179	5.54	5.5	
LL2DB4A-SB-028SN-0005-SO	4/18/2008	930	4/18/2008	1	0.008	0.045	0.40	ND	Blue Tint
LL2DB4-PIT	4/18/2008	1530	4/18/2008	100	0.013	3.361			Needs add'l dilution;
LL2DB4-PIT DL	4/18/2008	1530	4/18/2008	1000	0.002	0.751	23003.10	23003	Original Sample ID was LL3DB4-PIT. Corrected to LL2DB4-PIT after analysis

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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs <sup>initial</sup>	Abs <sup>sample</sup>	Result	TNT Conc. (ppm) (Cleanup Level: 1646 ppm)	Comments
LL2-2-51-SS-032SN-0001-SO DUP	4/18/2008	900	4/18/2008	1	0.001	0.008	0.12	ND	
LL2DB4-SB-034SN-0001-SO	4/18/2008	1445	4/21/2008	1	0.000	0.002	0.06	ND	
LL2DB4-SB-034SN-0002-SO	4/18/2008	1445	4/21/2008	1	0.009	0.063	0.84	0.8	
LL2DB4-SB-034SN-0003-SO	4/18/2008	1445	4/21/2008	1	0.002	0.009	0.03	ND	
LL2DB4-SB-034SN-0004-SO	4/18/2008	1445	4/21/2008	1	0.004	0.033	0.53	ND	
LL2DB4-SB-034SN-0005-SO	4/18/2008	1445	4/21/2008	1	0.024	0.043	-1.64	ND	
LL2DB4-SB-035SN-0001-SO	4/18/2008	1500	4/21/2008	1	0.003	0.013	0.03	ND	
LL2DB4-SB-035SN-0002-SO	4/18/2008	1500	4/21/2008	1	0.000	0.007	0.22	ND	
LL2DB4-SB-035SN-0003-SO	4/18/2008	1500	4/21/2008	1	0.001	0.023	0.59	ND	
LL2DB4-SB-035SN-0004-SO	4/18/2008	1500	4/21/2008	1	0.003	0.006	-0.19	ND	
LL2DB4-SB-035SN-0005-SO	4/18/2008	1500	4/21/2008	1	0.010	0.010	-0.93	ND	
LL2DB4-SB-036SN-0001-SO	4/18/2008	1550	4/21/2008	1	0.001	0.016	0.37	ND	
LL2DB4-SB-036SN-0002-SO	4/18/2008	1550	4/21/2008	1	0.001	0.001	-0.09	ND	
LL2DB4-SB-036SN-0003-SO	4/18/2008	1550	4/21/2008	1	0.001	0.004	0.00	ND	
LL2DB4-SB-036SN-0004-SO	4/18/2008	1550	4/21/2008	1	0.006	0.008	-0.50	ND	
LL2DB4-SB-036SN-0005-SO	4/18/2008	1550	4/21/2008	1	0.004	0.004	-0.37	ND	
LL4G20-SS-036-0001-SO	4/18/2008	1200	4/21/2008	1	0.007	0.016	-0.37	ND	
LL3EB4AVP1-SS-075SN-0001-SO	4/18/2008	1145	4/21/2008	1	0.012	0.023	-0.77	ND	
Pink Water 1	4/21/2008	NA	4/21/2008	1	0.040	0.192	0.99	1.0	Surface soil samples near standing pink water at EB4A.
Pink Water 2	4/21/2008	NA	4/21/2008	1	0.005	0.171	4.67	4.7	
Pink Water 3	4/21/2008	NA	4/21/2008	1	0.020	0.399	9.88	9.9	
Pink Water 4	4/21/2008	NA	4/21/2008	1	0.010	0.801	23.56	23.6	
LL2DB4-SB-036SN-0003-SO DUP	4/18/2008	1550	4/21/2008	1	0.000	0.001	0.03	ND	
LL3EB4A-SB-100SN-0001-SO	4/21/2008	1120	4/23/2008	1	0.007	1.092			
LL3EB4A-SB-100SN-0001-SO DL	4/21/2008	1120	4/23/2008	2	0.007	0.505	29.54	29.5	
LL3EB4A-SB-100SN-0002-SO	4/21/2008	1120	4/23/2008	1	0.000	0.001	0.03	ND	
LL3EB4A-SB-100SN-0003-SO	4/21/2008	1120	4/23/2008	1	0.003	0.005	-0.22	ND	
LL3EB4A-SB-100SN-0004-SO	4/21/2008	1120	4/23/2008	1	0.000	0.002	0.06	ND	
LL3EB4A-SB-100SN-0005-SO	4/21/2008	1120	4/23/2008	1	0.000	0.006	0.19	ND	
LL3EB4A-SB-101SN-0001-SO	4/21/2008	1200	4/23/2008	1	0.004	0.146	4.02	4.0	
LL3EB4A-SB-101SN-0002-SO	4/21/2008	1200	4/23/2008	1	0.000	0.003	0.09	ND	
LL3EB4A-SB-101SN-0003-SO	4/21/2008	1200	4/23/2008	1	0.000	0.002	0.06	ND	
LL3EB4A-SB-101SN-0004-SO	4/21/2008	1200	4/23/2008	1	0.000	0.002	0.06	ND	
LL3EB4A-SB-101SN-0005-SO	4/21/2008	1200	4/23/2008	1	0.000	0.007	0.22	ND	
LL2DB4-SB-037SN-0001-SO	4/23/2008	1015	4/23/2008	1	0.000	0.008	0.25	ND	
LL2DB4-SB-037SN-0002-SO	4/23/2008	1015	4/23/2008	1	0.001	0.006	0.06	ND	
LL2DB4-SB-037SN-0003-SO	4/23/2008	1015	4/23/2008	1	0.001	0.005	0.03	ND	
LL2DB4-SB-037SN-0004-SO	4/23/2008	1015	4/23/2008	1	0.002	0.008	0.00	ND	
LL2DB4-SB-037SN-0005-SO	4/23/2008	1015	4/23/2008	1	0.004	0.038	0.68	ND	
LL2DB4-SB-039SN-0001-SO	4/23/2008	1000	4/23/2008	1	0.000	0.000	0.00	ND	
LL2DB4-SB-039SN-0002-SO	4/23/2008	1000	4/23/2008	1	0.000	0.028	0.87	0.9	
LL2DB4-SB-039SN-0003-SO	4/23/2008	1000	4/23/2008	1	0.006	0.007	-0.53	ND	
LL2DB4-SB-039SN-0004-SO	4/23/2008	1000	4/23/2008	1	0.000	0.000	0.00	ND	
LL2DB4-SB-039SN-0005-SO	4/23/2008	1000	4/23/2008	1	0.000	0.000	0.00	ND	
LL3EB4A-SB-101SN-0005-SO DUP	4/21/2008	1200	4/23/2008	1	0.003	0.007	-0.15	ND	
LL2DB4-SB-040SN-0001-SO	4/23/2008	920	4/23/2008	1	0.010	0.012	-0.87	ND	
LL2DB4-SB-040SN-0002-SO	4/23/2008	920	4/23/2008	1	0.000	0.002	0.06	ND	
LL2DB4-SB-040SN-0003-SO	4/23/2008	920	4/23/2008	1	0.009	0.009	-0.84	ND	
LL2DB4-SB-040SN-0004-SO	4/23/2008	920	4/23/2008	1	0.000	0.026	0.80	0.8	
LL2DB4-SB-041SN-0001-SO	4/23/2008	905	4/23/2008	1	0.000	0.000	0.00	ND	
LL2DB4-SB-041SN-0002-SO	4/23/2008	905	4/23/2008	1	0.000	0.000	0.00	ND	
LL2DB4-SB-041SN-0003-SO	4/23/2008	905	4/23/2008	1	0.000	0.000	0.00	ND	
LL2DB4-SB-041SN-0004-SO	4/23/2008	905	4/23/2008	1	0.000	0.000	0.00	ND	
LL2DB4-SB-041SN-0005-SO	4/23/2008	905	4/23/2008	1	0.000	0.020	0.62	ND	
LL2DB4-SB-042SN-0001-SO	4/23/2008	855	4/23/2008	1	0.000	0.003	0.09	ND	
LL2DB4-SB-042SN-0002-SO	4/23/2008	855	4/23/2008	1	0.006	0.010	-0.43	ND	
LL2DB4-SB-042SN-0003-SO	4/23/2008	855	4/23/2008	1	0.012	0.013	-1.08	ND	
LL2DB4-SB-042SN-0004-SO	4/23/2008	855	4/23/2008	1	0.007	0.007	-0.65	ND	
LL2DB4-SB-042SN-0005-SO	4/23/2008	855	4/23/2008	1	0.177	0.173	-16.56	ND	Cloudy, no pink
LL2DB4-SB-043SN-0001-SO	4/23/2008	840	4/23/2008	1	0.179	0.269			Light peach, cloudy
LL2DB4-SB-043SN-0001-SO DL	4/23/2008	840	4/23/2008	2	0.014	0.053	-0.19	ND	
LL2DB4-SB-043SN-0002-SO	4/23/2008	840	4/23/2008	1	0.171	0.174	-15.79	ND	Cloudy, no pink
LL2DB4-SB-043SN-0003-SO	4/23/2008	840	4/23/2008	1	0.001	0.006	0.06	ND	
LL2DB4-SB-043SN-0004-SO	4/23/2008	840	4/23/2008	1	0.001	0.006	0.06	ND	
LL2DB4-SB-043SN-0005-SO	4/23/2008	840	4/23/2008	1	0.001	0.007	0.09	ND	

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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs <sup>initial</sup>	Abs <sup>sample</sup>	Result	TNT Conc. (ppm) (Cleanup Level: 1646 ppm)	Comments
LL2DB4-SB-043SN-0004-SO DUP	4/23/2008	840	4/23/2008	1	0.001	0.007	0.09	ND	
LL2DB10VP2-SS-056SN-0001-SO	4/23/2008	1100	4/23/2008	1	0.178	1.159			
LL2DB10VP2-SS-056SN-0001-SO DL	4/23/2008	1100	4/23/2008	3	0.056	0.510	26.56	26.6	
LL2DB10VP1-SS-057SN-0001-SO	4/23/2008	1110	4/23/2008	1	0.088	0.163	-5.85	ND	
LL2DB8A-SS-059SN-0001-SO	4/23/2008	1115	4/23/2008	1	0.000	0.000	0.00	ND	
LL2DB11-SS-060SN-0001-SO	4/23/2008	1040	4/23/2008	1	0.018	0.053	-0.59	ND	
LL2DB11-SS-060SN-0001-SO DUP	4/23/2008	1040	4/23/2008	1	0.007	0.025	-0.09	ND	
LL2DB4-SB-044SN-0001-SO	4/23/2008	1520	4/24/2008	1	0.000	0.008	0.25	ND	
LL2DB4-SB-044SN-0002-SO	4/23/2008	1520	4/24/2008	1	0.000	0.005	0.15	ND	
LL2DB4-SB-044SN-0003-SO	4/23/2008	1520	4/24/2008	1	0.000	0.001	0.03	ND	
LL2DB4-SB-044SN-0004-SO	4/23/2008	1520	4/24/2008	1	0.001	0.004	0.00	ND	
LL2DB4-SB-044SN-0005-SO	4/23/2008	1520	4/24/2008	1	0.001	0.041	1.15	1.1	Blue Tint
LL2DB4-SB-045SN-0001-SO	4/23/2008	1510	4/24/2008	1	0.000	0.021	0.65	ND	
LL2DB4-SB-045SN-0002-SO	4/23/2008	1510	4/24/2008	1	0.000	0.001	0.03	ND	
LL2DB4-SB-045SN-0003-SO	4/23/2008	1510	4/24/2008	1	0.001	0.010	0.19	ND	
LL2DB4-SB-045SN-0004-SO	4/23/2008	1510	4/24/2008	1	0.005	0.006	-0.43	ND	
LL2DB4-SB-045SN-0005-SO	4/23/2008	1510	4/24/2008	1	0.004	0.004	-0.37	ND	
LL2DB4-SB-046SN-0001-SO	4/23/2008	1455	4/24/2008	1	0.003	0.012	0.00	ND	
LL2DB4-SB-046SN-0002-SO	4/23/2008	1455	4/24/2008	1	0.002	0.008	0.00	ND	
LL2DB4-SB-046SN-0003-SO	4/23/2008	1455	4/24/2008	1	0.004	0.025	0.28	ND	
LL2DB4-SB-046SN-0004-SO	4/23/2008	1455	4/24/2008	1	0.002	0.018	0.31	ND	
LL2DB4-SB-046SN-0005-SO	4/23/2008	1455	4/24/2008	1	0.001	0.011	0.22	ND	
LL2DB4-SB-047SN-0001-SO	4/23/2008	1420	4/24/2008	1	0.000	0.016	0.50	ND	
LL2DB4-SB-047SN-0002-SO	4/23/2008	1420	4/24/2008	1	0.008	1.747			
LL2DB4-SB-047SN-0002-SO DL	4/23/2008	1420	4/24/2008	3	0.004	0.540	48.67	48.7	
LL2DB4-SB-047SN-0003-SO	4/23/2008	1420	4/24/2008	1	0.010	3.009			
LL2DB4-SB-047SN-0003-SO DL	4/23/2008	1420	4/24/2008	10	0.000	0.355	109.91	109.9	
LL2DB4-SB-047SN-0004-SO	4/23/2008	1420	4/24/2008	1	0.016	1.269			
LL2DB4-SB-047SN-0004-SO DL	4/23/2008	1420	4/24/2008	5	0.003	0.301	44.74	44.7	
LL2DB4-SB-047SN-0005-SO	4/23/2008	1420	4/24/2008	1	0.004	0.034	0.56	ND	
LL2DB4-SB-044SN-0003-SO DUP	4/23/2008	1520	4/24/2008	1	0.002	0.003	-0.15	ND	
LL2DB4-SB-048SN-0001-SO	4/23/2008	1405	4/24/2008	1	0.003	0.174	5.02	5.0	
LL2DB4-SB-048SN-0002-SO	4/23/2008	1405	4/24/2008	1	0.001	0.003	-0.03	ND	
LL2DB4-SB-048SN-0003-SO	4/23/2008	1405	4/24/2008	1	0.006	0.047	0.71	0.7	Yellow
LL2DB4-SB-048SN-0004-SO	4/23/2008	1405	4/24/2008	1	0.024	3.231			
LL2DB4-SB-048SN-0004-SO DL1	4/23/2008	1405	4/24/2008	100	0.003	0.090	241.49	241.5	Overdiluted; don't use.
LL2DB4-SB-048SN-0004-SO DL2	4/23/2008	1405	4/24/2008	10	0.004	0.800	242.72	242.7	
LL2DB4-SB-048SN-0005-SO	4/23/2008	1405	4/24/2008	1	0.111	3.254			
LL2DB4-SB-048SN-0005-SO DL	4/23/2008	1405	4/24/2008	100	0.002	0.285	857.59	857.6	
LL2DB4-SB-049SN-0001-SO	4/23/2008	1350	4/24/2008	1	0.001	0.001	-0.09	ND	
LL2DB4-SB-049SN-0002-SO	4/23/2008	1350	4/24/2008	1	0.001	0.012	0.25	ND	
LL2DB4-SB-049SN-0003-SO	4/23/2008	1350	4/24/2008	1	0.004	0.359	10.62	10.6	
LL2DB4-SB-049SN-0004-SO	4/23/2008	1350	4/24/2008	1	0.039	3.244			
LL2DB4-SB-049SN-0004-SO DL1	4/23/2008	1350	4/24/2008	100	0.002	0.071	195.05	195.0	Overdiluted; don't use.
LL2DB4-SB-049SN-0004-SO DL2	4/23/2008	1350	4/24/2008	10	0.006	0.669	199.69	199.7	
LL2DB4-SB-049SN-0005-SO	4/23/2008	1350	4/24/2008	1	0.033	3.208			
LL2DB4-SB-049SN-0005-SO DL	4/23/2008	1350	4/24/2008	100	0.003	0.153	436.53	436.5	
LL3EB4A-SB-070SN-0001-SO	4/24/2008	1000	4/24/2008	1	0.010	0.655	19.04	19.0	
LL3EB4A-SB-070SN-0002-SO	4/24/2008	1000	4/24/2008	1	0.002	0.007	-0.03	ND	
LL3EB4A-SB-070SN-0003-SO	4/24/2008	1000	4/24/2008	1	0.002	0.006	-0.06	ND	
LL3EB4A-SB-070SN-0004-SO	4/24/2008	1000	4/24/2008	1	0.003	0.007	-0.15	ND	
LL3EB4A-SB-070SN-0005-SO	4/24/2008	1000	4/24/2008	1	0.002	0.002	-0.19	ND	
LL3EB4A-SB-071SN-0001-SO	4/24/2008	930	4/24/2008	1	0.016	0.417	10.93	10.9	
LL3EB4A-SB-071SN-0002-SO	4/24/2008	930	4/24/2008	1	0.000	0.026	0.80	0.8	
LL3EB4A-SB-071SN-0003-SO	4/24/2008	930	4/24/2008	1	0.001	0.002	-0.06	ND	
LL3EB4A-SB-071SN-0004-SO	4/24/2008	930	4/24/2008	1	0.000	0.000	0.00	ND	
LL3EB4A-SB-071SN-0005-SO	4/24/2008	930	4/24/2008	1	0.000	0.002	0.06	ND	
LL2DB4-SB-049SN-0003-SO DUP	4/23/2008	1350	4/24/2008	1	0.004	0.013	-0.09	ND	
LL3EB4A-SB-072SN-0001-SO	4/24/2008	915	4/24/2008	1	0.002	0.022	0.43	ND	Blue Tint
LL3EB4A-SB-072SN-0002-SO	4/24/2008	915	4/24/2008	1	0.000	0.002	0.06	ND	
LL3EB4A-SB-072SN-0003-SO	4/24/2008	915	4/24/2008	1	0.000	0.002	0.06	ND	
LL3EB4A-SB-072SN-0004-SO	4/24/2008	915	4/24/2008	1	0.002	0.003	-0.15	ND	
LL3EB4A-SB-072SN-0005-SO	4/24/2008	915	4/24/2008	1	0.000	0.001	0.03	ND	
LL2DB29-SS-061SN-0001-SO	4/24/2008	1635	4/24/2008	1	0.025	0.055	-1.39	ND	Yellow
LL2DB13B-SS-062SN-0001-SO	4/24/2008	1710	4/24/2008	1	0.002	0.005	-0.09	ND	

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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs <sup>Initial</sup>	Abs <sup>sample</sup>	Result	TNT Conc. (ppm) (Cleanup Level: 1646 ppm)	Comments
LL2DB26-SS-063SN-0001-SO	4/24/2008	1640	4/24/2008	1	0.017	0.046	-0.68	ND	Pale yellow
LL2DB13-SS-064SN-0001-SO	4/24/2008	1650	4/24/2008	1	0.162	0.360	-8.92	ND	Bright Yellow
LL2DB13A-SS-065SN-0001-SO	4/24/2008	1700	4/24/2008	1	0.006	0.018	-0.19	ND	
LL3EB4A-SB-072SN-0003-SO DUP	4/24/2008	915	4/24/2008	1	0.000	0.001	0.03	ND	
LL3EB4-SB-047SN-0001-SO	4/30/2008	1030	4/30/2008	1	0.003	0.014	0.06	ND	
LL3EB4-SB-047SN-0002-SO	4/30/2008	1030	4/30/2008	1	0.002	0.005	-0.09	ND	
LL3EB4-SB-047SN-0003-SO	4/30/2008	1030	4/30/2008	1	0.003	0.005	-0.22	ND	
LL3EB4-SB-047SN-0004-SO	4/30/2008	1030	4/30/2008	1	0.002	0.004	-0.12	ND	
LL3EB4-SB-048SN-0001-SO	4/30/2008	1100	4/30/2008	1	0.008	0.039	0.22	ND	
LL3EB4-SB-048SN-0002-SO	4/30/2008	1100	4/30/2008	1	0.007	0.029	0.03	ND	
LL3EB4-SB-048SN-0003-SO	4/30/2008	1100	4/30/2008	1	0.003	0.022	0.31	ND	
LL3EB4-SB-048SN-0004-SO	4/30/2008	1100	4/30/2008	1	0.000	0.001	0.03	ND	
LL3EB4-SB-048SN-0005-SO	4/30/2008	1100	4/30/2008	1	0.003	0.004	-0.25	ND	
LL3EB4-SB-049SN-0001-SO	4/30/2008	945	4/30/2008	1	0.011	0.152	3.34	3.3	
LL3EB4-SB-049SN-0002-SO	4/30/2008	945	4/30/2008	1	0.002	0.026	0.56	ND	
LL3EB4-SB-049SN-0003-SO	4/30/2008	945	4/30/2008	1	0.008	0.134	3.16	3.2	
LL3EB4-SB-049SN-0004-SO	4/30/2008	945	4/30/2008	1	0.000	0.003	0.09	ND	
LL3EB4-SB-051SN-0001-SO	4/30/2008	930	4/30/2008	1	0.018	0.135	1.95	2.0	
LL3EB4-SB-051SN-0002-SO	4/30/2008	930	4/30/2008	1	0.018	0.676	18.70	18.7	
LL3EB4-SB-051SN-0003-SO	4/30/2008	930	4/30/2008	1	0.044	2.499	71.92		
LL3EB4-SB-051SN-0003-SO DL	4/30/2008	930	4/30/2008	10	0.002	0.272	81.73	81.7	
LL3EB4-SB-051SN-0004-SO	4/30/2008	930	4/30/2008	1	0.004	0.104	2.72	2.7	
LL3EB4-SB-048SN-0002-SO-DUP	4/30/2008	1100	4/30/2008	1	0.005	0.035	0.46	ND	
LL2DB10-SB-090SN-0001-SO	4/30/2008	1205	4/30/2008	1	0.000	0.003	0.09	ND	
LL2DB10-SB-090SN-0002-SO	4/30/2008	1205	4/30/2008	1	0.002	0.008	0.00	ND	
LL2DB10-SB-090SN-0003-SO	4/30/2008	1205	4/30/2008	1	0.000	0.001	0.03	ND	
LL2DB10-SB-090SN-0004-SO	4/30/2008	1205	4/30/2008	1	0.001	0.003	-0.03	ND	
LL2DB10-SB-090SN-0005-SO	4/30/2008	1205	4/30/2008	1	0.002	0.004	-0.12	ND	
LL2DB10-SB-091SN-0001-SO	4/30/2008	1200	4/30/2008	1	0.002	0.003	-0.15	ND	
LL2DB10-SB-091SN-0002-SO	4/30/2008	1200	4/30/2008	1	0.001	0.001	-0.09	ND	
LL2DB10-SB-091SN-0003-SO	4/30/2008	1200	4/30/2008	1	0.001	0.002	-0.06	ND	
LL2DB10-SB-093SN-0001-SO	4/30/2008	1220	4/30/2008	1	0.003	0.004	-0.25	ND	
LL2DB10-SB-093SN-0002-SO	4/30/2008	1220	4/30/2008	1	0.000	0.001	0.03	ND	
LL2DB10-SB-093SN-0003-SO	4/30/2008	1220	4/30/2008	1	0.004	0.007	-0.28	ND	
LL2DB10-SB-093SN-0004-SO	4/30/2008	1220	4/30/2008	1	0.007	0.008	-0.62	ND	
LL2DB10-SB-093SN-0005-SO	4/30/2008	1220	4/30/2008	1	0.005	0.008	-0.37	ND	
LL2DB10-SB-093SN-0004-SO-DUP	4/30/2008	1220	4/30/2008	1	0.007	0.008	-0.62	ND	
LL2DB10-SB-092SN-0001-SO	4/30/2008	1600	5/1/2008	1	0.001	0.003	-0.03	ND	
LL2DB10-SB-092SN-0002-SO	4/30/2008	1600	5/1/2008	1	0.000	0.001	0.03	ND	
LL2DB10-SB-092SN-0003-SO	4/30/2008	1600	5/1/2008	1	0.000	0.001	0.03	ND	
LL2DB10-SB-092SN-0004-SO	4/30/2008	1600	5/1/2008	1	0.000	0.001	0.03	ND	
LL2DB10-SB-094SN-0001-SO	4/30/2008	1530	5/1/2008	1	0.000	0.004	0.12	ND	
LL2DB10-SB-094SN-0002-SO	4/30/2008	1530	5/1/2008	1	0.000	0.001	0.03	ND	
LL2DB10-SB-094SN-0003-SO	4/30/2008	1530	5/1/2008	1	0.002	0.003	-0.15	ND	
LL2DB27-SS-68SN-0001-SO	4/30/2008	1725	5/1/2008	1	0.000	0.005	0.15	ND	
LL2DB27A-SS-066SN-0001-SO	4/30/2008	1745	5/1/2008	1	0.002	0.016	0.25	ND	
LL2DB27A-SS-066SN-0001-SO-DUP	4/30/2008	1745	5/1/2008	1	0.001	0.014	0.31	ND	
LL2DA6-SB-073SN-0001-SO	5/7/2008	1545	5/8/2008	1	0.006	0.020	-0.12	ND	
LL2DA6-SB-073SN-0002-SO	5/7/2008	1545	5/8/2008	1	0.016	2.640			
LL2DA6-SB-073SN-0002-SO DL	5/7/2008	1545	5/8/2008	10	0.005	0.521	155.11	155.1	
LL2DA6-SB-073SN-0003-SO	5/7/2008	1545	5/8/2008	1	0.003	0.025	0.40	ND	
LL2DA6-SB-073SN-0004-SO	5/7/2008	1545	5/8/2008	1	0.002	0.047	1.21	1.2	
LL2DA6-SB-073SN-0005-SO	5/7/2008	1545	5/8/2008	1	0.006	2.050			
LL2DA6-SB-073SN-0005-SO DL	5/7/2008	1545	5/8/2008	10	0.002	0.206	61.30	61.3	
LL2DA6-SB-074SN-0001-SO	5/7/2008	1525	5/8/2008	1	0.006	0.020	-0.12	ND	
LL2DA6-SB-074SN-0002-SO	5/7/2008	1525	5/8/2008	1	0.040	0.093	-2.07	ND	Yellow TNT
LL2DA6-SB-074SN-0003-SO	5/7/2008	1525	5/8/2008	1	0.007	0.023	-0.15	ND	
LL2DA6-SB-074SN-0004-SO	5/7/2008	1525	5/8/2008	1	0.002	0.017	0.28	ND	Blue TNT
LL2DA6-SB-074SN-0005-SO	5/7/2008	1525	5/8/2008	1	0.004	0.027	0.34	ND	
LL2DA6-SB-075SN-0001-SO	5/7/2008	1450	5/8/2008	1	0.007	0.016	-0.37	ND	
LL2DA6-SB-075SN-0002-SO	5/7/2008	1450	5/8/2008	1	0.002	0.049	1.27	1.3	
LL2DA6-SB-075SN-0003-SO	5/7/2008	1450	5/8/2008	1	0.036	3.292			
LL2DA6-SB-075SN-0003-SO DL	5/7/2008	1450	5/8/2008	100	0.000	0.156	482.97	483.0	
LL2DA6-SB-075SN-0004-SO	5/7/2008	1450	5/8/2008	1	0.024	3.411			
LL2DA6-SB-075SN-0004-SO DL	5/7/2008	1450	5/8/2008	100	0.000	0.109	337.46	337.5	

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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs <sup>initial</sup>	Abs <sup>sample</sup>	Result	TNT Conc. (ppm) (Cleanup Level: 1646 ppm)	Comments
LL2DA6-SB-075SN-0005-SO	5/7/2008	1450	5/8/2008	1	0.004	0.019	0.09	ND	
LL2DA6-SB-076SN-0001-SO	5/7/2008	1540	5/8/2008	1	0.006	0.015	-0.28	ND	
LL2DA6-SB-076SN-0002-SO	5/7/2008	1540	5/8/2008	1	0.012	0.022	-0.80	ND	
LL2DA6-SB-076SN-0003-SO	5/7/2008	1540	5/8/2008	1	0.030	3.419			
LL2DA6-SB-076SN-0003-SO DL	5/7/2008	1540	5/8/2008	100	0.000	0.253	783.28	783.3	
LL2DA6-SB-076SN-0004-SO	5/7/2008	1540	5/8/2008	1	0.001	0.034	0.93	0.9	
LL2DA6-SB-076SN-0005-SO	5/7/2008	1540	5/8/2008	1	0.008	0.370	10.46	10.5	
LL2DA6-SB-074SN-0002-SO-DUP	5/7/2008	1525	5/8/2008	1	0.013	0.033	-0.59	ND	
LL2DA6-SB-077SN-0001-SO	5/7/2008	1510	5/8/2008	1	0.002	0.017	0.28	ND	
LL2DA6-SB-077SN-0002-SO	5/7/2008	1510	5/8/2008	1	0.002	0.017	0.28	ND	
LL2DA6-SB-077SN-0003-SO	5/7/2008	1510	5/8/2008	1	0.000	0.028	0.87	0.9	
LL2DA6-SB-077SN-0004-SO	5/7/2008	1510	5/8/2008	1	0.000	0.014	0.43	ND	
LL2DA6-SB-077SN-0005-SO	5/7/2008	1510	5/8/2008	1	0.005	0.050	0.93	0.9	
LL2DA7-SS-070SN-0001-SO	5/7/2008	1145	5/8/2008	1	0.004	0.007	-0.28	ND	
LL2DB27C-SS-069SN-0001-SO	5/7/2008	1100	5/8/2008	1	0.003	0.007	-0.15	ND	
LL2DA21-SS-071SN-0001-SO	5/7/2008	1200	5/8/2008	1	0.003	0.008	-0.12	ND	
LL2DA28-SS-072SN-0001-SO	5/7/2008	1430	5/8/2008	1	0.008	0.037	0.15	ND	
LL2DA28A-SS-079SN-0001-SO	5/8/2008	1020	5/8/2008	1	0.002	0.038	0.93	0.9	
LL2DA6A-SB-080SN-0001-SO	5/8/2008	900	5/8/2008	1	0.008	0.271	7.40	7.4	
LL2DA6A-SB-080SN-0002-SO	5/8/2008	900	5/8/2008	1	0.011	0.041	-0.09	ND	
LL2DA6A-SB-080SN-0003-SO	5/8/2008	900	5/8/2008	1	0.007	0.026	-0.06	ND	
LL2DA6A-SB-080SN-0004-SO	5/8/2008	900	5/8/2008	1	0.023	0.194	3.16	3.2	
LL2DA6A-SB-080SN-0005-SO	5/8/2008	900	5/8/2008	1	0.015	0.064	0.12	ND	
LL2DA6A-SB-081SN-0001-SO	5/8/2008	1015	5/8/2008	1	0.002	0.010	0.06	ND	
LL2DA6A-SB-081SN-0002-SO	5/8/2008	1015	5/8/2008	1	0.005	0.025	0.15	ND	
LL2DA6A-SB-081SN-0003-SO	5/8/2008	1015	5/8/2008	1	0.007	0.091	1.95	2.0	
LL2DA6A-SB-081SN-0004-SO	5/8/2008	1015	5/8/2008	1	0.003	0.014	0.06	ND	
LL2DA6A-SB-081SN-0005-SO	5/8/2008	1015	5/8/2008	1	0.022	0.053	-1.08	ND	
LL2DA6A-SB-081SN-0005-SO-DUP	5/8/2008	1015	5/8/2008	1	0.008	0.027	-0.15	ND	
LL2DA6A-SB-082SN-0001-SO	5/8/2008	915	5/8/2008	1	0.012	0.682	19.63	19.6	
LL2DA6A-SB-082SN-0002-SO	5/8/2008	915	5/8/2008	1	0.015	0.032	-0.87	ND	
LL2DA6A-SB-082SN-0003-SO	5/8/2008	915	5/8/2008	1	0.007	0.014	-0.43	ND	
LL2DA6A-SB-082SN-0004-SO	5/8/2008	915	5/8/2008	1	0.014	0.023	-1.02	ND	
LL2DA6A-SB-082SN-0005-SO	5/8/2008	915	5/8/2008	1	0.013	0.028	-0.74	ND	
LL2DA6A-SB-083SN-0001-SO	5/8/2008	1000	5/8/2008	1	0.011	0.128	2.60	2.6	
LL2DA6A-SB-083SN-0002-SO	5/8/2008	1000	5/8/2008	1	0.012	0.535	15.08	15.1	
LL2DA6A-SB-083SN-0003-SO	5/8/2008	1000	5/8/2008	1	0.006	1.658			
LL2DA6A-SB-083SN-0003-SO DL	5/8/2008	1000	5/8/2008	2	0.010	2.316			
LL2DA6A-SB-083SN-0003-SO DL2	5/8/2008	1000	5/8/2008	20	0.000	0.160	99.07	99.1	
LL2DA6A-SB-083SN-0004-SO	5/8/2008	1000	5/8/2008	1	0.001	0.002	-0.06	ND	
LL2DA6A-SB-083SN-0005-SO	5/8/2008	1000	5/8/2008	1	0.001	0.002	-0.06	ND	
LL2DA6A-SB-084SN-0001-SO	5/8/2008	930	5/8/2008	1	0.004	0.391	11.61	11.6	
LL2DA6A-SB-084SN-0002-SO	5/8/2008	930	5/8/2008	1	0.005	0.024	0.12	ND	
LL2DA6A-SB-084SN-0003-SO	5/8/2008	930	5/8/2008	1	0.060	0.018	-6.87	ND	
LL2DA6A-SB-084SN-0004-SO	5/8/2008	930	5/8/2008	1	0.007	0.077	1.52	1.5	
LL2DA6A-SB-084SN-0005-SO	5/8/2008	930	5/8/2008	1	0.001	0.002	-0.06	ND	
LL2DA6A-SB-084SN-0001-SO-DUP	5/8/2008	930	5/8/2008	1	0.000	0.008	0.25	ND	
LL2DB10-SB-096SN-0001-SO	5/8/2008	1515	5/9/2008	1	0.005	0.034	0.43	ND	
LL2DB10-SB-096SN-0002-SO	5/8/2008	1515	5/9/2008	1	0.007	0.044	0.50	ND	
LL2DB10-SB-096SN-0003-SO	5/8/2008	1515	5/9/2008	1	0.043	0.273	3.13	3.1	
LL2DB9-SS-055SN-0001-SO	5/8/2008	1610	5/9/2008	1	0.002	0.014	0.19	ND	
LL2DA5-SS-085SN-0001-SO	5/8/2008	1715	5/9/2008	1	0.001	0.011	0.22	ND	
LL2DB802-SS-001SN-0001-SO	5/8/2008	1640	5/9/2008	1	0.000	0.004	0.12	ND	
LL2DB802-SS-001SN-0001-SO-DUP	5/8/2008	1640	5/9/2008	1	0.001	0.003	-0.03	ND	
LL2DB27B-SS-067SN-0001-SO	5/9/2008	1100	5/9/2008	1	0.005	0.010	-0.31	ND	
LL2DB10-SCREEN 1	5/16/2008	1410	5/21/2008	100	0.002	0.889	2727.55	2727.6	Samples taken after product removed. Between DB-10 and DB-10VP2
LL2DB10-SCREEN 2	5/16/2008	1416	5/21/2008	10	0.013	3.356			
LL2DB10-SCREEN 2 DL1	5/16/2008	1416	5/21/2008	100	0.001	1.139			
LL2DB10-SCREEN 2 DL2	5/16/2008	1416	5/21/2008	200	0.001	0.550	3380.80	3380.8	
LL2DB10-SCREEN 3	5/16/2008	1425	5/21/2008	100	0.004	1.578			
LL2DB10-SCREEN 3 DL	5/16/2008	1425	5/21/2008	200	0.002	0.769	4712.07	4712.1	
LL2DB10-SCREEN 3 DUP	5/16/2008	1425	5/21/2008	100	0.003	1.556			
LL2DB10-SCREEN 3 DUP DL	5/16/2008	1425	5/21/2008	200	0.002	0.696	4260.06	4260.1	
LL2DB10-SB-095SN-0001-SO	5/21/2008	1115	5/22/2008	1	0.002	0.005	-0.09	ND	
LL2DB10-SB-095SN-0002-SO	5/21/2008	1115	5/22/2008	1	0.001	0.004	0.00	ND	

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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs <sup>Initial</sup>	Abs <sup>sample</sup>	Result	TNT Conc. (ppm) (Cleanup Level: 1646 ppm)	Comments
LL2DB10-SB-095SN-0003-SO	5/21/2008	1115	5/22/2008	1	0.003	0.005	-0.22	ND	
LL2DB10-SB-097SN-0001-SO	5/21/2008	1145	5/22/2008	1	0.003	0.009	-0.09	ND	
LL2DB10-SB-097SN-0002-SO	5/21/2008	1145	5/22/2008	1	0.003	0.005	-0.22	ND	
LL2DB4A-SB-024SN-0001-SO	5/21/2008	1200	5/22/2008	1	0.008	0.016	-0.50	ND	
LL2DB4A-SB-024SN-0002-SO	5/21/2008	1200	5/22/2008	1	0.004	0.008	-0.25	ND	
LL2DB4A-SB-024SN-0003-SO	5/21/2008	1200	5/22/2008	1	0.006	0.008	-0.50	ND	
LL2DB4A-SB-024SN-0004-SO	5/21/2008	1200	5/22/2008	1	0.003	0.004	-0.25	ND	
LL2DB4A-SB-024SN-0005-SO	5/21/2008	1200	5/22/2008	1	0.008	0.009	-0.71	ND	
LL2DB4A-SB-025SN-0001-SO	5/21/2008	1645	5/22/2008	1	0.000	0.005	0.15	ND	
LL2DB4A-SB-025SN-0002-SO	5/21/2008	1645	5/22/2008	1	0.000	0.001	0.03	ND	
LL2DB4A-SB-025SN-0003-SO	5/21/2008	1645	5/22/2008	1	0.000	0.002	0.06	ND	
LL2DB4A-SB-025SN-0004-SO	5/21/2008	1645	5/22/2008	1	0.000	0.001	0.03	ND	
LL2DB4A-SB-025SN-0005-SO	5/21/2008	1645	5/22/2008	1	0.000	0.021	0.65	ND	
LL2DB4A-SB-026SN-0001-SO	5/21/2008	1630	5/22/2008	1	0.038	0.167	0.46	ND	
LL2DB4A-SB-026SN-0002-SO	5/21/2008	1630	5/22/2008	1	0.010	0.030	-0.31	ND	
LL2DB4A-SB-026SN-0003-SO	5/21/2008	1630	5/22/2008	1	0.000	0.003	0.09	ND	
LL2DB4A-SB-026SN-0004-SO	5/21/2008	1630	5/22/2008	1	0.001	0.004	0.00	ND	
LL2DB4A-SB-026SN-0005-SO	5/21/2008	1630	5/22/2008	1	0.004	0.006	-0.31	ND	
LL2DB4A-SB-026SN-0001-SO DUP	5/21/2008	1630	5/22/2008	1	0.042	0.481	9.69	9.7	
LL2DB10-SB-098SN-0001-SO	5/22/2008	900	5/22/2008	1	0.005	0.041	0.65	ND	
LL2DB10-SB-098SN-0002-SO	5/22/2008	900	5/22/2008	1	0.003	0.033	0.65	ND	
LL2DB10-SB-098SN-0003-SO	5/22/2008	900	5/22/2008	1	0.001	0.004	0.00	ND	
LL2DB10-SB-098SN-0004-SO	5/22/2008	900	5/22/2008	1	0.002	0.004	-0.12	ND	
LL2DB10-SB-098SN-0005-SO	5/22/2008	900	5/22/2008	1	0.001	0.003	-0.03	ND	
LL2DB10-SB-099SN-0001-SO	5/22/2008	920	5/22/2008	1	0.004	0.017	0.03	ND	
LL2DB10-SB-099SN-0002-SO	5/22/2008	920	5/22/2008	1	0.004	0.015	-0.03	ND	
LL2DB10-SB-099SN-0003-SO	5/22/2008	920	5/22/2008	1	0.139	0.517	-1.21	ND	
LL2DB10-SB-099SN-0004-SO	5/22/2008	920	5/22/2008	1	0.052	0.363	4.80	4.8	
LL2DB10-SB-099SN-0005-SO	5/22/2008	920	5/22/2008	1	0.006	0.102	2.41	2.4	
LL2DB10-SB-100SN-0001-SO	5/22/2008	935	5/22/2008	1	0.026	0.309	6.35	6.3	
LL2DB10-SB-100SN-0002-SO	5/22/2008	935	5/22/2008	1	0.001	0.004	0.00	ND	
LL2DB10-SB-100SN-0003-SO	5/22/2008	935	5/22/2008	1	0.000	0.001	0.03	ND	
LL2DB10-SB-101SN-0001-SO	5/22/2008	945	5/22/2008	1	0.008	0.067	1.08	1.1	
LL2DB10-SB-101SN-0002-SO	5/22/2008	945	5/22/2008	1	0.000	0.003	0.09	ND	
LL2DB10-SB-101SN-0003-SO	5/22/2008	945	5/22/2008	1	0.000	0.002	0.06	ND	
LL2DB10-SB-101SN-0004-SO	5/22/2008	945	5/22/2008	1	0.004	0.008	-0.25	ND	
LL2DB10-SB-101SN-0005-SO	5/22/2008	945	5/22/2008	1	0.001	0.003	-0.03	ND	
LL2DB10-SB-102SN-0001-SO	5/22/2008	1000	5/22/2008	1	0.005	0.016	-0.12	ND	
LL2DB10-SB-102SN-0002-SO	5/22/2008	1000	5/22/2008	1	0.002	0.004	-0.12	ND	
LL2DB10-SB-102SN-0003-SO	5/22/2008	1000	5/22/2008	1	0.002	0.005	-0.09	ND	
LL2DB10-SB-100SN-0003-SO DUP	5/22/2008	935	5/22/2008	1	0.002	0.005	-0.09	ND	
LL2DB10-SB-103SN-0001-SO	5/22/2008	1015	5/22/2008	1	0.005	0.006	-0.48	ND	
LL2DB10-SB-103SN-0002-SO	5/22/2008	1015	5/22/2008	1	0.007	0.009	-0.59	ND	
LL2DB10-SB-103SN-0003-SO	5/22/2008	1015	5/22/2008	1	0.003	0.011	-0.03	ND	
LL2DB4-SB-038SN-0001-SO	5/22/2008	1150	5/22/2008	1	0.000	0.005	0.15	ND	
LL2DB4-SB-038SN-0002-SO	5/22/2008	1150	5/22/2008	1	0.000	0.001	0.03	ND	
LL2DB4-SB-038SN-0003-SO	5/22/2008	1150	5/22/2008	1	0.006	0.039	0.46	ND	
LL2DB4-SB-038SN-0004-SO	5/22/2008	1150	5/22/2008	1	0.062	0.155	-2.88	ND	
LL2DB4-SB-038SN-0005-SO	5/22/2008	1150	5/22/2008	1	0.024	0.156	1.86	1.9	
LL2DB4VP1-SS-087SN-0001-SO	5/22/2008	1100	5/22/2008	1	0.004	0.016	0.00	ND	
LL2DB30-SS-104SN-0001-SO	5/22/2008	1115	5/22/2008	1	0.007	0.029	0.03	ND	
LL2DB4-SB-038SN-0002-SO DUP	5/22/2008	1150	5/22/2008	1	0.000	0.001	0.03	ND	



**APPENDIX E-2**  
**RDX Results**

**RDV Soil Test Worksheet**  
**RVAAP**

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDV Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL4G5-SS-001SN-0001-SO	3/14/2008	14:30	3/14/2008	1	0.012	-0.09	ND	
LL4G5-SS-001SN-0001-SO-DUP	3/14/2008	14:30	3/14/2008	1	0.012	-0.09	ND	
LL2DB4-SS-001SN-0001-SO	3/21/2008	11:05	3/21/2008	1	0.049	1.56	1.6	
LL2DB4-SS-001SN-0002-SO	3/21/2008	11:08	3/21/2008	1	0.015	0.04	ND	
LL2DB4-SS-002SN-0001-SO	3/21/2008	11:10	3/21/2008	1	0.023	0.40	ND	
LL2DB4-SS-002SN-0002-SO	3/21/2008	11:13	3/21/2008	1	0.046	1.42	1.4	
LL3EB10-SS-001SN-0001-SO	3/21/2008	10:15	3/21/2008	1	0.012	-0.09	ND	
LL3EB10-SS-001SN-0002-SO	3/21/2008	10:18	3/21/2008	1	0.016	0.09	ND	
LL3EB10-SS-001SN-0002-SO-DUP	3/21/2008	10:18	3/21/2008	1	0.009	-0.22	ND	
LL3EB10-SS-002SN-0001-SO	3/21/2008	10:20	3/21/2008	1	0.013	-0.04	ND	
LL3EB10-SS-002SN-0002-SO	3/21/2008	10:23	3/21/2008	1	0.010	-0.18	ND	
LL3EB10-SS-003SN-0001-SO	3/21/2008	10:25	3/21/2008	1	0.011	-0.13	ND	
LL3EB10-SS-003SN-0002-SO	3/21/2008	10:28	3/21/2008	1	0.006	-0.36	ND	
LL4G4-SS-002SN-0001-SO	3/21/2008	14:40	3/21/2008	1	0.019	0.22	ND	
LL4G7-SS-003SN-0001-SO	3/21/2008	14:35	3/21/2008	1	0.014	0.00	ND	
LL4G12-SS-016SN-0001-SO	3/21/2008	14:58	3/21/2008	1	0.020	0.27	ND	Sample ID corrected
LL4G13VP1-SS-017SN-0001-SO	3/21/2008	15:40	3/21/2008	1	0.025	0.49	ND	Outside footprint/red dust
LL4G8-SB-004SN-0001-SO	3/21/2008	15:15	3/21/2008	1	0.015	0.04	ND	
LL4G8-SB-004SN-0002-SO	3/21/2008	15:15	3/21/2008	1	0.031	0.76	ND	
LL4G8-SB-004SN-0003-SO	3/21/2008	15:15	3/21/2008	1	0.016	0.09	ND	
LL4G8-SB-004SN-0004-SO	3/21/2008	15:15	3/21/2008	1	0.032	0.80	0.8	
LL4G8-SB-004SN-0005-SO	3/21/2008	15:15	3/21/2008	1	0.008	-0.27	ND	
LL4G8-SB-005SN-0001-SO	3/21/2008	15:30	3/21/2008	1	0.015	0.04	ND	
LL4G8-SB-005SN-0002-SO	3/21/2008	15:30	3/21/2008	1	0.031	0.76	ND	
LL4G8-SB-005SN-0003-SO	3/21/2008	15:30	3/21/2008	1	0.015	0.04	ND	
LL4G8-SB-005SN-0004-SO	3/21/2008	15:30	3/21/2008	1	0.014	0.00	ND	
LL4G8-SB-005SN-0005-SO	3/21/2008	15:30	3/21/2008	1	0.012	-0.09	ND	
LL4G8-SB-006SN-0001-SO	3/21/2008	15:50	3/24/2008	1	0.018	0.18	ND	
LL4G8-SB-006SN-0002-SO	3/21/2008	15:50	3/24/2008	1	0.017	0.13	ND	
LL4G8-SB-006SN-0003-SO	3/21/2008	15:50	3/24/2008	1	0.013	-0.04	ND	
LL4G8-SB-006SN-0004-SO	3/21/2008	15:50	3/24/2008	1	0.014	0.00	ND	
LL4G8-SB-006SN-0005-SO	3/21/2008	15:50	3/24/2008	1	0.004	-0.44	ND	
LL4G8-SB-007SN-0001-SO	3/21/2008	18:15	3/24/2008	1	0.018	0.18	ND	
LL4G8-SB-007SN-0002-SO	3/21/2008	18:15	3/24/2008	1	0.019	0.22	ND	
LL4G8-SB-007SN-0003-SO	3/21/2008	18:15	3/24/2008	1	0.016	0.09	ND	
LL4G8-SB-007SN-0004-SO	3/21/2008	18:15	3/24/2008	1	0.017	0.13	ND	
LL4G8-SB-007SN-0005-SO	3/21/2008	18:15	3/24/2008	1	0.003	-0.49	ND	
LL4G8-SB-008SN-0001-SO	3/21/2008	16:30	3/24/2008	1	0.010	-0.18	ND	
LL4G8-SB-008SN-0001-SO-DUP	3/21/2008	16:30	3/24/2008	1	0.013	-0.04	ND	
LL4G8-SB-008SN-0002-SO	3/21/2008	16:30	3/24/2008	1	0.011	-0.13	ND	
LL4G8-SB-008SN-0003-SO	3/21/2008	16:30	3/24/2008	1	0.013	-0.04	ND	
LL4G8-SB-008SN-0004-SO	3/21/2008	16:30	3/24/2008	1	0.014	0.00	ND	
LL4G8-SB-008SN-0005-SO	3/21/2008	16:30	3/24/2008	1	0.014	0.00	ND	
LL4G8-SB-009SN-0001-SO	3/21/2008	16:45	3/24/2008	1	0.015	0.04	ND	
LL4G8-SB-009SN-0002-SO	3/21/2008	16:45	3/24/2008	1	0.016	0.09	ND	
LL4G8-SB-009SN-0003-SO	3/21/2008	16:45	3/24/2008	1	0.016	0.09	ND	
LL4G8-SB-009SN-0004-SO	3/21/2008	16:45	3/24/2008	1	0.014	0.00	ND	
LL4G8-SB-009SN-0005-SO	3/21/2008	16:45	3/24/2008	1	0.015	0.04	ND	
LL4G8-SB-010SN-0001-SO	3/21/2008	17:05	3/24/2008	1	0.013	-0.04	ND	
LL4G8-SB-010SN-0002-SO	3/21/2008	17:05	3/24/2008	1	0.013	-0.04	ND	
LL4G8-SB-010SN-0003-SO	3/21/2008	17:05	3/24/2008	1	0.010	-0.18	ND	
LL4G8-SB-010SN-0004-SO	3/21/2008	17:05	3/24/2008	1	0.014	0.00	ND	
LL4G8-SB-010SN-0005-SO	3/21/2008	17:05	3/24/2008	1	0.014	0.00	ND	
LL4G8-SB-011SN-0001-SO	3/21/2008	17:20	3/24/2008	1	0.072	2.58	2.6	
LL4G8-SB-011SN-0002-SO	3/21/2008	17:20	3/24/2008	1	0.011	-0.13	ND	
LL4G8-SB-011SN-0003-SO	3/21/2008	17:20	3/24/2008	1	0.009	-0.22	ND	
LL4G8-SB-011SN-0004-SO	3/21/2008	17:20	3/24/2008	1	0.012	-0.09	ND	
LL4G8-SB-011SN-0005-SO	3/21/2008	17:20	3/24/2008	1	0.013	-0.04	ND	
LL4G8-SB-012SN-0001-SO	3/21/2008	18:35	3/24/2008	1	0.016	0.09	ND	
LL4G8-SB-012SN-0001-SO	3/21/2008	18:35	3/24/2008	1	0.014	0.00	ND	
LL4G8-SB-012SN-0002-SO	3/21/2008	18:35	3/24/2008	1	0.004	-0.44	ND	
LL4G8-SB-012SN-0003-SO	3/21/2008	18:35	3/24/2008	1	0.008	-0.27	ND	
LL4G8-SB-012SN-0004-SO	3/21/2008	18:35	3/24/2008	1	0.015	0.04	ND	
LL4G8-SB-012SN-0005-SO	3/21/2008	18:35	3/24/2008	1	0.001	-0.58	ND	

**RDV Soil Test Worksheet**  
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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDV Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL4G8-SB-013SN-0001-SO	3/21/2008	17:25	3/24/2008	1	0.007	-0.31	ND	
LL4G8-SB-013SN-0002-SO	3/21/2008	17:25	3/24/2008	1	0.015	0.04	ND	
LL4G8-SB-013SN-0003-SO	3/21/2008	17:25	3/24/2008	1	0.013	-0.04	ND	
LL4G8-SB-013SN-0004-SO	3/21/2008	17:25	3/24/2008	1	0.010	-0.18	ND	
LL4G8-SB-013SN-0005-SO	3/21/2008	17:25	3/24/2008	1	0.013	-0.04	ND	
LL4G8-SB-014SN-0001-SO	3/21/2008	18:25	3/24/2008	1	0.011	-0.13	ND	
LL4G8-SB-014SN-0002-SO	3/21/2008	18:25	3/24/2008	1	0.012	-0.09	ND	
LL4G8-SB-014SN-0003-SO	3/21/2008	18:25	3/24/2008	1	0.012	-0.09	ND	
LL4G8-SB-014SN-0004-SO	3/21/2008	18:25	3/24/2008	1	0.015	0.04	ND	
LL4G8-SB-014SN-0005-SO	3/21/2008	18:25	3/24/2008	1	0.018	0.18	ND	
LL4G8-SB-015SN-0001-SO	3/21/2008	18:00	3/24/2008	1	0.017	0.13	ND	
LL4G8-SB-015SN-0001-SO-DUP	3/21/2008	18:00	3/24/2008	1	0.017	0.13	ND	
LL4G8-SB-015SN-0002-SO	3/21/2008	18:00	3/24/2008	1	0.014	0.00	ND	
LL4G8-SB-015SN-0003-SO	3/21/2008	18:00	3/24/2008	1	0.011	-0.13	ND	
LL4G8-SB-015SN-0004-SO	3/21/2008	18:00	3/24/2008	1	0.007	-0.31	ND	
LL4G8-SB-015SN-0005-SO	3/21/2008	18:00	3/24/2008	1	0.009	-0.22	ND	
LL4G9-SB-033SN-0001-SO	3/28/2008	1010	3/28/2008	1	0.016	0.09	ND	
LL4G9-SB-033SN-0002-SO	3/28/2008	1010	3/28/2008	1	0.014	0.00	ND	
LL4G9-SB-033SN-0003-SO	3/28/2008	1010	3/28/2008	1	0.014	0.00	ND	
LL4G9-SB-033SN-0004-SO	3/28/2008	1010	3/28/2008	1	0.016	0.09	ND	
LL4G9-SB-033SN-0005-SO	3/28/2008	1010	3/28/2008	1	0.017	0.13	ND	
LL4G9-SB-034SN-0001-SO	3/28/2008	1000	3/28/2008	1	0.017	0.13	ND	
LL4G9-SB-034SN-0002-SO	3/28/2008	1000	3/28/2008	1	0.013	-0.04	ND	
LL4G9-SB-034SN-0003-SO	3/28/2008	1000	3/28/2008	1	0.017	0.13	ND	
LL4G9-SB-034SN-0004-SO	3/28/2008	1000	3/28/2008	1	0.016	0.09	ND	
LL4G9-SB-034SN-0005-SO	3/28/2008	1000	3/28/2008	1	0.016	0.09	ND	
LL4G11-SS-023SN-0001-SO	3/28/2008	1058	3/28/2008	1	0.013	-0.04	ND	
LL4G13A-SS-019SN-0001-SO	3/28/2008	1230	3/28/2008	1	0.010	-0.18	ND	
LL4G13V2-SS-030SN-0001-SO	3/28/2008	1223	3/28/2008	1	0.013	-0.04	ND	
LL4G17-SS-026SN-0001-SO	3/28/2008	1150	3/28/2008	1	0.009	-0.22	ND	
LL4G13-SS-020SN-0001-SO	3/28/2008	1240	3/28/2008	1	0.009	-0.22	ND	
LL4G15-SB-031SN-0001-SO	3/28/2008	1137	3/28/2008	1	0.011	-0.13	ND	Sample ID corrected
LL4G15-SB-031SN-0002-SO	3/28/2008	1137	3/28/2008	1	0.013	-0.04	ND	Sample ID corrected
LL4G15-SB-031SN-0003-SO	3/28/2008	1137	3/28/2008	1	0.013	-0.04	ND	Sample ID corrected
LL4G15-SB-031SN-0004-SO	3/28/2008	1137	3/28/2008	1	0.011	-0.13	ND	Sample ID corrected
LL4G15-SB-031SN-0005-SO	3/28/2008	1137	3/28/2008	1	0.009	-0.22	ND	Sample ID corrected
LL4G15-SB-032SN-0001-SO	3/28/2008	1147	3/28/2008	1	0.016	0.09	ND	Sample ID corrected
LL4G15-SB-032SN-0002-SO	3/28/2008	1147	3/28/2008	1	0.015	0.04	ND	Sample ID corrected
LL4G15-SB-032SN-0003-SO	3/28/2008	1147	3/28/2008	1	0.016	0.09	ND	Sample ID corrected
LL4G15-SB-032SN-0004-SO	3/28/2008	1147	3/28/2008	1	0.014	0.00	ND	Sample ID corrected
LL4G15-SB-032SN-0005-SO	3/28/2008	1147	3/28/2008	1	0.017	0.13	ND	Sample ID corrected
LL4G15-SB-032SN-0005-SO-DUP	3/28/2008	1147	3/28/2008	1	0.009	-0.22	ND	Sample ID corrected
EB4A	3/28/2008	1848	3/28/2008	1	0.289	12.22	12.2	
LL4G13VP1-SS-018SN-0001-SO	3/28/2008	1420	3/31/2008	1	0.018	0.18	ND	
LL4G12A-SS-022SN-0001-SO	3/28/2008	1440	3/31/2008	1	0.012	-0.09	ND	
LL4G12VP1-SS-025SN-0001-SO	3/28/2008	1455	3/31/2008	1	0.013	-0.04	ND	
LL4G8VP1-SS-024SN-0001-SO	3/28/2008	1515	3/31/2008	1	0.010	-0.18	ND	
LL4G16-SS-021SN-0001-SO	3/28/2008	1540	3/31/2008	1	0.011	-0.13	ND	
LL4G2-SS-029SN-0001-SO	3/28/2008	1600	3/31/2008	1	0.016	0.09	ND	
LL4G6A-SS-028SN-0001-SO	3/28/2008	1620	3/31/2008	1	0.018	0.18	ND	
LL3EB22-SS-003SN-0001-SO	3/28/2008	1755	3/31/2008	1	0.035	0.93	0.9	
LL3EA6A-SB-081SN-0001-SO	3/28/2008	1830	3/31/2008	1	0.016	0.09	ND	
LL3EA6A-SB-081SN-0002-SO	3/28/2008	1830	3/31/2008	1	0.016	0.09	ND	
LL3EA6A-SB-081SN-0003-SO	3/28/2008	1830	3/31/2008	1	0.018	0.18	ND	
LL3EA6A-SB-081SN-0004-SO	3/28/2008	1830	3/31/2008	1	0.020	0.27	ND	
LL3EA6A-SB-081SN-0005-SO	3/28/2008	1830	3/31/2008	1	0.016	0.09	ND	
LL3EA6A-SB-081SN-0005-SO-DUP	3/28/2008	1830	3/31/2008	1	0.013	-0.04	ND	
LL3EA6A-SB-082SN-0001-SO	3/28/2008	1900	3/31/2008	1	0.179	7.33	7.3	Yellow
LL3EA6A-SB-082SN-0002-SO	3/28/2008	1900	3/31/2008	1	0.017	0.13	ND	
LL3EA6A-SB-082SN-0003-SO	3/28/2008	1900	3/31/2008	1	0.013	-0.04	ND	
LL3EA6A-SB-082SN-0004-SO	3/28/2008	1900	3/31/2008	1	0.176	7.20	7.2	Yellow
LL3EA6A-SB-082SN-0005-SO	3/28/2008	1900	3/31/2008	1	0.017	0.13	ND	
LL3EA6A-SB-083SN-0001-SO	3/28/2008	1910	3/31/2008	1	0.022	0.36	ND	
LL3EA6A-SB-083SN-0002-SO	3/28/2008	1910	3/31/2008	1	0.018	0.18	ND	

**RDV Soil Test Worksheet  
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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDV Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL3EA6A-SB-083SN-0003-SO	3/28/2008	1910	3/31/2008	1	0.013	-0.04	ND	
LL3EA6A-SB-083SN-0004-SO	3/28/2008	1910	3/31/2008	1	0.015	0.04	ND	
LL3EA6A-SB-083SN-0005-SO	3/28/2008	1910	3/31/2008	1	0.011	-0.13	ND	
LL3EA6A-SB-084SN-0001-SO	3/28/2008	1925	3/31/2008	1	0.018	0.18	ND	
LL3EA6A-SB-084SN-0002-SO	3/28/2008	1925	3/31/2008	1	0.022	0.36	ND	
LL3EA6A-SB-084SN-0003-SO	3/28/2008	1925	3/31/2008	1	0.030	0.71	ND	
LL3EA6A-SB-084SN-0004-SO	3/28/2008	1925	3/31/2008	1	0.044	1.33	1.3	
LL3EA6A-SB-084SN-0005-SO	3/28/2008	1925	3/31/2008	1	0.052	1.69	1.7	
LL3EA6A-SB-085SN-0001-SO	3/28/2008	1940	3/31/2008	1	0.010	-0.18	ND	
LL3EA6A-SB-085SN-0002-SO	3/28/2008	1940	3/31/2008	1	0.015	0.04	ND	
LL3EA6A-SB-085SN-0003-SO	3/28/2008	1940	3/31/2008	1	0.010	-0.18	ND	
LL3EA6A-SB-085SN-0004-SO	3/28/2008	1940	3/31/2008	1	0.010	-0.18	ND	
LL3EA6A-SB-085SN-0005-SO	3/28/2008	1940	3/31/2008	1	0.011	-0.13	ND	
LL3EA6A-SB-085SN-0005-SO-DUP	3/28/2008	1940	3/31/2008	1	0.013	-0.04	ND	
LL3EA28A-SS-054SN-0001-SO	3/28/2008	1950	3/31/2008	1	0.015	0.04	ND	
LL351A-SS-055SN-0001-SO	3/28/2008	1925	3/31/2008	1	0.015	0.04	ND	
LL3EB8-SS-004SN-0001-SO	3/28/2008	1616	3/31/2008	1	0.017	0.13	ND	
LL3EB3-SS-078SN-0001-SO	3/28/2008	1845	3/31/2008	1	0.012	-0.09	ND	
LL4G18-SS-027SN-0001-SO	3/28/2008	1140	3/31/2008	1	0.013	-0.04	ND	
LL3EB2-SS-002SN-0001-SO	3/28/2008	1855	3/31/2008	1	0.010	-0.18	ND	
LL3EB19-SS-001SN-0001-SO	3/28/2008	1905	3/31/2008	1	0.012	-0.09	ND	
LL351-SS-005SN-0001-SO	3/28/2008	1920	3/31/2008	1	0.018	0.18	ND	
EB4A Conf. Sample	3/28/2008	1848	3/31/2008	1	0.734	32.00	32.0	
LL4G6-SS-035SN-0001-SO	4/2/2008	853	4/3/2008	1	0.011	-0.13	ND	
LL4G19-SS-037SN-0001-SO	4/2/2008	915	4/3/2008	1	0.013	-0.04	ND	
LL4G19A-SS-038SN-0001-SO	4/2/2008	925	4/3/2008	1	0.019	0.22	ND	
LL4G10-SS-039SN-0001-SO	4/2/2008	1000	4/3/2008	1	0.018	0.18	ND	
LL3EB20-SS-079SN-0001-SO	4/2/2008	1024	4/3/2008	1	0.016	0.09	ND	
LL3EB25-SS-077SN-0001-SO	4/2/2008	1050	4/3/2008	1	3.110			
LL3EB25-SS-077SN-0001-SO DL	4/2/2008	1050	4/3/2008	10	0.122	48.00	48.0	
LL3EB9A-SS-076SN-0001-SO	4/2/2008	1100	4/3/2008	1	0.014	0.00	ND	
LL3EB9A-SS-076SN-0001-SO DUP	4/2/2008	1100	4/3/2008	1	0.015	0.04	ND	
LL3EB4A-SB-061SN-0001-SO	4/3/2008	1330	4/3/2008	1	0.044	1.33	1.3	
LL3EB4A-SB-061SN-0002-SO	4/3/2008	1330	4/3/2008	1	0.031	0.76	ND	
LL3EB4A-SB-061SN-0003-SO	4/3/2008	1330	4/3/2008	1	0.019	0.22	ND	
LL3EB4A-SB-061SN-0004-SO	4/3/2008	1330	4/3/2008	1	0.013	-0.04	ND	
LL3EB4A-SB-061SN-0005-SO	4/3/2008	1330	4/3/2008	1	0.016	0.09	ND	
LL3EB9A-SS-032SN-0001-SO	4/3/2008	1020	4/3/2008	1	0.014	0.00	ND	
LL3EB4A-SB-062SN-0001-SO	4/3/2008	1310	4/3/2008	1	0.017	0.13	ND	
LL3EB4A-SB-062SN-0002-SO	4/3/2008	1310	4/3/2008	1	0.041	1.20	1.2	
LL3EB4A-SB-062SN-0003-SO	4/3/2008	1310	4/3/2008	1	0.013	-0.04	ND	
LL3EB4A-SB-062SN-0004-SO	4/3/2008	1310	4/3/2008	1	0.011	-0.13	ND	
LL3EB4A-SB-062SN-0005-SO	4/3/2008	1310	4/3/2008	1	0.020	0.27	ND	
LL3EB4A-SB-063SN-0001-SO	4/3/2008	1215	4/3/2008	1	0.086	3.20	3.2	
LL3EB4A-SB-063SN-0002-SO	4/3/2008	1215	4/3/2008	1	0.047	1.47	1.5	
LL3EB4A-SB-063SN-0003-SO	4/3/2008	1215	4/3/2008	1	0.043	1.29	1.3	
LL3EB4A-SB-063SN-0004-SO	4/3/2008	1215	4/3/2008	1	0.053	1.73	1.7	
LL3EB4A-SB-063SN-0005-SO	4/3/2008	1215	4/3/2008	1	0.024	0.44	ND	
LL3EB4A-SB-064SN-0001-SO	4/3/2008	1230	4/3/2008	1	0.013	-0.04	ND	
LL3EB4A-SB-064SN-0002-SO	4/3/2008	1230	4/3/2008	1	0.009	-0.22	ND	
LL3EB4A-SB-064SN-0003-SO	4/3/2008	1230	4/3/2008	1	0.011	-0.13	ND	
LL3EB4A-SB-064SN-0004-SO	4/3/2008	1230	4/3/2008	1	0.010	-0.18	ND	
LL3EB4A-SB-064SN-0005-SO	4/3/2008	1230	4/3/2008	1	0.013	-0.04	ND	
LL3EB4A-SB-073SN-0001-SO	4/3/2008	1300	4/3/2008	1	0.017	0.13	ND	
LL3EB4A-SB-073SN-0002-SO	4/3/2008	1300	4/3/2008	1	0.019	0.22	ND	
LL3EB4A-SB-073SN-0003-SO	4/3/2008	1300	4/3/2008	1	0.013	-0.04	ND	
LL3EB4A-SB-073SN-0004-SO	4/3/2008	1300	4/3/2008	1	0.015	0.04	ND	
LL3EB4A-SB-073SN-0004-SO DUP	4/3/2008	1300	4/3/2008	1	0.011	-0.13	ND	
LL3EB4A-SB-073SN-0005-SO	4/3/2008	1300	4/4/2008	1	0.013	-0.04	ND	
LL3EB4VP1-SS-033SN-0001-SO	4/3/2008	1030	4/4/2008	1	0.017	0.13	ND	
LL3EB10VP1-SS-028SN-0001-SO	4/3/2008	930	4/4/2008	1	0.025	0.49	ND	
LL3EB10VP2-SS-029SN-0001-SO	4/3/2008	940	4/4/2008	1	0.029	0.67	ND	
LL3EB4A-SB-058SN-0001-SO	4/3/2008	1540	4/4/2008	1	0.020	0.27	ND	
LL3EB4A-SB-058SN-0002-SO	4/3/2008	1540	4/4/2008	1	0.016	0.09	ND	

**RDX Soil Test Worksheet  
RVAAP**

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDX Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL3EB4A-SB-058SN-0003-SO	4/3/2008	1540	4/4/2008	1	0.052	1.69	1.7	
LL3EB4A-SB-058SN-0004-SO	4/3/2008	1540	4/4/2008	1	0.048	1.51	1.5	
LL3EB4A-SB-058SN-0005-SO	4/3/2008	1540	4/4/2008	1	0.050	1.60	1.6	
LL3EB4A-SB-058SN-0005-SO DUP	4/3/2008	1540	4/4/2008	1	0.022	0.36	ND	
LL3EB4A-SB-059SN-0001-SO	4/3/2008	1630	4/4/2008	1	0.020	0.27	ND	
LL3EB4A-SB-059SN-0002-SO	4/3/2008	1630	4/4/2008	1	0.055	1.82	1.8	
LL3EB4A-SB-059SN-0003-SO	4/3/2008	1630	4/4/2008	1	0.013	-0.04	ND	
LL3EB4A-SB-059SN-0004-SO	4/3/2008	1630	4/4/2008	1	0.016	0.09	ND	
LL3EB4A-SB-059SN-0005-SO	4/3/2008	1630	4/4/2008	1	0.011	-0.13	ND	
LL3EB4A-SB-060SN-0001-SO	4/3/2008	1545	4/4/2008	1	0.012	-0.09	ND	
LL3EB4A-SB-060SN-0002-SO	4/3/2008	1545	4/4/2008	1	0.016	0.09	ND	
LL3EB4A-SB-060SN-0003-SO	4/3/2008	1545	4/4/2008	1	0.018	0.18	ND	
LL3EB4A-SB-060SN-0004-SO	4/3/2008	1545	4/4/2008	1	0.017	0.13	ND	
LL3EB4A-SB-060SN-0005-SO	4/3/2008	1545	4/4/2008	1	0.015	0.04	ND	
LL3EB4A-SB-065SN-0001-SO	4/3/2008	1715	4/4/2008	1	0.120	4.71	4.7	
LL3EB4A-SB-065SN-0002-SO	4/3/2008	1715	4/4/2008	1	0.064	2.22	2.2	
LL3EB4A-SB-065SN-0003-SO	4/3/2008	1715	4/4/2008	1	0.016	0.09	ND	
LL3EB4A-SB-065SN-0004-SO	4/3/2008	1715	4/4/2008	1	0.019	0.22	ND	
LL3EB4A-SB-065SN-0005-SO	4/3/2008	1715	4/4/2008	1	0.040	1.16	1.2	
LL3EB4A-SB-066SN-0001-SO	4/3/2008	1740	4/4/2008	1	0.020	0.27	ND	
LL3EB4A-SB-066SN-0002-SO	4/3/2008	1740	4/4/2008	1	0.025	0.49	ND	
LL3EB4A-SB-066SN-0003-SO	4/3/2008	1740	4/4/2008	1	0.018	0.18	ND	
LL3EB4A-SB-066SN-0004-SO	4/3/2008	1740	4/4/2008	1	0.017	0.13	ND	
LL3EB4A-SB-066SN-0005-SO	4/3/2008	1740	4/4/2008	1	0.017	0.13	ND	
LL3EB4A-SB-066SN-0005-SO DUP	4/3/2008	1740	4/4/2008	1	0.013	-0.04	ND	
LL3EB4A-SB-067SN-0001-SO	4/3/2008	1700	4/4/2008	1	0.126	4.98	5.0	yellow
LL3EB4A-SB-067SN-0002-SO	4/3/2008	1700	4/4/2008	1	1.079			
LL3EB4A-SB-067SN-0002-SO DL	4/3/2008	1700	4/4/2008	2	0.852	74.49	74.5	
LL3EB4A-SB-067SN-0003-SO	4/3/2008	1700	4/4/2008	1	0.228	9.51	9.5	
LL3EB4A-SB-067SN-0004-SO	4/3/2008	1700	4/4/2008	1	0.040	1.16	1.2	
LL3EB4A-SB-067SN-0005-SO	4/3/2008	1645	4/4/2008	1	0.035	0.93	0.9	
LL3EB4A-SB-068SN-0001-SO	4/3/2008	1645	4/4/2008	1	0.013	-0.04	ND	
LL3EB4A-SB-068SN-0002-SO	4/3/2008	1645	4/4/2008	1	0.017	0.13	ND	
LL3EB4A-SB-068SN-0003-SO	4/3/2008	1645	4/4/2008	1	0.015	0.04	ND	
LL3EB4A-SB-068SN-0004-SO	4/3/2008	1645	4/4/2008	1	0.063	2.18	2.2	
LL3EB4A-SB-068SN-0005-SO	4/3/2008	1645	4/4/2008	1	0.012	-0.09	ND	
LL3EB4A-SB-069SN-0001-SO	4/3/2008	1755	4/4/2008	1	0.013	-0.04	ND	
LL3EB4A-SB-069SN-0002-SO	4/3/2008	1755	4/4/2008	1	0.013	-0.04	ND	
LL3EB4A-SB-069SN-0003-SO	4/3/2008	1755	4/4/2008	1	0.015	0.04	ND	
LL3EB4A-SB-069SN-0004-SO	4/3/2008	1755	4/4/2008	1	0.013	-0.04	ND	
LL3EB4A-SB-069SN-0005-SO	4/3/2008	1755	4/4/2008	1	0.012	-0.09	ND	
LL3EB4A-SB-040SN-0001-SO	4/4/2008	1145	4/7/2008	1	0.021	0.31	ND	
LL3EB4A-SB-040SN-0002-SO	4/4/2008	1145	4/7/2008	1	0.032	0.80	0.8	
LL3EB4A-SB-040SN-0003-SO	4/4/2008	1145	4/7/2008	1	0.037	1.02	1.0	
LL3EB4A-SB-040SN-0004-SO	4/4/2008	1145	4/7/2008	1	0.022	0.36	ND	
LL3EB4A-SB-040SN-0005-SO	4/4/2008	1145	4/7/2008	1	0.072	2.58	2.6	
LL3EB4A-SB-038SN-0001-SO	4/4/2008	1000	4/7/2008	1	0.022	0.36	ND	
LL3EB4A-SB-038SN-0002-SO	4/4/2008	1000	4/7/2008	1	0.014	0.00	ND	
LL3EB4A-SB-038SN-0003-SO	4/4/2008	1000	4/7/2008	1	0.010	-0.18	ND	
LL3EB4A-SB-038SN-0004-SO	4/4/2008	1000	4/7/2008	1	0.012	-0.09	ND	
LL3EB4A-SB-038SN-0005-SO	4/4/2008	1000	4/7/2008	1	0.013	-0.04	ND	
LL3EB4A-SB-037SN-0001-SO	4/4/2008	945	4/7/2008	1	0.029	0.67	ND	
LL3EB4A-SB-037SN-0002-SO	4/4/2008	945	4/7/2008	1	0.045	1.38	1.4	
LL3EB4A-SB-037SN-0003-SO	4/4/2008	945	4/7/2008	1	0.015	0.04	ND	
LL3EB4A-SB-037SN-0004-SO	4/4/2008	945	4/7/2008	1	0.031	0.76	ND	
LL3EB4A-SB-037SN-0005-SO	4/4/2008	945	4/7/2008	1	0.030	0.71	ND	
LL3EB4A-SB-039SN-0001-SO	4/4/2008	1130	4/7/2008	1	0.024	0.44	ND	
LL3EB4A-SB-039SN-0001-SO DUP	4/4/2008	1130	4/7/2008	1	0.024	0.44	ND	
LL3EB4A-SB-039SN-0002-SO	4/4/2008	1130	4/7/2008	1	0.016	0.09	ND	
LL3EB4A-SB-039SN-0003-SO	4/4/2008	1130	4/7/2008	1	0.015	0.04	ND	
LL3EB4A-SB-039SN-0004-SO	4/4/2008	1130	4/7/2008	1	0.021	0.31	ND	
LL3EB4A-SB-039SN-0005-SO	4/4/2008	1130	4/7/2008	1	0.019	0.22	ND	
LL3EB4A-SB-041SN-0001-SO	4/4/2008	1200	4/7/2008	1	0.024	0.44	ND	
LL3EB4A-SB-041SN-0002-SO	4/4/2008	1200	4/7/2008	1	0.027	0.58	ND	

**RDV Soil Test Worksheet  
RVAAP**

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDV Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL3EB4-SB-041SN-0003-SO	4/4/2008	1200	4/7/2008	1	0.030	0.71	ND	
LL3EB4-SB-041SN-0004-SO	4/4/2008	1200	4/7/2008	1	0.028	0.62	ND	
LL3EB4-SB-041SN-0005-SO	4/4/2008	1200	4/7/2008	1	0.033	0.84	0.8	
LL3EB4-SB-042SN-0001-SO	4/4/2008	1535	4/7/2008	1	0.142	5.69	5.7	yellow
LL3EB4-SB-042SN-0002-SO	4/4/2008	1535	4/7/2008	1	0.026	0.53	ND	
LL3EB4-SB-042SN-0003-SO	4/4/2008	1535	4/7/2008	1	0.084	3.11	3.1	
LL3EB4-SB-042SN-0004-SO	4/4/2008	1535	4/7/2008	1	0.138	5.51	5.5	
LL3EB4-SB-042SN-0005-SO	4/4/2008	1535	4/7/2008	1	0.036	0.98	1.0	
LL3EB4-SB-043SN-0001-SO	4/4/2008	1435	4/7/2008	1	0.019	0.22	ND	
LL3EB4-SB-043SN-0002-SO	4/4/2008	1435	4/7/2008	1	0.015	0.04	ND	
LL3EB4-SB-043SN-0003-SO	4/4/2008	1435	4/7/2008	1	0.022	0.36	ND	
LL3EB4-SB-043SN-0004-SO	4/4/2008	1435	4/7/2008	1	0.038	1.07	1.1	
LL3EB4-SB-043SN-0004-SO DUP	4/4/2008	1435	4/7/2008	1	0.040	1.16	1.2	
LL3EB4-SB-043SN-0005-SO	4/4/2008	1435	4/7/2008	1	0.029	0.67	ND	
LL3EB4-SB-044SN-0001-SO	4/4/2008	1400	4/7/2008	1	0.038	1.07	1.1	
LL3EB4-SB-044SN-0002-SO	4/4/2008	1400	4/7/2008	1	0.048	1.51	1.5	
LL3EB4-SB-044SN-0003-SO	4/4/2008	1400	4/7/2008	1	0.050	1.60	1.6	
LL3EB4-SB-044SN-0004-SO	4/4/2008	1400	4/7/2008	1	0.091	3.42	3.4	
LL3EB4-SB-044SN-0005-SO	4/4/2008	1400	4/7/2008	1	0.053	1.73	1.7	
LL3EB4-SB-045SN-0001-SO	4/4/2008	1030	4/7/2008	1	0.013	-0.04	ND	
LL3EB4-SB-045SN-0002-SO	4/4/2008	1030	4/7/2008	1	0.014	0.00	ND	
LL3EB4-SB-045SN-0003-SO	4/4/2008	1030	4/7/2008	1	0.014	0.00	ND	
LL3EB4-SB-045SN-0004-SO	4/4/2008	1030	4/7/2008	1	0.018	0.18	ND	
LL3EB4-SB-045SN-0005-SO	4/4/2008	1030	4/7/2008	1	0.013	-0.04	ND	
LL3EB4-SB-046SN-0001-SO	4/4/2008	1015	4/7/2008	1	0.014	0.00	ND	
LL3EB4-SB-046SN-0002-SO	4/4/2008	1015	4/7/2008	1	0.019	0.22	ND	
LL3EB4-SB-046SN-0003-SO	4/4/2008	1015	4/7/2008	1	0.013	-0.04	ND	
LL3EB4-SB-046SN-0004-SO	4/4/2008	1015	4/7/2008	1	0.014	0.00	ND	
LL3EB4-SB-046SN-0005-SO	4/4/2008	1015	4/7/2008	1	0.011	-0.13	ND	
LL3EB4-SB-050SN-0001-SO	4/4/2008	1415	4/7/2008	1	0.012	-0.09	ND	
LL3EB4-SB-050SN-0002-SO	4/4/2008	1415	4/7/2008	1	0.013	-0.04	ND	
LL3EB4-SB-050SN-0003-SO	4/4/2008	1415	4/7/2008	1	0.023	0.40	ND	
LL3EB4-SB-050SN-0003-SO DUP	4/4/2008	1415	4/7/2008	1	0.036	0.98	1.0	
LL3EB4-SB-050SN-0004-SO	4/4/2008	1415	4/7/2008	1	0.030	0.71	ND	
LL3EB4-SB-050SN-0005-SO	4/4/2008	1415	4/7/2008	1	0.013	-0.04	ND	
LL3EB4-SB-052SN-0001-SO	4/4/2008	1515	4/7/2008	1	0.016	0.09	ND	
LL3EB4-SB-052SN-0002-SO	4/4/2008	1515	4/7/2008	1	0.028	0.62	ND	
LL3EB4-SB-052SN-0003-SO	4/4/2008	1515	4/7/2008	1	0.024	0.44	ND	
LL3EB4-SB-052SN-0004-SO	4/4/2008	1515	4/7/2008	1	0.021	0.31	ND	
LL3EB4-SB-052SN-0005-SO	4/4/2008	1515	4/7/2008	1	0.022	0.36	ND	
LL3EB10-SB-014SN-0001-SO	4/7/2008	1530	4/9/2008	1	0.017	0.13	ND	
LL3EB10-SB-014SN-0001-SO-DUP	4/7/2008	1530	4/9/2008	1	0.014	0.00	ND	
LL3EB10-SB-014SN-0002-SO	4/7/2008	1530	4/9/2008	1	0.029	0.67	ND	
LL3EB10-SB-014SN-0003-SO	4/7/2008	1530	4/9/2008	1	0.013	-0.04	ND	
LL3EB10-SB-014SN-0004-SO	4/7/2008	1530	4/9/2008	1	0.014	0.00	ND	
LL3EB10-SB-014SN-0005-SO	4/7/2008	1530	4/9/2008	1	0.013	-0.04	ND	
LL3EB10-SB-016SN-0001-SO	4/7/2008	1030	4/9/2008	1	0.030	0.71	ND	
LL3EB10-SB-016SN-0002-SO	4/7/2008	1030	4/9/2008	1	0.013	-0.04	ND	
LL3EB10-SB-016SN-0003-SO	4/7/2008	1030	4/9/2008	1	0.029	0.67	ND	
LL3EB10-SB-016SN-0004-SO	4/7/2008	1030	4/9/2008	1	0.022	0.36	ND	
LL3EB10-SB-016SN-0005-SO	4/7/2008	1030	4/9/2008	1	0.013	-0.04	ND	
LL3EB10-SB-018SN-0001-SO	4/7/2008	955	4/9/2008	1	0.015	0.04	ND	
LL3EB10-SB-018SN-0002-SO	4/7/2008	955	4/9/2008	1	0.032	0.80	0.8	
LL3EB10-SB-018SN-0003-SO	4/7/2008	955	4/9/2008	1	0.013	-0.04	ND	
LL3EB10-SB-018SN-0004-SO	4/7/2008	955	4/9/2008	1	0.015	0.04	ND	
LL3EB10-SB-018SN-0005-SO	4/7/2008	955	4/9/2008	1	0.013	-0.04	ND	
LL3EB10-SB-025SN-0001-SO	4/7/2008	1010	4/9/2008	1	0.021	0.31	ND	
LL3EB10-SB-025SN-0002-SO	4/7/2008	1010	4/9/2008	1	0.015	0.04	ND	
LL3EB10-SB-025SN-0003-SO	4/7/2008	1010	4/9/2008	1	0.022	0.36	ND	
LL3EB10-SB-025SN-0004-SO	4/7/2008	1010	4/9/2008	1	0.020	0.27	ND	
LL3EB10-SB-025SN-0005-SO	4/7/2008	1010	4/9/2008	1	0.017	0.13	ND	
LL3EB10-SB-026SN-0001-SO	4/7/2008	920	4/9/2008	1	0.015	0.04	ND	
LL3EB10-SB-026SN-0002-SO	4/7/2008	920	4/9/2008	1	0.020	0.27	ND	
LL3EB10-SB-026SN-0003-SO	4/7/2008	920	4/9/2008	1	0.015	0.04	ND	

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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDV Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL3EB10-SB-026SN-0004-SO	4/7/2008	920	4/9/2008	1	0.012	-0.09	ND	
LL3EB10-SB-026SN-0005-SO	4/7/2008	920	4/9/2008	1	0.028	0.62	ND	
LL3EB10-SB-019SN-0001-SO	4/7/2008	1340	4/9/2008	1	0.016	0.09	ND	
LL3EB10-SB-019SN-0002-SO	4/7/2008	1340	4/9/2008	1	0.020	0.27	ND	
LL3EB10-SB-019SN-0003-SO	4/7/2008	1340	4/9/2008	1	0.024	0.44	ND	
LL3EB10-SB-019SN-0004-SO	4/7/2008	1340	4/9/2008	1	0.031	0.76	ND	
LL3EB10-SB-019SN-0004-SO-DUP	4/7/2008	1340	4/9/2008	1	0.032	0.80	0.8	
LL3EB10-SB-019SN-0005-SO	4/7/2008	1340	4/9/2008	1	0.043	1.29	1.3	
LL3EB10-SB-024SN-0001-SO	4/7/2008	1400	4/9/2008	1	0.028	0.62	ND	
LL3EB10-SB-024SN-0002-SO	4/7/2008	1400	4/9/2008	1	0.025	0.49	ND	
LL3EB10-SB-024SN-0003-SO	4/7/2008	1400	4/9/2008	1	0.023	0.40	ND	
LL3EB10-SB-024SN-0004-SO	4/7/2008	1400	4/9/2008	1	0.028	0.62	ND	
LL3EB10-SB-024SN-0005-SO	4/7/2008	1400	4/9/2008	1	0.036	0.98	1.0	
LL3EB10-SB-023SN-0001-SO	4/7/2008	1505	4/9/2008	1	0.047	1.47	1.5	Turbid, yellow
LL3EB10-SB-023SN-0002-SO	4/7/2008	1505	4/9/2008	1	0.049	1.56	1.6	Turbid, yellow
LL3EB10-SB-023SN-0003-SO	4/7/2008	1505	4/9/2008	1	0.049	1.56	1.6	
LL3EB10-SB-023SN-0004-SO	4/7/2008	1505	4/9/2008	1	0.033	0.84	0.8	
LL3EB10-SB-023SN-0005-SO	4/7/2008	1505	4/9/2008	1	0.042	1.24	1.2	
LL3EB10-SB-017SN-0001-SO	4/7/2008	1115	4/9/2008	1	0.042	1.24	1.2	3 depths only
LL3EB10-SB-017SN-0002-SO	4/7/2008	1115	4/9/2008	1	0.043	1.29	1.3	
LL3EB10-SB-017SN-0003-SO	4/7/2008	1115	4/9/2008	1	0.051	1.64	1.6	
LL3EB10-SB-021SN-0001-SO	4/7/2008	1600	4/9/2008	1	0.051	1.64	1.6	3 depths only
LL3EB10-SB-021SN-0002-SO	4/7/2008	1600	4/9/2008	1	0.042	1.24	1.2	
LL3EB10-SB-021SN-0003-SO	4/7/2008	1600	4/9/2008	1	0.047	1.47	1.5	
LL3EB10-SB-021SN-0003-SO-DUP	4/7/2008	1600	4/9/2008	1	0.045	1.38	1.4	
LL3EB11-SS-011SN-0001-SO	4/4/2008	1510	4/9/2008	1	0.015	0.04	ND	
LL3EB8A-SS-006SN-0001-SO	4/4/2008	1520	4/9/2008	1	0.015	0.04	ND	
LL3EB4A URS-EPA 1	4/8/2008	1510	4/9/2008	1	1.030			Yellowish-Brown;needs dil
LL3EB4A URS-EPA 1 DL	4/8/2008	1510	4/9/2008	10	0.226	94.22	94.2	Light Yellow
LL3EB4A URS-EPA 2	4/8/2008	1515	4/9/2008	1	0.099	3.78	3.8	Yellow
LL3EB4A URS-EPA 3	4/8/2008	1520	4/9/2008	1	0.146	5.87	5.9	Yellow
LL3EB4A URS-EPA 4	4/8/2008	1520	4/9/2008	1	0.287	12.13	12.1	
LL3EB10-SB-013SN-0001-SO	4/10/2008	1015	4/10/2008	1	0.030	0.71	ND	
LL3EB10-SB-013SN-0002-SO	4/10/2008	1015	4/10/2008	1	0.024	0.44	ND	
LL3EB10-SB-015SN-0001-SO	4/10/2008	940	4/10/2008	1	0.024	0.44	ND	
LL3EB10-SB-015SN-0002-SO	4/10/2008	940	4/10/2008	1	0.016	0.09	ND	
LL3EB10-SB-015SN-0003-SO	4/10/2008	940	4/10/2008	1	0.018	0.18	ND	
LL3EB10-SB-015SN-0004-SO	4/10/2008	940	4/10/2008	1	0.021	0.31	ND	
LL3EB10-SB-020SN-0001-SO	4/10/2008	845	4/10/2008	1	0.020	0.27	ND	
LL3EB10-SB-020SN-0002-SO	4/10/2008	845	4/10/2008	1	0.011	-0.13	ND	
LL3EB10-SB-020SN-0003-SO	4/10/2008	845	4/10/2008	1	0.017	0.13	ND	
LL3EB10-SB-020SN-0004-SO	4/10/2008	845	4/10/2008	1	0.018	0.18	ND	
LL3EB10-SB-020SN-0005-SO	4/10/2008	845	4/10/2008	1	0.018	0.18	ND	
LL3EB10-SB-022SN-0001-SO	4/10/2008	1000	4/10/2008	1	0.019	0.22	ND	
LL3EB10-SB-022SN-0002-SO	4/10/2008	1000	4/10/2008	1	0.020	0.27	ND	
LL3EA5-SS-080SN-0001-SO	4/10/2008	1130	4/10/2008	1	0.019	0.22	ND	



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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDV Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL3EA7-SS-030SN-0001-SO	4/10/2008	1255	4/10/2008	1	0.018	0.18	ND	
LL3EA7-SS-030SN-0001-SO DUP	4/10/2008	1255	4/10/2008	1	0.016	0.09	ND	
LL3EA21-SS-031SN-0001-SO	4/10/2008	1240	4/10/2008	1	0.019	0.22	ND	
LL3EA28-SS-034SN-0001-SO	4/10/2008	1230	4/10/2008	1	0.034	0.89	0.9	
LL3EB13-SS-007SN-0001-SO	4/10/2008	1100	4/10/2008	1	0.026	0.53	ND	
LL3EB13A-SS-008SN-0001-SO	4/10/2008	1110	4/10/2008	1	0.022	0.36	ND	
LL3EB13B-SS-009SN-0001-SO	4/10/2008	1045	4/10/2008	1	0.022	0.36	ND	
LL3EA6-SB-086SN-0001-SO	4/10/2008	1515	4/10/2008	1	0.015	0.04	ND	
LL3EA6-SB-086SN-0002-SO	4/10/2008	1515	4/10/2008	1	0.028	0.62	ND	
LL3EA6-SB-086SN-0002-SO DUP	4/10/2008	1515	4/10/2008	1	0.086	3.20	3.2	
LL3EA6-SB-086SN-0003-SO	4/10/2008	1515	4/10/2008	1	0.034	0.89	0.9	
LL3EA6-SB-086SN-0004-SO	4/10/2008	1515	4/10/2008	1	0.022	0.36	ND	
LL3EA6-SB-087SN-0001-SO	4/10/2008	1530	4/10/2008	1	0.048	1.51	1.5	
LL3EA6-SB-087SN-0002-SO	4/10/2008	1530	4/10/2008	1	0.028	0.62	ND	
LL3EA6-SB-087SN-0003-SO	4/10/2008	1530	4/10/2008	1	0.036	0.98	1.0	
LL3EA6-SB-087SN-0004-SO	4/10/2008	1530	4/10/2008	1	0.038	1.07	1.1	
LL3EA6-SB-087SN-0005-SO	4/10/2008	1530	4/10/2008	1	0.025	0.49	ND	
LL3EA6-SB-088SN-0001-SO	4/10/2008	1725	4/10/2008	1	0.068	2.40	2.4	
LL3EA6-SB-088SN-0002-SO	4/10/2008	1725	4/10/2008	1	0.014	0.00	ND	
LL3EA6-SB-088SN-0003-SO	4/10/2008	1725	4/10/2008	1	0.014	0.00	ND	
LL3EA6-SB-088SN-0004-SO	4/10/2008	1725	4/10/2008	1	0.012	-0.09	ND	
LL3EA6-SB-089SN-0001-SO	4/10/2008	1700	4/10/2008	1	0.014	0.00	ND	
LL3EA6-SB-089SN-0002-SO	4/10/2008	1700	4/10/2008	1	0.023	0.40	ND	
LL3EA6-SB-089SN-0003-SO	4/10/2008	1700	4/10/2008	1	0.026	0.53	ND	
LL3EA6-SB-089SN-0004-SO	4/10/2008	1700	4/10/2008	1	0.049	1.56	1.6	
LL3EA6-SB-089SN-0005-SO	4/10/2008	1700	4/10/2008	1	0.055	1.82	1.8	
LL3EA6-SB-090SN-0001-SO	4/10/2008	1745	4/10/2008	1	0.029	0.67	ND	
LL3EA6-SB-090SN-0002-SO	4/10/2008	1745	4/10/2008	1	0.072	2.58	2.6	
LL3EA6-SB-090SN-0003-SO	4/10/2008	1745	4/10/2008	1	0.024	0.44	ND	
LL3EA6-SB-090SN-0004-SO	4/10/2008	1745	4/10/2008	1	0.026	0.53	ND	
LL3EA6-SB-090SN-0005-SO	4/10/2008	1745	4/10/2008	1	0.013	-0.04	ND	
LL3EA6-SB-090SN-0005-SO DUP	4/10/2008	1745	4/10/2008	1	0.016	0.09	ND	
LL2DB4A-SB-013SN-0001-SO	4/17/2008	1400	4/17/2008	1	0.010	-0.18	ND	
LL2DB4A-SB-013SN-0002-SO	4/17/2008	1400	4/17/2008	1	0.020	0.27	ND	
LL2DB4A-SB-013SN-0003-SO	4/17/2008	1400	4/17/2008	1	0.009	-0.22	ND	
LL2DB4A-SB-013SN-0004-SO	4/17/2008	1400	4/17/2008	1	0.012	-0.09	ND	
LL2DB4A-SB-013SN-0005-SO	4/17/2008	1400	4/17/2008	1	0.024	0.44	ND	
LL2DB4A-SB-014SN-0001-SO	4/17/2008	1415	4/17/2008	1	0.048	1.51	1.5	
LL2DB4A-SB-014SN-0002-SO	4/17/2008	1415	4/17/2008	1	0.036	0.98	1.0	
LL2DB4A-SB-014SN-0003-SO	4/17/2008	1415	4/17/2008	1	0.072	2.58	2.6	
LL2DB4A-SB-014SN-0004-SO	4/17/2008	1415	4/17/2008	1	0.030	0.71	ND	
LL2DB4A-SB-014SN-0005-SO	4/17/2008	1415	4/17/2008	1	0.034	0.89	0.9	
LL2DB4A-SB-015SN-0001-SO	4/17/2008	1430	4/17/2008	1	0.079	2.89	2.9	
LL2DB4A-SB-015SN-0002-SO	4/17/2008	1430	4/17/2008	1	0.015	0.04	ND	
LL2DB4A-SB-015SN-0003-SO	4/17/2008	1430	4/17/2008	1	0.012	-0.09	ND	
LL2DB4A-SB-015SN-0004-SO	4/17/2008	1430	4/17/2008	1	0.027	0.58	ND	
LL2DB4A/VP1-SS-088SN-0001-SO	4/17/2008	1050	4/17/2008	1	0.013	-0.04	ND	
LL2DB9A-SS-008SN-0001-SO	4/17/2008	1035	4/17/2008	1	0.015	0.04	ND	
LL2DB19-SS-002SN-0001-SO	4/17/2008	930	4/17/2008	1	0.018	0.18	ND	
LL2DB20-SS-004SN-0001-SO	4/17/2008	950	4/17/2008	1	0.011	-0.13	ND	
LL2DB22-SS-006SN-0001-SO	4/17/2008	1210	4/17/2008	1	0.010	-0.18	ND	
LL2DB25-SS-007SN-0001-SO	4/17/2008	1010	4/17/2008	1	0.020	0.27	ND	
LL2DB2-SS-003SN-0001-SO	4/11/2008	1610	4/17/2008	1	0.017	0.13	ND	
LL2DB4A-SB-013SN-0001-SO-DUP	4/17/2008	1400	4/17/2008	1	0.018	0.18	ND	
LL2DB4A-SB-016SN-0001-SO	4/17/2008	1600	4/18/2008	1	0.178	7.29	7.3	Yellow Color
LL2DB4A-SB-016SN-0002-SO	4/17/2008	1600	4/18/2008	1	0.111	4.31	4.3	Yellow Color
LL2DB4A-SB-016SN-0003-SO	4/17/2008	1600	4/18/2008	1	0.053	1.73	1.7	Clear but turbid, no pink
LL2DB4A-SB-016SN-0004-SO	4/17/2008	1600	4/18/2008	1	0.031	0.76	ND	Clear but turbid, no pink
LL2DB4A-SB-016SN-0005-SO	4/17/2008	1600	4/18/2008	1	0.036	0.98	1.0	Clear but turbid, no pink
LL2DB4A-SB-017SN-0001-SO	4/17/2008	1615	4/18/2008	1	0.021	0.31	ND	Clear but turbid, no pink
LL2DB4A-SB-017SN-0002-SO	4/17/2008	1615	4/18/2008	1	0.026	0.53	ND	Clear but turbid, no pink



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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDx Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL2DB4A-SB-017SN-0003-SO	4/17/2008	1615	4/18/2008	1	0.051	1.64	1.6	Clear but turbid, no pink
LL2DB4A-SB-017SN-0004-SO	4/17/2008	1615	4/18/2008	1	0.025	0.49	ND	Clear but turbid, no pink
LL2DB4A-SB-017SN-0005-SO	4/17/2008	1615	4/18/2008	1	0.019	0.22	ND	Clear but turbid, no pink
LL2DB4A-SB-018SN-0001-SO	4/17/2008	1645	4/18/2008	1	0.021	0.31	ND	
LL2DB4A-SB-018SN-0002-SO	4/17/2008	1645	4/18/2008	1	0.041	1.20	1.2	
LL2DB4A-SB-018SN-0003-SO	4/17/2008	1645	4/18/2008	1	0.050	1.60	1.6	
LL2DB4A-SB-018SN-0004-SO	4/17/2008	1645	4/18/2008	1	0.020	0.27	ND	
LL2DB4A-SB-018SN-0005-SO	4/17/2008	1645	4/18/2008	1	0.021	0.31	ND	
LL2DB4A-SB-019SN-0001-SO	4/17/2008	1725	4/18/2008	1	0.020	0.27	ND	
LL2DB4A-SB-019SN-0002-SO	4/17/2008	1725	4/18/2008	1	0.024	0.44	ND	
LL2DB4A-SB-019SN-0003-SO	4/17/2008	1725	4/18/2008	1	0.027	0.58	ND	
LL2DB4A-SB-019SN-0004-SO	4/17/2008	1725	4/18/2008	1	0.027	0.58	ND	
LL2DB4A-SB-019SN-0005-SO	4/17/2008	1725	4/18/2008	1	0.024	0.44	ND	
LL2DB4A-SB-019SN-0005-SO DUP	4/17/2008	1725	4/18/2008	1	0.027	0.58	ND	
LL2DB4A-SB-020SN-0001-SO	4/17/2008	1745	4/18/2008	1	0.015	0.04	ND	
LL2DB4A-SB-020SN-0002-SO	4/17/2008	1745	4/18/2008	1	0.022	0.36	ND	
LL2DB4A-SB-020SN-0003-SO	4/17/2008	1745	4/18/2008	1	0.039	1.11	1.1	
LL2DB4A-SB-020SN-0004-SO	4/17/2008	1745	4/18/2008	1	0.019	0.22	ND	
LL2DB4A-SB-020SN-0005-SO	4/17/2008	1745	4/18/2008	1	0.034	0.89	0.9	
LL2DB4A-SB-021SN-0001-SO	4/17/2008	815	4/18/2008	1	0.032	0.80	0.8	
LL2DB4A-SB-021SN-0002-SO	4/17/2008	815	4/18/2008	1	0.030	0.71	ND	
LL2DB4A-SB-021SN-0003-SO	4/17/2008	815	4/18/2008	1	0.023	0.40	ND	
LL2DB4A-SB-021SN-0004-SO	4/17/2008	815	4/18/2008	1	0.031	0.76	ND	
LL2DB4A-SB-021SN-0005-SO	4/17/2008	815	4/18/2008	1	0.029	0.67	ND	
LL2DB4A-SB-022SN-0001-SO	4/17/2008	845	4/18/2008	1	0.028	0.62	ND	
LL2DB4A-SB-022SN-0002-SO	4/17/2008	845	4/18/2008	1	0.030	0.71	ND	
LL2DB4A-SB-022SN-0003-SO	4/17/2008	845	4/18/2008	1	0.048	1.51	1.5	
LL2DB4A-SB-022SN-0004-SO	4/17/2008	845	4/18/2008	1	0.041	1.20	1.2	
LL2DB4A-SB-022SN-0005-SO	4/17/2008	845	4/18/2008	1	0.034	0.89	0.9	
LL2DB4A-SB-023SN-0001-SO	4/17/2008	910	4/18/2008	1	0.027	0.58	ND	
LL2DB4A-SB-023SN-0002-SO	4/17/2008	910	4/18/2008	1	0.029	0.67	ND	
LL2DB4A-SB-023SN-0003-SO	4/17/2008	910	4/18/2008	1	0.031	0.76	ND	
LL2DB4A-SB-023SN-0004-SO	4/17/2008	910	4/18/2008	1	0.029	0.67	ND	
LL2DB4A-SB-023SN-0005-SO	4/17/2008	910	4/18/2008	1	0.028	0.62	ND	
LL2DB4A-SB-020SN-0005-SO DUP	4/17/2008	1745	4/18/2008	1	0.017	0.13	ND	
LL2-2-51-SS-032SN-0001-SO	4/18/2008	900	4/18/2008	1	0.018	0.18	ND	
LL2-2-51A-SS-033SN-0001-SO	4/18/2008	910	4/18/2008	1	0.028	0.62	ND	
LL2DB8-SS-031SN-0001-SO	4/18/2008	845	4/18/2008	1	0.030	0.71	ND	
LL2DB3-SS-005SN-0001-SO	4/18/2008	755	4/18/2008	1	0.035	0.93	0.9	
LL2DC1-SS-086SN-0001-SO	4/18/2008	825	4/18/2008	1	0.028	0.62	ND	
LL2DB4A-SB-027SN-0001-SO	4/18/2008	955	4/18/2008	1	0.037	1.02	1.0	Yellow Color
LL2DB4A-SB-027SN-0002-SO	4/18/2008	955	4/18/2008	1	0.030	0.71	ND	Yellow Color
LL2DB4A-SB-027SN-0003-SO	4/18/2008	955	4/18/2008	1	0.028	0.62	ND	Yellow Color
LL2DB4A-SB-027SN-0004-SO	4/18/2008	955	4/18/2008	1	0.042	1.24	1.2	Yellow Color
LL2DB4A-SB-027SN-0005-SO	4/18/2008	955	4/18/2008	1	0.055	1.82	1.8	Yellow Color
LL2DB4A-SB-028SN-0001-SO	4/18/2008	930	4/18/2008	1	0.045	1.38	1.4	Yellow Color
LL2DB4A-SB-028SN-0002-SO	4/18/2008	930	4/18/2008	1	0.098	3.73	3.7	Yellow Color
LL2DB4A-SB-028SN-0003-SO	4/18/2008	930	4/18/2008	1	0.064	2.22	2.2	Yellow Color
LL2DB4A-SB-028SN-0004-SO	4/18/2008	930	4/18/2008	1	0.043	1.29	1.3	Yellow Color
LL2DB4A-SB-028SN-0005-SO	4/18/2008	930	4/18/2008	1	0.086	3.20	3.2	Yellow Color
LL2DB4-PIT	4/18/2008	1530	4/18/2008	10	0.181	74.22	74.2	Yellow Color; Original Sample ID was LL3DB4-PIT. Corrected to LL2DB4-PIT.
LL2-2-51-SS-032SN-0001-SO DUP	4/18/2008	900	4/18/2008	1	0.020	0.27	ND	
LL2DB4-SB-034SN-0001-SO	4/18/2008	1445	4/21/2008	1	0.025	0.49	ND	
LL2DB4-SB-034SN-0002-SO	4/18/2008	1445	4/21/2008	1	0.028	0.62	ND	
LL2DB4-SB-034SN-0003-SO	4/18/2008	1445	4/21/2008	1	0.030	0.71	ND	
LL2DB4-SB-034SN-0004-SO	4/18/2008	1445	4/21/2008	1	0.026	0.53	ND	
LL2DB4-SB-034SN-0005-SO	4/18/2008	1445	4/21/2008	1	0.026	0.53	ND	
LL2DB4-SB-035SN-0001-SO	4/18/2008	1500	4/21/2008	1	0.031	0.76	ND	
LL2DB4-SB-035SN-0002-SO	4/18/2008	1500	4/21/2008	1	0.026	0.53	ND	
LL2DB4-SB-035SN-0003-SO	4/18/2008	1500	4/21/2008	1	0.029	0.67	ND	
LL2DB4-SB-035SN-0004-SO	4/18/2008	1500	4/21/2008	1	0.049	1.56	1.6	

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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDV Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL2DB4-SB-035SN-0005-SO	4/18/2008	1500	4/21/2008	1	0.034	0.89	0.9	
LL2DB4-SB-036SN-0001-SO	4/18/2008	1550	4/21/2008	1	0.030	0.71	ND	
LL2DB4-SB-036SN-0002-SO	4/18/2008	1550	4/21/2008	1	0.029	0.67	ND	
LL2DB4-SB-036SN-0003-SO	4/18/2008	1550	4/21/2008	1	0.025	0.49	ND	
LL2DB4-SB-036SN-0004-SO	4/18/2008	1550	4/21/2008	1	0.024	0.44	ND	
LL2DB4-SB-036SN-0005-SO	4/18/2008	1550	4/21/2008	1	0.023	0.40	ND	
LL4G20-SS-036-0001-SO	4/18/2008	1200	4/21/2008	1	0.024	0.44	ND	
LL3EB4AVP1-SS-075SN-0001-SO	4/18/2008	1145	4/21/2008	1	0.033	0.84	0.8	
Pink Water 1	4/21/2008	NA	4/21/2008	1	0.033	0.84	0.8	Surface soil samples near standing pink water at EB4A.
Pink Water 2	4/21/2008	NA	4/21/2008	1	0.095	3.60	3.6	
Pink Water 3	4/21/2008	NA	4/21/2008	1	0.056	1.87	1.9	
Pink Water 4	4/21/2008	NA	4/21/2008	1	0.080	2.93	2.9	
LL2DB4-SB-036SN-0003-SO DUP	4/18/2008	1550	4/21/2008	1	0.025	0.49	ND	
LL3EB4A-SB-100SN-0001-SO	4/21/2008	1120	4/23/2008	1	0.305	12.93	12.9	
LL3EB4A-SB-100SN-0002-SO	4/21/2008	1120	4/23/2008	1	0.051	1.64	1.6	
LL3EB4A-SB-100SN-0003-SO	4/21/2008	1120	4/23/2008	1	0.045	1.38	1.4	
LL3EB4A-SB-100SN-0004-SO	4/21/2008	1120	4/23/2008	1	0.030	0.71	ND	
LL3EB4A-SB-100SN-0005-SO	4/21/2008	1120	4/23/2008	1	0.039	1.11	1.1	
LL3EB4A-SB-101SN-0001-SO	4/21/2008	1200	4/23/2008	1	0.029	0.67	ND	
LL3EB4A-SB-101SN-0002-SO	4/21/2008	1200	4/23/2008	1	0.023	0.40	ND	
LL3EB4A-SB-101SN-0003-SO	4/21/2008	1200	4/23/2008	1	0.026	0.53	ND	
LL3EB4A-SB-101SN-0004-SO	4/21/2008	1200	4/23/2008	1	0.018	0.18	ND	
LL3EB4A-SB-101SN-0005-SO	4/21/2008	1200	4/23/2008	1	0.023	0.40	ND	
LL2DB4-SB-037SN-0001-SO	4/23/2008	1015	4/23/2008	1	0.022	0.36	ND	
LL2DB4-SB-037SN-0002-SO	4/23/2008	1015	4/23/2008	1	0.050	1.60	1.6	
LL2DB4-SB-037SN-0003-SO	4/23/2008	1015	4/23/2008	1	0.030	0.71	ND	
LL2DB4-SB-037SN-0004-SO	4/23/2008	1015	4/23/2008	1	0.065	2.27	2.3	No Pink, Turbid
LL2DB4-SB-037SN-0005-SO	4/23/2008	1015	4/23/2008	1	0.064	2.22	2.2	No Pink, Turbid
LL2DB4-SB-039SN-0001-SO	4/23/2008	1000	4/23/2008	1	0.024	0.44	ND	
LL2DB4-SB-039SN-0002-SO	4/23/2008	1000	4/23/2008	1	0.027	0.58	ND	
LL2DB4-SB-039SN-0003-SO	4/23/2008	1000	4/23/2008	1	0.030	0.71	ND	
LL2DB4-SB-039SN-0004-SO	4/23/2008	1000	4/23/2008	1	0.032	0.80	0.8	
LL2DB4-SB-039SN-0005-SO	4/23/2008	1000	4/23/2008	1	0.015	0.04	ND	
LL3EB4A-SB-101SN-0005-SO DUP	4/21/2008	1200	4/23/2008	1	0.027	0.58	ND	
LL2DB4-SB-040SN-0001-SO	4/23/2008	920	4/23/2008	1	0.023	0.40	ND	
LL2DB4-SB-040SN-0002-SO	4/23/2008	920	4/23/2008	1	0.022	0.36	ND	
LL2DB4-SB-040SN-0003-SO	4/23/2008	920	4/23/2008	1	0.025	0.49	ND	
LL2DB4-SB-040SN-0004-SO	4/23/2008	920	4/23/2008	1	0.024	0.44	ND	
LL2DB4-SB-041SN-0001-SO	4/23/2008	905	4/23/2008	1	0.029	0.67	ND	
LL2DB4-SB-041SN-0002-SO	4/23/2008	905	4/23/2008	1	0.013	-0.04	ND	
LL2DB4-SB-041SN-0003-SO	4/23/2008	905	4/23/2008	1	0.025	0.49	ND	
LL2DB4-SB-041SN-0004-SO	4/23/2008	905	4/23/2008	1	0.011	-0.13	ND	
LL2DB4-SB-041SN-0005-SO	4/23/2008	905	4/23/2008	1	0.009	-0.22	ND	
LL2DB4-SB-042SN-0001-SO	4/23/2008	855	4/23/2008	1	0.026	0.53	ND	
LL2DB4-SB-042SN-0002-SO	4/23/2008	855	4/23/2008	1	0.022	0.36	ND	
LL2DB4-SB-042SN-0003-SO	4/23/2008	855	4/23/2008	1	0.028	0.62	ND	
LL2DB4-SB-042SN-0004-SO	4/23/2008	855	4/23/2008	1	0.017	0.13	ND	
LL2DB4-SB-042SN-0005-SO	4/23/2008	855	4/23/2008	1	0.087	3.24	3.2	
LL2DB4-SB-043SN-0001-SO	4/23/2008	840	4/23/2008	1	0.015	0.04	ND	
LL2DB4-SB-043SN-0002-SO	4/23/2008	840	4/23/2008	1	0.026	0.53	ND	
LL2DB4-SB-043SN-0003-SO	4/23/2008	840	4/23/2008	1	0.027	0.58	ND	
LL2DB4-SB-043SN-0004-SO	4/23/2008	840	4/23/2008	1	0.022	0.36	ND	
LL2DB4-SB-043SN-0005-SO	4/23/2008	840	4/23/2008	1	0.021	0.31	ND	
LL2DB4-SB-043SN-0004-SO DUP	4/23/2008	840	4/23/2008	1	0.021	0.31	ND	
LL2DB10VP2-SS-056SN-0001-SO	4/23/2008	1100	4/23/2008	1	0.431	18.53	18.5	
LL2DB10VP1-SS-057SN-0001-SO	4/23/2008	1110	4/23/2008	1	0.030	0.71	ND	
LL2DB8A-SS-059SN-0001-SO	4/23/2008	1115	4/23/2008	1	0.023	0.40	ND	
LL2DB11-SS-060SN-0001-SO	4/23/2008	1040	4/23/2008	1	0.027	0.58	ND	
LL2DB11-SS-060SN-0001-SO DUP	4/23/2008	1040	4/23/2008	1	0.025	0.49	ND	
LL2DB4-SB-044SN-0001-SO	4/23/2008	1520	4/24/2008	1	0.050	1.60	1.6	Clear, Turbid
LL2DB4-SB-044SN-0002-SO	4/23/2008	1520	4/24/2008	1	0.028	0.62	ND	

**RDX Soil Test Worksheet  
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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDX Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL2DB4-SB-044SN-0003-SO	4/23/2008	1520	4/24/2008	1	0.032	0.80	0.8	
LL2DB4-SB-044SN-0004-SO	4/23/2008	1520	4/24/2008	1	0.025	0.49	ND	
LL2DB4-SB-044SN-0005-SO	4/23/2008	1520	4/24/2008	1	0.065	2.27	2.3	
LL2DB4-SB-045SN-0001-SO	4/23/2008	1510	4/24/2008	1	0.067	2.36	2.4	Clear, Turbid
LL2DB4-SB-045SN-0002-SO	4/23/2008	1510	4/24/2008	1	0.021	0.31	ND	
LL2DB4-SB-045SN-0003-SO	4/23/2008	1510	4/24/2008	1	0.014	0.00	ND	
LL2DB4-SB-045SN-0004-SO	4/23/2008	1510	4/24/2008	1	0.022	0.36	ND	
LL2DB4-SB-045SN-0005-SO	4/23/2008	1510	4/24/2008	1	0.015	0.04	ND	
LL2DB4-SB-046SN-0001-SO	4/23/2008	1455	4/24/2008	1	0.029	0.67	ND	
LL2DB4-SB-046SN-0002-SO	4/23/2008	1455	4/24/2008	1	0.029	0.67	ND	
LL2DB4-SB-046SN-0003-SO	4/23/2008	1455	4/24/2008	1	0.030	0.71	ND	
LL2DB4-SB-046SN-0004-SO	4/23/2008	1455	4/24/2008	1	0.009	-0.22	ND	
LL2DB4-SB-046SN-0005-SO	4/23/2008	1455	4/24/2008	1	0.045	1.38	1.4	Clear, Turbid
LL2DB4-SB-047SN-0001-SO	4/23/2008	1420	4/24/2008	1	0.029	0.67	ND	
LL2DB4-SB-047SN-0002-SO	4/23/2008	1420	4/24/2008	1	0.047	1.47	1.5	Light Yellow
LL2DB4-SB-047SN-0003-SO	4/23/2008	1420	4/24/2008	1	0.154	6.22	6.2	Peach/Yellow
LL2DB4-SB-047SN-0004-SO	4/23/2008	1420	4/24/2008	1	0.021	0.31	ND	
LL2DB4-SB-047SN-0005-SO	4/23/2008	1420	4/24/2008	1	0.049	1.56	1.6	
LL2DB4-SB-044SN-0003-SO DUP	4/23/2008	1520	4/24/2008	1	0.055	1.82	1.8	
LL2DB4-SB-048SN-0001-SO	4/23/2008	1405	4/24/2008	1	0.015	0.04	ND	
LL2DB4-SB-048SN-0002-SO	4/23/2008	1405	4/24/2008	1	0.013	-0.04	ND	
LL2DB4-SB-048SN-0003-SO	4/23/2008	1405	4/24/2008	1	0.021	0.31	ND	
LL2DB4-SB-048SN-0004-SO	4/23/2008	1405	4/24/2008	1	0.368	15.73	15.7	
LL2DB4-SB-048SN-0005-SO	4/23/2008	1405	4/24/2008	1	0.699	30.44	30.4	
LL2DB4-SB-049SN-0001-SO	4/23/2008	1350	4/24/2008	1	0.024	0.44	ND	
LL2DB4-SB-049SN-0002-SO	4/23/2008	1350	4/24/2008	1	0.020	0.27	ND	
LL2DB4-SB-049SN-0003-SO	4/23/2008	1350	4/24/2008	1	0.047	1.47	1.5	
LL2DB4-SB-049SN-0004-SO	4/23/2008	1350	4/24/2008	1	0.094	3.56	3.6	
LL2DB4-SB-049SN-0005-SO	4/23/2008	1350	4/24/2008	1	0.063	2.18	2.2	
LL3EB4A-SB-070SN-0001-SO	4/24/2008	1000	4/24/2008	1	0.039	1.11	1.1	
LL3EB4A-SB-070SN-0002-SO	4/24/2008	1000	4/24/2008	1	0.718	31.29	31.3	
LL3EB4A-SB-070SN-0003-SO	4/24/2008	1000	4/24/2008	1	1.095			
LL3EB4A-SB-070SN-0003-SO DL1	4/24/2008	1000	4/24/2008	2	1.462			
LL3EB4A-SB-070SN-0003-SO DL2	4/24/2008	1000	4/24/2008	10	0.502	216.89	216.9	
LL3EB4A-SB-070SN-0004-SO	4/24/2008	1000	4/24/2008	1	2.343			
LL3EB4A-SB-070SN-0004-SO DL1	4/24/2008	1000	4/24/2008	2	1.274			
LL3EB4A-SB-070SN-0004-SO DL2	4/24/2008	1000	4/24/2008	10	0.459	197.78	197.8	
LL3EB4A-SB-070SN-0005-SO	4/24/2008	1000	4/24/2008	1	1.242			
LL3EB4A-SB-070SN-0005-SO DL1	4/24/2008	1000	4/24/2008	2	0.426	36.62	36.6	
LL3EB4A-SB-070SN-0005-SO DL2	4/24/2008	1000	4/24/2008	10	0.279			Don't use; 2x is good.
LL3EB4A-SB-071SN-0001-SO	4/24/2008	930	4/24/2008	1	0.032	0.80	0.8	
LL3EB4A-SB-071SN-0002-SO	4/24/2008	930	4/24/2008	1	0.025	0.49	ND	
LL3EB4A-SB-071SN-0003-SO	4/24/2008	930	4/24/2008	1	0.016	0.09	ND	
LL3EB4A-SB-071SN-0004-SO	4/24/2008	930	4/24/2008	1	0.027	0.58	ND	
LL3EB4A-SB-071SN-0005-SO	4/24/2008	930	4/24/2008	1	0.022	0.36	ND	
LL2DB4-SB-049SN-0003-SO DUP	4/23/2008	1350	4/24/2008	1	0.020	0.27	ND	
LL3EB4A-SB-072SN-0001-SO	4/24/2008	915	4/24/2008	1	0.044	1.33	1.3	Slight Peach Color
LL3EB4A-SB-072SN-0002-SO	4/24/2008	915	4/24/2008	1	0.018	0.18	ND	
LL3EB4A-SB-072SN-0003-SO	4/24/2008	915	4/24/2008	1	0.022	0.36	ND	
LL3EB4A-SB-072SN-0004-SO	4/24/2008	915	4/24/2008	1	0.021	0.31	ND	
LL3EB4A-SB-072SN-0005-SO	4/24/2008	915	4/24/2008	1	0.016	0.09	ND	
LL2DB29-SS-061SN-0001-SO	4/24/2008	1635	4/24/2008	1	0.017	0.13	ND	
LL2DB13B-SS-062SN-0001-SO	4/24/2008	1710	4/24/2008	1	0.022	0.36	ND	
LL2DB26-SS-063SN-0001-SO	4/24/2008	1640	4/24/2008	1	0.056	1.87	1.9	
LL2DB13-SS-064SN-0001-SO	4/24/2008	1650	4/24/2008	1	0.022	0.36	ND	
LL2DB13A-SS-065SN-0001-SO	4/24/2008	1700	4/24/2008	1	0.022	0.36	ND	
LL3EB4A-SB-072SN-0003-SO DUP	4/24/2008	915	4/24/2008	1	0.016	0.09	ND	
LL3EB4-SB-047SN-0001-SO	4/30/2008	1030	4/30/2008	1	0.029	0.67	ND	
LL3EB4-SB-047SN-0002-SO	4/30/2008	1030	4/30/2008	1	0.095	3.60	3.6	
LL3EB4-SB-047SN-0003-SO	4/30/2008	1030	4/30/2008	1	0.030	0.71	ND	
LL3EB4-SB-047SN-0004-SO	4/30/2008	1030	4/30/2008	1	0.026	0.53	ND	

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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDx Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL3EB4-SB-048SN-0001-SO	4/30/2008	1100	4/30/2008	1	0.019	0.22	ND	
LL3EB4-SB-048SN-0002-SO	4/30/2008	1100	4/30/2008	1	0.035	0.93	0.9	
LL3EB4-SB-048SN-0003-SO	4/30/2008	1100	4/30/2008	1	0.023	0.40	ND	
LL3EB4-SB-048SN-0004-SO	4/30/2008	1100	4/30/2008	1	0.023	0.40	ND	
LL3EB4-SB-048SN-0005-SO	4/30/2008	1100	4/30/2008	1	0.016	0.09	ND	
LL3EB4-SB-049SN-0001-SO	4/30/2008	945	4/30/2008	1	0.023	0.40	ND	
LL3EB4-SB-049SN-0002-SO	4/30/2008	945	4/30/2008	1	0.031	0.76	ND	
LL3EB4-SB-049SN-0003-SO	4/30/2008	945	4/30/2008	1	0.030	0.71	ND	
LL3EB4-SB-049SN-0004-SO	4/30/2008	945	4/30/2008	1	0.030	0.71	ND	
LL3EB4-SB-051SN-0001-SO	4/30/2008	930	4/30/2008	1	0.036	0.98	1.0	
LL3EB4-SB-051SN-0002-SO	4/30/2008	930	4/30/2008	1	0.022	0.36	ND	
LL3EB4-SB-051SN-0003-SO	4/30/2008	930	4/30/2008	1	0.036	0.98	1.0	
LL3EB4-SB-051SN-0004-SO	4/30/2008	930	4/30/2008	1	0.041	1.20	1.2	
LL3EB4-SB-048SN-0002-SO-DUP	4/30/2008	1100	4/30/2008	1	0.015	0.04	ND	
LL2DB10-SB-090SN-0001-SO	4/30/2008	1205	4/30/2008	1	0.022	0.36	ND	
LL2DB10-SB-090SN-0002-SO	4/30/2008	1205	4/30/2008	1	0.034	0.89	0.9	
LL2DB10-SB-090SN-0003-SO	4/30/2008	1205	4/30/2008	1	0.163	6.62	6.6	
LL2DB10-SB-090SN-0004-SO	4/30/2008	1205	4/30/2008	1	0.123	4.84	4.8	
LL2DB10-SB-090SN-0005-SO	4/30/2008	1205	4/30/2008	1	0.037	1.02	1.0	
LL2DB10-SB-091SN-0001-SO	4/30/2008	1200	4/30/2008	1	0.030	0.71	ND	
LL2DB10-SB-091SN-0002-SO	4/30/2008	1200	4/30/2008	1	0.026	0.53	ND	
LL2DB10-SB-091SN-0003-SO	4/30/2008	1200	4/30/2008	1	0.030	0.71	ND	
LL2DB10-SB-093SN-0001-SO	4/30/2008	1220	4/30/2008	1	0.036	0.98	1.0	
LL2DB10-SB-093SN-0002-SO	4/30/2008	1220	4/30/2008	1	0.026	0.53	ND	
LL2DB10-SB-093SN-0003-SO	4/30/2008	1220	4/30/2008	1	0.017	0.13	ND	
LL2DB10-SB-093SN-0004-SO	4/30/2008	1220	4/30/2008	1	0.022	0.36	ND	
LL2DB10-SB-093SN-0005-SO	4/30/2008	1220	4/30/2008	1	0.024	0.44	ND	
LL2DB10-SB-093SN-0004-SO-DUP	4/30/2008	1220	4/30/2008	1	0.025	0.49	ND	
LL2DB10-SB-092SN-0001-SO	4/30/2008	1600	5/1/2008	1	0.025	0.49	ND	
LL2DB10-SB-092SN-0002-SO	4/30/2008	1600	5/1/2008	1	0.019	0.22	ND	
LL2DB10-SB-092SN-0003-SO	4/30/2008	1600	5/1/2008	1	0.022	0.36	ND	
LL2DB10-SB-092SN-0004-SO	4/30/2008	1600	5/1/2008	1	0.014	0.00	ND	
LL2DB10-SB-094SN-0001-SO	4/30/2008	1530	5/1/2008	1	0.021	0.31	ND	
LL2DB10-SB-094SN-0002-SO	4/30/2008	1530	5/1/2008	1	0.016	0.09	ND	
LL2DB10-SB-094SN-0003-SO	4/30/2008	1530	5/1/2008	1	0.016	0.09	ND	
LL2DB27-SS-68SN-0001-SO	4/30/2008	1725	5/1/2008	1	0.027	0.58	ND	
LL2DB27A-SS-066SN-0001-SO	4/30/2008	1745	5/1/2008	1	0.021	0.31	ND	
LL2DB27A-SS-066SN-0001-SO-DUP	4/30/2008	1745	5/1/2008	1	0.025	0.49	ND	
LL2DA6-SB-073SN-0001-SO	5/7/2008	1545	5/8/2008	1	0.029	0.67	ND	
LL2DA6-SB-073SN-0002-SO	5/7/2008	1545	5/8/2008	1	0.020	0.27	ND	
LL2DA6-SB-073SN-0003-SO	5/7/2008	1545	5/8/2008	1	0.027	0.58	ND	
LL2DA6-SB-073SN-0004-SO	5/7/2008	1545	5/8/2008	1	0.027	0.58	ND	
LL2DA6-SB-073SN-0005-SO	5/7/2008	1545	5/8/2008	1	0.037	1.02	1.0	
LL2DA6-SB-074SN-0001-SO	5/7/2008	1525	5/8/2008	1	0.042	1.24	1.2	
LL2DA6-SB-074SN-0002-SO	5/7/2008	1525	5/8/2008	1	0.023	0.40	ND	
LL2DA6-SB-074SN-0003-SO	5/7/2008	1525	5/8/2008	1	0.042	1.24	1.2	
LL2DA6-SB-074SN-0004-SO	5/7/2008	1525	5/8/2008	1	0.020	0.27	ND	
LL2DA6-SB-074SN-0005-SO	5/7/2008	1525	5/8/2008	1	0.030	0.71	ND	
LL2DA6-SB-075SN-0001-SO	5/7/2008	1450	5/8/2008	1	0.020	0.27	ND	
LL2DA6-SB-075SN-0002-SO	5/7/2008	1450	5/8/2008	1	0.026	0.53	ND	
LL2DA6-SB-075SN-0003-SO	5/7/2008	1450	5/8/2008	1	0.092	3.47	3.5	
LL2DA6-SB-075SN-0004-SO	5/7/2008	1450	5/8/2008	1	0.059	2.00	2.0	
LL2DA6-SB-075SN-0005-SO	5/7/2008	1450	5/8/2008	1	0.022	0.36	ND	
LL2DA6-SB-076SN-0001-SO	5/7/2008	1540	5/8/2008	1	0.043	1.29	1.3	
LL2DA6-SB-076SN-0002-SO	5/7/2008	1540	5/8/2008	1	0.048	1.51	1.5	
LL2DA6-SB-076SN-0003-SO	5/7/2008	1540	5/8/2008	1	0.086	3.20	3.2	
LL2DA6-SB-076SN-0004-SO	5/7/2008	1540	5/8/2008	1	0.020	0.27	ND	
LL2DA6-SB-076SN-0005-SO	5/7/2008	1540	5/8/2008	1	0.033	0.84	0.8	
LL2DA6-SB-074SN-0002-SO-DUP	5/7/2008	1525	5/8/2008	1	0.024	0.44	ND	
LL2DA6-SB-077SN-0001-SO	5/7/2008	1510	5/8/2008	1	0.013	-0.04	ND	
LL2DA6-SB-077SN-0002-SO	5/7/2008	1510	5/8/2008	1	0.016	0.09	ND	

**RDV Soil Test Worksheet**  
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Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDV Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL2DA6-SB-077SN-0003-SO	5/7/2008	1510	5/8/2008	1	0.074	2.67	2.7	
LL2DA6-SB-077SN-0004-SO	5/7/2008	1510	5/8/2008	1	0.018	0.18	ND	
LL2DA6-SB-077SN-0005-SO	5/7/2008	1510	5/8/2008	1	0.017	0.13	ND	
LL2DA7-SS-070SN-0001-SO	5/7/2008	1145	5/8/2008	1	0.031	0.76	ND	
LL2DB27C-SS-069SN-0001-SO	5/7/2008	1100	5/8/2008	1	0.032	0.80	0.8	
LL2DA21-SS-071SN-0001-SO	5/7/2008	1200	5/8/2008	1	0.029	0.67	ND	
LL2DA28-SS-072SN-0001-SO	5/7/2008	1430	5/8/2008	1	0.038	1.07	1.1	
LL2DA28A-SS-079SN-0001-SO	5/8/2008	1020	5/8/2008	1	0.019	0.22	ND	
LL2DA6A-SB-080SN-0001-SO	5/8/2008	900	5/8/2008	1	0.047	1.47	1.5	
LL2DA6A-SB-080SN-0002-SO	5/8/2008	900	5/8/2008	1	0.052	1.69	1.7	
LL2DA6A-SB-080SN-0003-SO	5/8/2008	900	5/8/2008	1	0.106	4.09	4.1	
LL2DA6A-SB-080SN-0004-SO	5/8/2008	900	5/8/2008	1	0.100	3.82	3.8	
LL2DA6A-SB-080SN-0005-SO	5/8/2008	900	5/8/2008	1	0.090	3.38	3.4	
LL2DA6A-SB-081SN-0001-SO	5/8/2008	1015	5/8/2008	1	0.069	2.44	2.4	
LL2DA6A-SB-081SN-0002-SO	5/8/2008	1015	5/8/2008	1	0.027	0.58	ND	
LL2DA6A-SB-081SN-0003-SO	5/8/2008	1015	5/8/2008	1	0.033	0.84	0.8	
LL2DA6A-SB-081SN-0004-SO	5/8/2008	1015	5/8/2008	1	0.053	1.73	1.7	
LL2DA6A-SB-081SN-0005-SO	5/8/2008	1015	5/8/2008	1	0.034	0.89	0.9	
LL2DA6A-SB-081SN-0005-SO-DUP	5/8/2008	1015	5/8/2008	1	0.038	1.07	1.1	
LL2DA6A-SB-082SN-0001-SO	5/8/2008	915	5/8/2008	1	0.029	0.67	ND	
LL2DA6A-SB-082SN-0002-SO	5/8/2008	915	5/8/2008	1	0.046	1.42	1.4	
LL2DA6A-SB-082SN-0003-SO	5/8/2008	915	5/8/2008	1	0.026	0.53	ND	
LL2DA6A-SB-082SN-0004-SO	5/8/2008	915	5/8/2008	1	0.038	1.07	1.1	
LL2DA6A-SB-082SN-0005-SO	5/8/2008	915	5/8/2008	1	0.024	0.44	ND	
LL2DA6A-SB-083SN-0001-SO	5/8/2008	1000	5/8/2008	1	0.039	1.11	1.1	
LL2DA6A-SB-083SN-0002-SO	5/8/2008	1000	5/8/2008	1	0.032	0.80	0.8	
LL2DA6A-SB-083SN-0003-SO	5/8/2008	1000	5/8/2008	1	0.056	1.87	1.9	
LL2DA6A-SB-083SN-0004-SO	5/8/2008	1000	5/8/2008	1	0.022	0.36	ND	
LL2DA6A-SB-083SN-0005-SO	5/8/2008	1000	5/8/2008	1	0.028	0.62	ND	
LL2DA6A-SB-084SN-0001-SO	5/8/2008	930	5/8/2008	1	0.023	0.40	ND	
LL2DA6A-SB-084SN-0002-SO	5/8/2008	930	5/8/2008	1	0.024	0.44	ND	
LL2DA6A-SB-084SN-0003-SO	5/8/2008	930	5/8/2008	1	0.042	1.24	1.2	
LL2DA6A-SB-084SN-0004-SO	5/8/2008	930	5/8/2008	1	0.034	0.89	0.9	
LL2DA6A-SB-084SN-0005-SO	5/8/2008	930	5/8/2008	1	0.025	0.49	ND	
LL2DA6A-SB-084SN-0001-SO-DUP	5/8/2008	930	5/8/2008	1	0.023	0.40	ND	
LL2DB10-SB-096SN-0001-SO	5/8/2008	1515	5/9/2008	1	0.017	0.13	ND	
LL2DB10-SB-096SN-0002-SO	5/8/2008	1515	5/9/2008	1	0.020	0.27	ND	
LL2DB10-SB-096SN-0003-SO	5/8/2008	1515	5/9/2008	1	0.031	0.76	ND	
LL2DB9-SS-055SN-0001-SO	5/8/2008	1610	5/9/2008	1	0.025	0.49	ND	
LL2DA5-SS-085SN-0001-SO	5/8/2008	1715	5/9/2008	1	0.032	0.80	0.8	
LL2DB802-SS-001SN-0001-SO	5/8/2008	1640	5/9/2008	1	0.275	11.60	11.6	
LL2DB802-SS-001SN-0001-SO-DUP	5/8/2008	1640	5/9/2008	1	0.379	16.22	16.2	
LL2DB27B-SS-067SN-0001-SO	5/9/2008	1100	5/9/2008	1	0.018	0.18	ND	
LL2DB10-SCREEN 1	5/16/2008	1410	5/21/2008	1	0.191	7.87	7.9	Samples taken after product removed between DB-10 and DB-10VP2
LL2DB10-SCREEN 2	5/16/2008	1416	5/21/2008	1	0.373	15.96	16.0	
LL2DB10-SCREEN 3	5/16/2008	1425	5/21/2008	1	0.231	9.64	9.6	
LL2DB10-SCREEN 3 DUP	5/16/2008	1425	5/21/2008	1	0.380	16.27	16.3	
LL2DB10-SB-095SN-0001-SO	5/21/2008	1115	5/22/2008	1	0.012	-0.09	ND	
LL2DB10-SB-095SN-0002-SO	5/21/2008	1115	5/22/2008	1	0.019	0.22	ND	
LL2DB10-SB-095SN-0003-SO	5/21/2008	1115	5/22/2008	1	0.028	0.62	ND	
LL2DB10-SB-097SN-0001-SO	5/21/2008	1145	5/22/2008	1	0.034	0.89	0.9	
LL2DB10-SB-097SN-0002-SO	5/21/2008	1145	5/22/2008	1	0.021	0.31	ND	
LL2DB4A-SB-024SN-0001-SO	5/21/2008	1200	5/22/2008	1	0.019	0.22	ND	
LL2DB4A-SB-024SN-0002-SO	5/21/2008	1200	5/22/2008	1	0.042	1.24	1.2	
LL2DB4A-SB-024SN-0003-SO	5/21/2008	1200	5/22/2008	1	0.029	0.67	ND	
LL2DB4A-SB-024SN-0004-SO	5/21/2008	1200	5/22/2008	1	0.021	0.31	ND	
LL2DB4A-SB-024SN-0005-SO	5/21/2008	1200	5/22/2008	1	0.025	0.49	ND	
LL2DB4A-SB-025SN-0001-SO	5/21/2008	1645	5/22/2008	1	0.036	0.98	1.0	
LL2DB4A-SB-025SN-0002-SO	5/21/2008	1645	5/22/2008	1	0.013	-0.04	ND	
LL2DB4A-SB-025SN-0003-SO	5/21/2008	1645	5/22/2008	1	0.016	0.09	ND	
LL2DB4A-SB-025SN-0004-SO	5/21/2008	1645	5/22/2008	1	0.022	0.36	ND	

**RDV Soil Test Worksheet  
RVAAP**

Sample ID	Date Collected	Time Collected	Date Tested	DF	Abs	Result	RDV Conc. (ppm) (Cleanup Level: 838 ppm)	Comments
LL2DB4A-SB-025SN-0005-SO	5/21/2008	1645	5/22/2008	1	0.046	1.42	1.4	
LL2DB4A-SB-026SN-0001-SO	5/21/2008	1630	5/22/2008	1	0.043	1.29	1.3	
LL2DB4A-SB-026SN-0002-SO	5/21/2008	1630	5/22/2008	1	0.021	0.31	ND	
LL2DB4A-SB-026SN-0003-SO	5/21/2008	1630	5/22/2008	1	0.019	0.22	ND	
LL2DB4A-SB-026SN-0004-SO	5/21/2008	1630	5/22/2008	1	0.024	0.44	ND	
LL2DB4A-SB-026SN-0005-SO	5/21/2008	1630	5/22/2008	1	0.021	0.31	ND	
LL2DB4A-SB-026SN-0001-SO DUP	5/21/2008	1630	5/22/2008	1	0.038	1.07	1.1	
LL2DB10-SB-098SN-0001-SO	5/22/2008	900	5/22/2008	1	0.030	0.71	ND	
LL2DB10-SB-098SN-0002-SO	5/22/2008	900	5/22/2008	1	0.019	0.22	ND	
LL2DB10-SB-098SN-0003-SO	5/22/2008	900	5/22/2008	1	0.021	0.31	ND	
LL2DB10-SB-098SN-0004-SO	5/22/2008	900	5/22/2008	1	0.023	0.40	ND	
LL2DB10-SB-098SN-0005-SO	5/22/2008	900	5/22/2008	1	0.036	0.98	1.0	
LL2DB10-SB-099SN-0001-SO	5/22/2008	920	5/22/2008	1	0.017	0.13	ND	
LL2DB10-SB-099SN-0002-SO	5/22/2008	920	5/22/2008	1	0.015	0.04	ND	
LL2DB10-SB-099SN-0003-SO	5/22/2008	920	5/22/2008	1	0.065	2.27	2.3	
LL2DB10-SB-099SN-0004-SO	5/22/2008	920	5/22/2008	1	0.077	2.80	2.8	
LL2DB10-SB-099SN-0005-SO	5/22/2008	920	5/22/2008	1	0.019	0.22	ND	
LL2DB10-SB-100SN-0001-SO	5/22/2008	935	5/22/2008	1	0.048	1.51	1.5	
LL2DB10-SB-100SN-0002-SO	5/22/2008	935	5/22/2008	1	0.019	0.22	ND	
LL2DB10-SB-100SN-0003-SO	5/22/2008	935	5/22/2008	1	0.030	0.71	ND	
LL2DB10-SB-101SN-0001-SO	5/22/2008	945	5/22/2008	1	0.029	0.67	ND	
LL2DB10-SB-101SN-0002-SO	5/22/2008	945	5/22/2008	1	0.016	0.09	ND	
LL2DB10-SB-101SN-0003-SO	5/22/2008	945	5/22/2008	1	0.023	0.40	ND	
LL2DB10-SB-101SN-0004-SO	5/22/2008	945	5/22/2008	1	0.015	0.04	ND	
LL2DB10-SB-101SN-0005-SO	5/22/2008	945	5/22/2008	1	0.014	0.00	ND	
LL2DB10-SB-102SN-0001-SO	5/22/2008	1000	5/22/2008	1	0.030	0.71	ND	
LL2DB10-SB-102SN-0002-SO	5/22/2008	1000	5/22/2008	1	0.021	0.31	ND	
LL2DB10-SB-102SN-0003-SO	5/22/2008	1000	5/22/2008	1	0.030	0.71	ND	
LL2DB10-SB-100SN-0003-SO DUP	5/22/2008	935	5/22/2008	1	0.023	0.40	ND	
LL2DB10-SB-103SN-0001-SO	5/22/2008	1015	5/22/2008	1	0.022	0.36	ND	
LL2DB10-SB-103SN-0002-SO	5/22/2008	1015	5/22/2008	1	0.046	1.42	1.4	
LL2DB10-SB-103SN-0003-SO	5/22/2008	1015	5/22/2008	1	0.030	0.71	ND	
LL2DB4-SB-038SN-0001-SO	5/22/2008	1150	5/22/2008	1	0.038	1.07	1.1	
LL2DB4-SB-038SN-0002-SO	5/22/2008	1150	5/22/2008	1	0.027	0.58	ND	
LL2DB4-SB-038SN-0003-SO	5/22/2008	1150	5/22/2008	1	0.020	0.27	ND	
LL2DB4-SB-038SN-0004-SO	5/22/2008	1150	5/22/2008	1	0.025	0.49	ND	
LL2DB4-SB-038SN-0005-SO	5/22/2008	1150	5/22/2008	1	0.034	0.89	0.9	
LL2DB4VP1-SS-087SN-0001-SO	5/22/2008	1100	5/22/2008	1	0.028	0.62	ND	
LL2DB30-SS-104SN-0001-SO	5/22/2008	1115	5/22/2008	1	0.024	0.44	ND	
LL2DB4-SB-038SN-0002-SO DUP	5/22/2008	1150	5/22/2008	1	0.014	0.00	ND	

**APPENDIX F**  
**Data Verification Reports, Fixed Laboratory Analyses**



**Data Verification Report  
Soil Screening Confirmation Sampling  
Ravenna Army Ammunition Plant  
Data Package: L08030356**

## I. INTRODUCTION

Ten discrete soil samples were collected from Buildings EB-4 and EA-6A at Load Line 3 of the Ravenna Army Ammunition Plant (RVAAP) on April 4, 2008. The samples were selected for confirmation analysis by Microbac Laboratories, Inc. (formerly Kemron) of Marietta, Ohio, based on the results of screening analyses for 2,4,6-trinitrotoluene (TNT) and hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) conducted at RVAAP. The sample identifications and analyses requested are summarized in Table 1 below.

**Table 1  
Sample and Analysis Summary**

Lab ID	Sample ID	Date Collected	Matrix	Sample Type	Analyses Requested <sup>(1)</sup>
					Expl
L08040200-01	LL3EB4-SB-038SN-0005-SO	4/4/2008	Soil	Discrete	X
L08040200-02	LL3EB4-SB-042SN-0004-SO	4/4/2008	Soil	Discrete	X
L08040200-03	LL3EB4-SB-044SN-0005-SO	4/4/2008	Soil	Discrete	X
L08040200-04	LL3EB4-SB-037SN-0004-SO	4/4/2008	Soil	Discrete	X
L08040200-05	LL3EB4-SB-042SN-0005-SO	4/4/2008	Soil	Discrete	X
L08040200-06	LL3EA6A-SB-082A-0004-SO	4/4/2008	Soil	Discrete	X
L08040200-07	LL3EA6A-SB-082A-0002-SO	4/4/2008	Soil	Discrete	X
L08040200-08	LL3EA6A-SB-082A-0001-SO	4/4/2008	Soil	Discrete	X
L08040200-09	LL3EA6A-SB-082A-0005-SO	4/4/2008	Soil	Discrete	X
L08040200-10	LL3EA6A-SB-082A-0003-SO	4/4/2008	Soil	Discrete	X

(1) Definitions: Expl = Explosives (nitroaromatics/nitramines) by high performance liquid chromatography (HPLC), SW846 Method 8330B

Reference: SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," Third Edition, November 1986 and its updates.

Data quality verification was performed by URS Corporation (URS) for all samples and analyses listed in Table 1 to verify the reported results. This includes assessment of supporting quality control (QC) parameters and a review for compliance with the cited methods, but does not include reconstruction of the analytical data. The following information was reviewed:

- ▶ Case Narrative
- ▶ Chain-of-Custody and sample login documents
- ▶ URS sample ID and laboratory sample ID
- ▶ Sample matrix
- ▶ Sample results by sample, by analytical fraction



- ▶ Analytical method performed
- ▶ Units of measure and detection limits
- ▶ Sample holding times
- ▶ Laboratory data qualifiers
- ▶ Date samples were digested and/or analyzed
- ▶ Initial Calibration summaries
- ▶ Calibration Verification summaries
- ▶ Laboratory Method Blank results
- ▶ Laboratory Control Sample (LCS) results
- ▶ QC Method Reporting Limit Standard (QCMRL) results
- ▶ Matrix Spike/Matrix Spike Duplicate results
- ▶ Laboratory Duplicate results
- ▶ Surrogate recoveries (where applicable)
- ▶ Internal Standard responses and retention times
- ▶ Any nonconformances or analytical problems noted in the case narrative
- ▶ Electronic Data

Guidance documents for the review process included the referenced analytical methods; the RVAAP Facility-Wide QAPP (SAIC 2001) and QAPP Addendum (URS 2008); and the Louisville Chemistry Guideline (LCG), Version 5 (USACE 2002).

## II. DATA REVIEW

This section describes each data review category, summarizes the acceptance criteria, and discusses any findings. Unless otherwise noted, the acceptance criteria were met for each sample, and no qualifications were required. The data qualifiers are defined in Section III.

### A. Sample Custody and Handling

The Chain of Custody and sample receiving documents are reviewed for correct sample identifications, preservatives, temperatures, dates, signatures, and condition of the containers and custody seals upon receipt. Lack of proper preservation can result in qualification or rejection of data, depending on the specific parameters and severity of the exceedance. Other discrepancies or deficiencies may require contacting the laboratory for additional information and are assessed in accordance with the guidance documents on a case-by-case basis.

- All samples were received at the laboratory under custody and intact. The temperature was 3°C, within the acceptance range of 2-6°C. No deficiencies were noted in the login documentation.
- Samples from Building EA-6A at Load Line 3 were incorrectly identified on the Chain of Custody and subsequently in the laboratory report as, “LL3EB6A-...” The sample IDs have been corrected in this report and appear as, “LL3EA6A-...”

## **B. Holding Time Criteria**

All analyses were reviewed for compliance with the method-required holding times. Extraction or analysis of a sample beyond the holding time can result in qualification or rejection of data, depending on the specific parameters and severity of the exceedance.

- All extractions and analyses were performed within the appropriate holding times.

## **C. Instrument Performance / Calibrations**

Instrument performance and initial and continuing calibration criteria are established to ensure the instruments are capable of producing acceptable qualitative and quantitative data for all parameters. The number and concentration of standards analyzed for each initial calibration, the frequency of initial and continuing calibrations, the requirements for any other QC standards, and the criteria for acceptable performance are specified in each determinative method and the LCG.

- Initial and continuing calibrations for Method 8330B met the applicable QC criteria on both columns.

## **D. Blanks**

Blank samples can include laboratory method blanks, instrument blanks, field equipment blanks, and trip blanks. Blanks are evaluated to determine whether conditions exist resulting in reported sample concentrations which are not native to the sample (i.e., if samples were contaminated from external sources). Sample contamination is demonstrated if an analyte is detected in a blank, and the concentration in an associated sample is not significantly higher. Specifically, if the sample concentration is less than five times the blank concentration (or ten times for common contaminants such as acetone, methylene chloride, 2-butanone, and phthalate esters), it is assumed that the sample concentration was due to external contamination and not actually present in the samples. The result is, therefore, qualified as present in the blank (B), and is generally considered a nondetect. If the sample concentration is greater than five times the associated blank concentration (or ten times for common contaminants), the amount attributable to contamination is negligible and the sample concentration is reported unqualified.

- No analytes were detected in any blanks associated with this group of samples.

## **E. Laboratory Control Samples**

A Laboratory Control Sample (LCS) is a “contaminant-free matrix” spiked with a known concentration of all analytes of interest or a representative subset of the target analytes (for multi-component targets, such as PCBs). The LCS is carried through the complete sequence of sample preparation and analytical procedures and provides information on the method’s performance. Percent recoveries are monitored to provide a continuous measure of each method’s accuracy. The LCS recoveries are compared with established method performance criteria to determine data

acceptability. Recoveries above QC limits indicate a positive bias. Therefore, associated positive concentrations are qualified as estimated (J). If recoveries are below QC limits, a negative bias is assumed. Consequently, associated nondetect and positive concentrations are qualified as estimated. If recoveries are significantly low (i.e., below 30%), positive concentrations are estimated and nondetect results are rejected.

- LCS recoveries were within QC acceptance limits for all analytes.

## **F. Surrogate Recoveries**

Surrogates are chemicals not normally found in nature, but chemically behave in a similar fashion as the target analytes. Surrogate spikes are added prior to sample preparation for organic analyses and are used to evaluate the effects of the sample matrix on the extraction efficiency and/or instrument response. Surrogate recoveries are evaluated against QC acceptance limits. Recoveries above QC limits indicate a positive bias; therefore, associated positive concentrations are qualified as estimated (J). If recoveries are below QC limits, a negative bias is assumed and associated nondetect and positive concentrations are qualified as estimated (J/UJ). If recoveries are significantly low (i.e., below 10%), positive concentrations are estimated (J) and nondetect results are rejected (R).

- Surrogate recoveries were within QC acceptance limits in the undiluted analyses of all samples, with the exception of samples LL3EB4-SB-042SN-0004-SO and LL3EA6A-SB-082A-0004-SO on one HPLC column. For these two samples, the surrogate peak was masked by a large peak (1,3,5-trinitrobenzene) eluting at a retention time close to that of the surrogate. In both cases, the surrogate recoveries were acceptable on the second column (on which the peaks for 1,3,5-trinitrobenzene and the surrogate compound, 1,2-dinitrobenzene, were widely separated). Consequently, no data were qualified based on surrogate recoveries.

## **G. Matrix Spike/Matrix Spike Duplicate Samples**

A Matrix Spike is an aliquot of the matrix (water or soil) spiked with a known concentration of the analytes of interest. The Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples—or just an MS for metals—are subjected to the entire analytical procedure in order to determine both accuracy and precision of the method for that matrix. This is accomplished by calculating the percent recovery and the Relative Percent Difference (RPD) of the two spiked samples. The MS/MSDs do not control the analytical process, but are used to evaluate the effect of the matrix on analytical performance. Associated data (the spiked sample or samples with a like matrix) are qualified following criteria similar to the surrogates.

- Extra sample volume for MS/MSD analyses was not collected during this sampling event; therefore MS/MSDs were not performed. Method precision and accuracy were evaluated with an LCS/LCS Duplicate for these analyses. All LCS/LCSD recoveries and RPDs were acceptable.

## **H. Duplicate Samples**

Duplicate or replicate samples are analyzed to estimate the precision of data generated and serve as an indicator of sample representativeness and analytical reproducibility. Duplicates may be laboratory duplicates, which monitor the precision of the analytical process (for organics, this is accomplished with the MS/MSD), or field duplicates, which monitor the precision of the entire sampling and analytical system. If significant differences between analyses are identified, associated data are qualified as estimated.

- Field duplicates were not collected during this sampling event.

## **I. Sample Dilutions and Reanalyses**

Samples analyzed at dilution and the reasons for the dilutions are as follows:

- Samples LL3EB4-SB-042SN-0004-SO, LL3EB4-SB-037SN-0004-SO, LL3EB4-SB-042SN-0005-SO, LL3EA6A-SB-082A-0004-SO, LL3EA6A-SB-082A-0002-SO, LL3EA6A-SB-082A-0001-SO, and LL3EA6A-SB-082A-0005-SO required dilutions ranging from 4-fold to 500-fold in order to quantify concentrations of TNT exceeding the calibration range in the undiluted analyses. Results for all other analytes were reported from the undiluted runs.

## **J. Miscellaneous Comments**

Positive detections for explosives on the primary HPLC column were confirmed on a second, dissimilar column. For analytes detected on both columns, the result selected for reporting was the higher of the two concentrations. Detections on one column that were not detected on the other (in the absence of matrix interferences) were reported as nondetect at the sample reporting limit. When the presence of an analyte on one column could not be confirmed due to matrix interferences (e.g., a large interfering peak on one column at the expected retention time of an analyte detected on the other column) the laboratory flagged the affected result “SMI” (sample matrix interference). During the data verification, the reviewer selected the positive result from the column without the interference for reporting and qualified the result as tentatively identified (“N”).

Microbac reported results below their reporting limit but above the method detection limit (MDL) with a qualifier (“J”), in accordance with USEPA Contract Laboratory Program (CLP) conventions. During this data review, the “J” qualifiers were retained with the numeric results.

Except where affected by dilutions, the reporting limits met the project requirements specified in the QAPP Addendum.

The data package was sufficiently complete as to allow the verification of sample results in accordance with the QAPP and the LCG.

### III. DETERMINATION OF DATA QUALITY AND USABILITY

Based on the findings of this data review, overall acceptable levels of accuracy, precision, and sensitivity were demonstrated. Representativeness, reproducibility, and comparability are assumed to be acceptable, given the use of consistent sampling procedures and strict adherence to SW846 methodologies. The analytical data are therefore considered usable for supporting project objectives.

Completeness was calculated at 100% for this data package, based on the fact that no data points were rejected.

The final data set, with qualifiers, is presented in Table 2. The following data qualifiers were used to note data usability:

- 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.
- N = There is presumptive evidence that the analyte is present, but it has not been confirmed. The analyte is tentatively identified. There is an indication that the reported analyte is present, however, all quality control requirements necessary for confirmation were not met.

### IV. REFERENCES

- SAIC. 2001. Facility-Wide Sampling and Analysis Plan for Environmental Investigations at the Ravenna Army Ammunition Plant, Ravenna, Ohio. Part 2: Quality Assurance Project Plan. Prepared for the US Army Corps of Engineers, Louisville District. March 2001.
- URS. 2008. URS Group, Inc. Draft of the Work Plan for the Sampling of Soils Below Floor Slabs at LLs-2, 3, 4 and Excavation and Transportation of Contaminated Soils to Load Line 4 (Buildings G-1, G-1A, and G-3). Appendix A: Quality Assurance Project Plan Addendum. Prepared for the US Army Corps of Engineers. April 2008.
- USACE. 2002. Louisville Chemistry Guideline. Version 5. Environmental Engineering Branch, Louisville District, US Army Corps of Engineers. June 2002.

**Table 2**  
**Analytical Data Summary - Explosives**  
**RVAAP**  
**Soil Screening Confirmation Samples**

PARAMETER	UNITS	L08040200-01 LL3EB4-SB- 038SN-0005-SO 4/4/2008	L08040200-02 LL3EB4-SB- 042SN-0004-SO 4/4/2008	L08040200-03 LL3EB4-SB- 044SN-0005-SO 4/4/2008	L08040200-04 LL3EB4-SB- 037SN-0004-SO 4/4/2008	L08040200-05 LL3EB4-SB- 042SN-0005-SO 4/4/2008	L08040200-06 LL3EA6A-SB- 082A-0004-SO 4/4/2008	L08040200-07 LL3EA6A-SB- 082A-0002-SO 4/4/2008	L08040200-08 LL3EA6A-SB- 082A-0001-SO 4/4/2008	L08040200-09 LL3EA6A-SB- 082A-0005-SO 4/4/2008	L08040200-10 LL3EA6A-SB- 082A-0003-SO 4/4/2008
1,3,5-Trinitrobenzene	mg/kg	0.244 U	<b>9.84</b>	0.250 U	<b>0.190 J</b>	<b>0.259</b>	<b>2.03</b>	<b>0.461</b>	<b>0.871</b>	<b>1.68</b>	0.243 U
1,3-Dinitrobenzene	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	<b>0.206 J</b>	0.248 U	<b>0.163 J</b>	<b>0.257</b>	0.243 U
2,4,6-Trinitrotoluene	mg/kg	0.244 U	<b>611</b>	<b>0.948</b>	<b>15.2</b>	<b>323</b>	<b>2040</b>	<b>31.7</b>	<b>1740</b>	<b>2620</b>	<b>3.75</b>
2,4-Dinitrotoluene	mg/kg	0.244 U	<b>0.76</b>	0.250 U	0.250 U	<b>0.422</b>	<b>1.97</b>	0.248 U	<b>1.7</b>	<b>2.08</b>	0.243 U
2,6-Dinitrotoluene	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	<b>1.07 N</b>	0.248 U	0.244 U	0.249 U	0.243 U
2-Amino-4,6-dinitrotoluene	mg/kg	0.244 U	<b>1.86</b>	0.250 U	0.250 U	<b>1.96</b>	<b>0.741</b>	0.248 U	<b>0.772</b>	<b>1.45</b>	0.243 U
2-Nitrotoluene	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 U
3-Nitrotoluene	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 U
4-Amino-2,6-dinitrotoluene	mg/kg	0.244 U	<b>2.63</b>	0.250 U	<b>0.267</b>	<b>1.72</b>	<b>2.07 N</b>	<b>0.412</b>	<b>1.12 N</b>	<b>5.68</b>	0.243 U
4-Nitrotoluene	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 U
HMX	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 U
Nitrobenzene	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 U
Nitroglycerin	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 U
PETN	mg/kg	1.46 U	1.50 U	1.50 U	1.50 U	1.50 U	1.46 U	1.49 U	1.46 U	1.50 U	1.46 U
RDX	mg/kg	0.244 U	<b>0.849</b>	0.250 U	<b>0.203 J</b>	<b>0.394</b>	<b>0.779 N</b>	0.248 U	<b>1.52 N</b>	<b>1.22</b>	0.243 U
Tetryl	mg/kg	0.244 U	0.249 U	0.250 U	0.250 U	0.250 U	0.244 U	0.248 U	0.244 U	0.249 U	0.243 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.

N = There is presumptive evidence that the analyte is present, but it has not been confirmed. The analyte is tentatively identified. There is an indication that the reported analyte is present, however, all quality control requirements necessary for confirmation were not met.

COC No. A 81685

156 Starlite Drive

Marietta, OH 45750



ENVIRONMENTAL SERVICES

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071

Fax: 740-373-4835

Company Name: URS Corporation		Project Contact: Joann Bartsen		Contact Phone #: 216-622-2400	
Turn Around Requirements: Normal		Location: Ravenna			
Project ID: RVAPP					
Sampler (print): Brenda Pratt		Signature: <i>B. Pratt</i>			
Sample I.D. No.	Grab	Date	Time	Matrix*	Hold
LL3EQ4-SB-0385N-0005-S6	X	4-4-08	1000	Soil	1
" " -0425N-0005-S6	X	"	1535		1
" " -0445N-0005-S6	X	"	1400		1
-0375N-0004-S6	X	"	0945		1
-6425N-0005-S6	X	"	1535		1
LL3EQ6A-SB-082A-0004-S6	X	"	1650		1
" " 082A-0002-S6	X	"	1650		1
" " 082A-0004-S6	X	"	1650		1
" " 082A-0005-S6	X	"	1650		1
082A-0003-S6	X	"	1650		1
NUMBER OF CONTAINERS					
TOTAL # (LAB USE)					
Program <input type="checkbox"/> CWA <input type="checkbox"/> RCRA <input type="checkbox"/> DOD <input type="checkbox"/> AFCEE <input type="checkbox"/> Other					
ADDITIONAL REQUIREMENTS					
Relinquished by: (Signature) <i>B. Pratt</i>		Date 4-7-08		Time 1000	
Relinquished by: (Signature)		Date 4-8-08		Time 1000	
Received by: (Signature)		Date 4-8-08		Time 1000	
Remarks: Call Peggy Schuler with any questions					

\*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

## Detailed Results

Detailed Results

Notifications

Tracking no.: 865325388567

 E-mail notifications**Delivered****Delivered**  
Signed for by: R.KING

## Shipment Dates

Ship date ⓘ Apr 7, 2008  
Delivery date ⓘ Apr 8, 2008 9:57 AM

## Destination

MARIETTA, OH  
Signature Proof of Delivery ⓘ

## Shipment Facts

[Help](#)

Service type	Priority Overnight	Reference	RVAAP
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## Shipment Travel History

[Help](#)Select time zone: 

Select time format: 12H | 24H

All shipment travel activity is displayed in local time for the location

Date/Time	Activity	Location	Details
Apr 8, 2008 9:57 AM	Delivered	MARIETTA, OH	



**Data Verification Report  
Ohio EPA Collocated Samples  
Ravenna Army Ammunition Plant  
Data Packages: L08040402 and L08040660**

## I. INTRODUCTION

Four soil samples and one water sample were collected on April 11, 2008, near Building EB-4A at Load Line 3 and one soil sample and one water sample were collected on April 21, 2008, near building DB-4A at Load Line 2 of the Ravenna Army Ammunition Plant (RVAAP). The samples were submitted to Microbac Laboratories, Inc. (formerly Kemron) of Marietta, Ohio, for analysis of the parameters indicated in Table 1 below.

**Table 1  
Sample and Analysis Summary**

Lab ID	Sample ID	Date Collected	Matrix	Analyses Requested <sup>(1)</sup>	
				Expl	Met
L08040402-01	LL3EB4A-EPA1SS	4/11/2008	Soil	X	X
L08040402-02	LL3EB4A-EPA2SS	4/11/2008	Soil	X	X
L08040402-03	LL3EB4A-EPA3SS	4/11/2008	Soil	X	X
L08040402-04	LL3EB4A-EPA3SW	4/11/2008	Water	X	
L08040402-05	LL3EB4A-EPA4SS	4/11/2008	Soil	X	X
L08040660-01	LL2DB4A-SS-104SN-0001	4/21/2008	Soil	X	
L08040660-02	LL2DB4A-GW-100SN	4/21/2008	Water	X	

(1) Definitions: Expl = Explosives (nitroaromatics/nitramines) by high performance liquid chromatography (HPLC), SW846 Method 8330B.

Met = Metals (USEPA CLP Target Analyte List), SW846 Methods 6010B, 6020, and 7470A.

Reference: SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," Third Edition, November 1986 and its updates.

Data quality verification was performed by URS Corporation (URS) for all samples and analyses listed in Table 1 to verify the reported results. This includes assessment of supporting quality control (QC) parameters and a review for compliance with the cited methods, but does not include reconstruction of the analytical data. The following information was reviewed:

- ▶ Case Narrative
- ▶ Chain-of-Custody and sample login documents
- ▶ URS sample ID and laboratory sample ID
- ▶ Sample matrix
- ▶ Sample results by sample, by analytical fraction
- ▶ Analytical method performed
- ▶ Units of measure and detection limits

- ▶ Sample holding times
- ▶ Laboratory data qualifiers
- ▶ Date samples were digested and/or analyzed
- ▶ Initial Calibration summaries
- ▶ Calibration Verification summaries
- ▶ Laboratory Method Blank results
- ▶ Laboratory Control Sample (LCS) results
- ▶ QC Method Reporting Limit Standard (QCMRL) results
- ▶ Matrix Spike/Matrix Spike Duplicate results
- ▶ Laboratory Duplicate results
- ▶ Surrogate recoveries (where applicable)
- ▶ Internal Standard responses and retention times
- ▶ Any nonconformances or analytical problems noted in the case narrative
- ▶ Electronic Data

Guidance documents for the review process included the referenced analytical methods; the RVAAP Facility-Wide QAPP (SAIC 2001) and QAPP Addendum (URS 2008); and the Louisville Chemistry Guideline (LCG), Version 5 (USACE 2002).

## **II. DATA REVIEW**

This section describes each data review category, summarizes the acceptance criteria, and discusses any findings. Unless otherwise noted, the acceptance criteria were met for each sample, and no qualifications were required. The data qualifiers are defined in Section III.

### **A. Sample Custody and Handling**

The Chain of Custody and sample receiving documents are reviewed for correct sample identifications, preservatives, temperatures, dates, signatures, and condition of the containers and custody seals upon receipt. Lack of proper preservation can result in qualification or rejection of data, depending on the specific parameters and severity of the exceedance. Other discrepancies or deficiencies may require contacting the laboratory for additional information and are assessed in accordance with the guidance documents on a case-by-case basis.

- All samples were received at the laboratory under custody and intact. The cooler temperatures were 3°C and 6°C, within the acceptance range of 2-6°C.
- The requested analyses were inadvertently omitted from the Chain of Custody for the samples collected on April 21, 2008. Samples were logged in for explosives analysis by Method 8330B after the laboratory confirmed the analyses with URS project personnel.

## **B. Holding Time Criteria**

All analyses were reviewed for compliance with the method-required holding times. Extraction or analysis of a sample beyond the holding time can result in qualification or rejection of data, depending on the specific parameters and severity of the exceedance.

- All extractions and analyses were performed within the appropriate holding times.

## **C. Instrument Performance / Calibrations**

Instrument performance and initial and continuing calibration criteria are established to ensure the instruments are capable of producing acceptable qualitative and quantitative data for all parameters. The number and concentration of standards analyzed for each initial calibration, the frequency of initial and continuing calibrations, the requirements for any other QC standards, and the criteria for acceptable performance are specified in each determinative method and the LCG.

- Initial and continuing calibrations for all methods met the applicable QC criteria.

## **D. Blanks**

Blank samples can include laboratory method blanks, instrument blanks, field equipment blanks, and trip blanks. Blanks are evaluated to determine whether conditions exist resulting in reported sample concentrations which are not native to the sample (i.e., if samples were contaminated from external sources). Sample contamination is demonstrated if an analyte is detected in a blank, and the concentration in an associated sample is not significantly higher. Specifically, if the sample concentration is less than five times the blank concentration (or ten times for common contaminants such as acetone, methylene chloride, 2-butanone, and phthalate esters), it is assumed that the sample concentration was due to external contamination and not actually present in the samples. The result is, therefore, qualified as present in the blank (B), and is generally considered a nondetect. If the sample concentration is greater than five times the associated blank concentration (or ten times for common contaminants), the amount attributable to contamination is negligible and the sample concentration is reported unqualified.

- No analytes were detected in any blanks associated with this group of samples.

## **E. Laboratory Control Samples**

A Laboratory Control Sample (LCS) is a “contaminant-free matrix” spiked with a known concentration of all analytes of interest or a representative subset of the target analytes (for multi-component targets, such as PCBs). The LCS is carried through the complete sequence of sample preparation and analytical procedures and provides information on the method’s performance. Percent recoveries are monitored to provide a continuous measure of each method’s accuracy. The LCS recoveries are compared with established method performance criteria to determine data acceptability. Recoveries above QC limits indicate a positive bias. Therefore, associated positive

concentrations are qualified as estimated (J). If recoveries are below QC limits, a negative bias is assumed. Consequently, associated nondetect and positive concentrations are qualified as estimated. If recoveries are significantly low (i.e., below 30%), positive concentrations are estimated and nondetect results are rejected.

- LCS recoveries were within QC acceptance limits for all parameter groups.

## **F. Surrogate Recoveries**

Surrogates are chemicals not normally found in nature, but chemically behave in a similar fashion as the target analytes. Surrogate spikes are added prior to sample preparation for organic analyses and are used to evaluate the effects of the sample matrix on the extraction efficiency and/or instrument response. Surrogate recoveries are evaluated against QC acceptance limits. Recoveries above QC limits indicate a positive bias; therefore, associated positive concentrations are qualified as estimated (J). If recoveries are below QC limits, a negative bias is assumed and associated nondetect and positive concentrations are qualified as estimated (J/UJ). If recoveries are significantly low (i.e., below 10%), positive concentrations are estimated (J) and nondetect results are rejected (R).

- Surrogate recoveries were within QC acceptance limits in the undiluted analyses of all samples, with the exception of sample LL3EB4A-EPA4SS on one HPLC column and sample LL3EB4A-EPA1SS on both columns. For these two samples, the surrogate peak on the first column was masked by a large peak (1,3,5-trinitrobenzene) eluting at a retention time close to that of the surrogate. For sample LL3EB4A-EPA4SS, the surrogate recovery was acceptable on the second column (on which the peaks for 1,3,5-trinitrobenzene and the surrogate compound, 1,2-dinitrobenzene, were widely separated). Consequently, no results for that sample were qualified based on surrogate recoveries. For sample LL3EB4A-EPA1SS, however, the surrogate recovery was above the upper QC acceptance limit on the second column. Therefore, all positive results reported from the undiluted analysis of those samples were qualified as estimated (flagged “J”).
- No action was taken for surrogates that were not recovered or had recoveries outside of QC acceptance limits when the sample was diluted 10-fold or more.

## **G. Matrix Spike/Matrix Spike Duplicate Samples**

A Matrix Spike is an aliquot of the matrix (water or soil) spiked with a known concentration of the analytes of interest. The Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples—or just an MS for metals—are subjected to the entire analytical procedure in order to determine both accuracy and precision of the method for that matrix. This is accomplished by calculating the percent recovery and the Relative Percent Difference (RPD) of the two spiked samples. The MS/MSDs do not control the analytical process, but are used to evaluate the effect of the matrix on analytical performance. Associated data (the spiked sample or samples with a like matrix) are qualified following criteria similar to the surrogates.

- Extra sample volume for MS/MSD analyses was not collected during this sampling event; therefore MS/MSDs were not performed for Method 8330B. Method precision and accuracy were evaluated with an LCS/LCS Duplicate for these analyses. All LCS/LCSD recoveries and RPDs were acceptable.
- The laboratory selected sample LL3EB4A-EPA1SS for the metals MS analyses. The recovery for potassium was above the upper QC acceptance limit of 125% and the recoveries for cobalt and selenium were below the lower limit of 75% (but above 30%). The results for these analytes in all soil samples (all positive detections) were therefore qualified as estimated due to a matrix effect (“JI”). In addition, the recovery for antimony was less than 30%. Consequently, the nondetect results for antimony in all soil samples were rejected (“RI”).
- The spikes for several metals, including aluminum, calcium, iron, and magnesium were not valid due to sample concentrations exceeding four times the amount spiked. No action was taken.

## **H. Duplicate Samples**

Duplicate or replicate samples are analyzed to estimate the precision of data generated and serve as an indicator of sample representativeness and analytical reproducibility. Duplicates may be laboratory duplicates, which monitor the precision of the analytical process (for organics, this is accomplished with the MS/MSD), or field duplicates, which monitor the precision of the entire sampling and analytical system. If significant differences between analyses are identified, associated data are qualified as estimated.

- Field duplicates were not collected during this sampling event.
- The laboratory selected sample LL3EB4A-EPA1SS for the metals duplicate analyses. The RPDs exceeded the QC acceptance limit of 20% for potassium, silver, and selenium. Therefore the results for these analytes in all samples were qualified as estimated (“J”).

## **I. Serial Dilutions and Post-Digestion Spikes**

A serial dilution is a five-fold (4:1) dilution of a selected sample analyzed for metals by ICP or ICP/MS. If the calculated result from the diluted analysis differs by more than ten percent from the original analysis result (assuming the concentration is sufficiently greater than the instrument detection limit), the discrepancy is attributed to matrix interference. Positive detections in the parent sample and all associated samples are qualified as estimated (J) for the element in question. Post-digestion spikes are performed when matrix spike recoveries are outside of control limits to determine whether the exceedance is due to the matrix or to the digestion procedure.

- Serial dilution percent differences exceeded 10% for chromium, cobalt, and manganese. Consequently, the results for these analytes in all samples were qualified as estimated (J).

- Post-digestion spike recoveries for analytes that exceeded matrix spike criteria were all within acceptance limits.

## **J. Sample Dilutions and Reanalyses**

Samples analyzed at dilution and the reasons for the dilutions are as follows:

- All soil and water samples required dilutions ranging from 10-fold to 10,000-fold in order to quantify concentrations of 1,3,5-trinitrobenzene, 2,4-dinitrotoluene, and/or TNT exceeding the calibration range in the undiluted analyses. Results for all other analytes in most samples were reported from the undiluted runs. Exceptions were the DB4A soil and water samples, which were reported from a single dilution each (10-fold for LL2DB4A-SS-104SN-0001 and 100-fold for LL2DB4A-GW-100SN) and water sample LL3EB4A-EPA3SW, for which the least dilute analysis was a 10-fold dilution. The reporting limits for these three samples were elevated accordingly.

## **K. Miscellaneous Comments**

Positive detections for explosives on the primary HPLC column were confirmed on a second, dissimilar column. For analytes detected on both columns, the result selected for reporting was the higher of the two concentrations. Detections on one column that were not detected on the other (in the absence of matrix interferences) were reported as nondetect at the sample reporting limit. When the presence of an analyte on one column could not be confirmed due to matrix interferences (e.g., a large interfering peak on one column at the expected retention time of an analyte detected on the other column) the laboratory flagged the affected result “SMI” (sample matrix interference). During the data verification, the reviewer selected the positive result from the column without the interference for reporting and qualified the result as tentatively identified (“N”).

Microbac reported results below their reporting limit but above the method detection limit (MDL) with a qualifier (“J”), in accordance with USEPA Contract Laboratory Program (CLP) conventions. During this data review, the “J” qualifiers were retained with the numeric results.

Except where affected by dilutions, the reporting limits met the project requirements specified in the QAPP Addendum.

The data package was sufficiently complete as to allow the verification of sample results in accordance with the QAPP and the LCG.

### III. DETERMINATION OF DATA QUALITY AND USABILITY

Based on the findings of this data review, overall acceptable levels of accuracy, precision, and sensitivity were demonstrated. Representativeness, reproducibility, and comparability are assumed to be acceptable, given the use of consistent sampling procedures and strict adherence to SW846 methodologies. The analytical data are therefore considered usable for supporting project objectives, with the exception of four rejected antimony data points as summarized below:

<u>Analyte</u>	<u>Samples Affected</u>	<u>Reason for Rejection</u>
Antimony	LL3EB4A-EPA1SS LL3EB4A-EPA2SS LL3EB4A-EPA3SS LL3EB4A-EPA4SS	Excessively low recovery (2%) in the associated matrix spike

Completeness was calculated at 98.0%, based on 204 total data points.

The final data set, with qualifiers, is presented in Tables 2 and 3. The following data qualifiers were used to note data usability:

- 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.
- JI = Estimated concentration because of a matrix effect, evidenced by a matrix spike recovery outside of control limits (but greater than 30%).
- RI = The nondetect sample result was rejected due to a recovery below 30% in the associated matrix spike. The presence or absence of the analyte could not be verified. The result is not usable.
- N = There is presumptive evidence that the analyte is present, but it has not been confirmed. The analyte is tentatively identified. There is an indication that the reported analyte is present, however, all quality control requirements necessary for confirmation were not met.

#### IV. REFERENCES

- SAIC. 2001. Facility-Wide Sampling and Analysis Plan for Environmental Investigations at the Ravenna Army Ammunition Plant, Ravenna, Ohio. Part 2: Quality Assurance Project Plan. Prepared for the US Army Corps of Engineers, Louisville District. March 2001.
- URS. 2008. URS Group, Inc. Draft of the Work Plan for the Sampling of Soils Below Floor Slabs at LLs-2, 3, 4 and Excavation and Transportation of Contaminated Soils to Load Line 4 (Buildings G-1, G-1A, and G-3). Appendix A: Quality Assurance Project Plan Addendum. Prepared for the US Army Corps of Engineers. April 2008.
- USACE. 2002. Louisville Chemistry Guideline. Version 5. Environmental Engineering Branch, Louisville District, US Army Corps of Engineers. June 2002.



**Table 2**  
**Analytical Data Summary - Soil Samples**  
**RVAAP**  
**OEPA Collocated Samples**

PARAMETER	UNITS	L08040402-01 LL3EB4A- EPA1SS	L08040402-02 LL3EB4A- EPA2SS	L08040402-03 LL3EB4A- EPA3SS	L08040402-05 LL3EB4A- EPA4SS	L08040660-01 LL2DB4A- SS-104SN-0001
<b>EXPLOSIVES</b>						
1,3,5-Trinitrobenzene	mg/kg	19.6	0.851	1.3	6.82	2.48 U
1,3-Dinitrobenzene	mg/kg	1.47 J	0.247 U	0.248 U	0.157 J	2.48 U
2,4,6-Trinitrotoluene	mg/kg	27800	209	272	3670	36.6
2,4-Dinitrotoluene	mg/kg	17.1	0.188 J	0.160 J	1.94	2.48 U
2,6-Dinitrotoluene	mg/kg	0.646 N	0.247 U	0.248 U	0.250 U	2.48 U
2-Amino-4,6-dinitrotoluene	mg/kg	5.14 J	0.975	0.533	1.82	2.48 U
2-Nitrotoluene	mg/kg	0.249 U	0.247 U	0.248 U	0.250 U	2.48 U
3-Nitrotoluene	mg/kg	0.249 U	0.247 U	0.248 U	0.250 U	2.48 U
4-Amino-2,6-dinitrotoluene	mg/kg	4.71 N	1.53	0.724	1.98 J	1.63 J
4-Nitrotoluene	mg/kg	0.249 U	0.247 U	0.248 U	0.250 U	2.48 U
HMX	mg/kg	1.23 J	0.247 U	0.248 U	0.967	2.48 U
Nitrobenzene	mg/kg	0.249 U	0.247 U	0.248 U	0.250 U	2.48 U
Nitroglycerin	mg/kg	0.249 U	0.247 U	0.248 U	0.250 U	2.48 U
PETN	mg/kg	1.50 U	1.48 U	1.49 U	1.50 U	14.9 U
RDX	mg/kg	6.89 J	2.47 U	0.248 U	1.91	1.70 J
Tetryl	mg/kg	0.249 U	0.247 U	0.248 U	0.250 U	2.48 U
<b>METALS</b>						
Aluminum, Total	mg/kg	11700	13300	13300	11000	
Barium, Total	mg/kg	84.3	65.1	81.7	64.1	
Beryllium, Total	mg/kg	0.703	0.712	0.775	0.633	
Cadmium, Total	mg/kg	37.2	1.26	1.36	7.3	
Calcium, Total	mg/kg	12500	5960	10900	4850	
Chromium, Total	mg/kg	18.9 J	17.3 J	17.6 J	16.6 J	
Cobalt, Total	mg/kg	8.34 JI	10.5 JI	10.2 JI	9.81 JI	
Copper, Total	mg/kg	32.3	21.9	19.6	21.5	
Iron, Total	mg/kg	22900	29400	22900	21800	
Magnesium, Total	mg/kg	3900	3810	3720	3040	
Manganese, Total	mg/kg	344 J	317 J	334 J	310 J	
Potassium, Total	mg/kg	1430 JI	1530 JI	1390 JI	1260 JI	
Silver, Total	mg/kg	0.207 J	0.201 J	0.320 J	0.366 U	
Sodium, Total	mg/kg	127	89.3	105	69.6	
Vanadium, Total	mg/kg	17.9	20.4	19.2	16.8	
Zinc, Total	mg/kg	186	81.1	87.2	91	
Antimony, Total	mg/kg	-- RI	-- RI	-- RI	-- RI	
Arsenic, Total	mg/kg	10.3	11.4	10.5	10.7	
Lead, Total	mg/kg	70.7	21.3	90.1	28	
Nickel, Total	mg/kg	22.8	25.1	23.5	22.9	
Selenium, Total	mg/kg	0.274 JI	0.285 JI	0.366 JI	0.297 JI	
Thallium, Total	mg/kg	0.159	0.191	0.143	0.17	
Mercury, Total	mg/kg	0.173	0.0252 J	0.0327 J	0.0342 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.

JI = Estimated concentration because of a matrix effect, evidenced by a matrix spike recovery outside of control limits (but greater than 30%).

RI = The nondetect sample result was rejected due to a recovery below 30% in the associated matrix spike. The presence or absence of the analyte could not be verified. The result is not usable.

N = There is presumptive evidence that the analyte is present, but it has not been confirmed. The analyte is tentatively identified. There is an indication that the reported analyte is present, however, all quality control requirements necessary for confirmation were not met.

**Table 3**  
**Analytical Data Summary - Water Samples**  
**RVAAP**  
**OEPA Collocated Samples**

PARAMETER	UNITS	L08040402-04 LL3EB4A- EPA3SW	L08040660-02 LL2DB4A- GW-100SN
<u>EXPLOSIVES</u>			
1,3,5-Trinitrobenzene	ug/L	<b>397</b>	<b>1370</b>
1,3-Dinitrobenzene	ug/L	10.2 U	102 U
2,4,6-Trinitrotoluene	ug/L	<b>7310</b>	<b>1470</b>
2,4-Dinitrotoluene	ug/L	<b>10.1 J</b>	<b>84.4 J</b>
2,6-Dinitrotoluene	ug/L	10.2 U	102 U
2-Amino-4,6-dinitrotoluene	ug/L	<b>102</b>	<b>263</b>
2-Nitrotoluene	ug/L	10.2 U	102 U
3-Nitrotoluene	ug/L	10.2 U	102 U
4-Amino-2,6-dinitrotoluene	ug/L	<b>125</b>	<b>339</b>
4-Nitrotoluene	ug/L	10.2 U	102 U
HMX	ug/L	<b>8.14 J</b>	<b>104</b>
Nitrobenzene	ug/L	10.2 U	102 U
Nitroglycerin	ug/L	10.2 U	102 U
PETN	ug/L	76.5 U	765 U
RDX	ug/L	<b>70.9</b>	<b>960</b>
Tetryl	ug/L	10.2 U	102 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.

COC No. A 79739

156 Starlite Drive

Marietta, OH 45750



CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071

Fax: 740-373-4835

Company Name: URS Corp		Project Contact: KVAAP Subslab Sample		Contact Phone #: 216-622-2400	
Turn Around Requirements: 2 WKS		Location: Lead Line 3 Bldg 4A			
Project ID:					
Sampler (print): Stan Saveng		Signature: <i>Stan Saveng</i>			
Sample I.D. No.	Comp	Grab	Date	Time	Matrix*
113EB4A-EPA155	X		11 Apr 08	1505	S
113EB4A-EPA255				1510	S
113EB4A-EPA355				1515	S
113EB4A-EPA35W			1515	1530	W
113EB4A-EPA455			1530	1530	S
TOTAL # (LAB USE)					
Program <input type="checkbox"/> CWA <input type="checkbox"/> RCRA <input type="checkbox"/> DOD <input type="checkbox"/> AFCEE <input checked="" type="checkbox"/> Other <i>USACE Louisville</i>					
ADDITIONAL REQUIREMENTS					
Relinquished by: (Signature) <i>Stan Saveng</i> Date 1650 11 Apr 08 Time					
Received by: (Signature) <i>FedEx</i> Date 4-12-08 Time 915					
Remarks:					

156 Starlite Drive  
Marietta, OH 45750

Phone: 740-373-4071  
Fax: 740-373-4835



## CHAIN-OF-CUSTODY RECORD

[illegible]

\*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

## Detailed Results

Detailed Results

Notifications

Tracking no.: 791888592362

 E-mail notifications**Delivered****Delivered**

Signed for by: J.THOMPSON

Shipment Dates

Destination

Ship date ⓘ Apr 22, 2008

Delivery date ⓘ Apr 23, 2008 10:14 AM

MARIETTA, OH

Signature Proof of Delivery ⓘ

## Shipment Facts

[Help](#)

Service type

Priority Overnight

## Shipment Travel History

[Help](#)Select time zone: Select time format: [12H](#) | [24H](#)

All shipment travel activity is displayed in local time for the location

Date/Time	Activity	Location	Details
Apr 23, 2008 10:14 AM	Delivered	MARIETTA, OH	

**APPENDIX G**  
**Field Screening Core Location Coordinates**

## Appendix G: Soil Core Location Coordinates (Obtained from GPS Unit)

POINTNAME	NORTHING	EASTING
LL3EA6A-SB-081SN	559413.527	2371519.678
LL3EA6A-SB-082SN	559434.979	2371514.684
LL3EA6A-SB-084SN	559391.304	2371515.099
LL3EA6A-SB-085SN	559403.457	2371535.743
LL3EB4-SB-042SN	559669.719	2370872.654
LL3EB4A-SB-062SN	559151.646	2370993.749
LL3EB4A-SB-066SN	559172.192	2371066.23
LL3EB9A-SS-076SN	558867.014	2371061.11
LL2251-SS-032SN	561015.744	2373234.11
LL2251A-SS-033SN	561059.721	2373204.857
LL2DA28	561587.898	2374205.047
LL2DA6-SB-073	561561.346	2374237.404
LL2DA6-SB-074	561540.053	2374231.468
LL2DA6-SB-075	561555.844	2374225.226
LL2DA6-SB-076	561568.706	2374219.213
LL2DA6-SB-077	561555.832	2374213.552
LL2DA6A-SB-080	561121.339	2374479.627
LL2DA6A-SB-081	561089.462	2374472.18
LL2DA6A-SB-082	561116.379	2374464.672
LL2DA6A-SB-083	561131.171	2374456.83
LL2DA6A-SB-084	561110.402	2374450.062
LL2DB10-SB-090	561835.939	2373293.145
LL2DB10-SB-091	561861.503	2373329.6
LL2DB10-SB-092	561833.606	2373321.624
LL2DB10-SB-093	561788.981	2373315.212
LL2DB10-SB-094	561803.785	2373357.27
LL2DB10-SB-095	561760.193	2373348.387
LL2DB10-SB-096	561698.986	2373343.617
LL2DB10-SB-097	561732.566	2373378.249
LL2DB10-SB-098	561703.733	2373370.513
LL2DB10-SB-099	561675.505	2373360.595
LL2DB10-SB-100	561693.194	2373396.479
LL2DB10-SB-101	561672.053	2373381.917
LL2DB10-SB-102	561647.222	2373378.987
LL2DB10-SB-103	561657.358	2373417.32
LL2DB11-060-SN	562178.732	2373115.641
LL2DB19-SS-002SN	559856.255	2374382.473
LL2DB2-SS-019SN	559924.93	2374345.755
LL2DB20-SS-004SN	560026.679	2374349.013
LL2DB22-SS-006SN	560087.342	2373850.684
LL2DB25-SS-007SN	560501.359	2374054.905
LL2DB27-066	562865.168	2373585.683
LL2DB27-068	563175.136	2374213.771
LL2DB27B67	563183.614	2374037.479
LL2DB27C-069SN	563418.242	2374344.624
LL2DB3-SS-005SN	560118.753	2374248.034
LL2DB30-SS	560915.274	2374132.64
LL2DB4-SB-034SN	561273.232	2373664.235
LL2DB4-SB-035SN	561293.829	2373703.442
LL2DB4-SB-036SN	561307.991	2373739.514
LL2DB4-SB-037SN	561344.082	2373798.173
LL2DB4-SB-038SN	561374.408	2373819.194
LL2DB4-SB-039	561354.268	2373828.663
LL2DB4-SB-040	561325.186	2373815.828
LL2DB4-SB-041SN	561308.381	2373785.139
LL2DB4-SB-042SN	561283.446	2373741.504
LL2DB4-SB-043SN	561263.045	2373700.135
LL2DB4-SB-044SN	561231.877	2373689.935
LL2DB4-SB-045SN	561253.978	2373733.003
LL2DB4-SB-046SN	561277.213	2373773.239
LL2DB4-SB-047SN	561303.847	2373828.208
LL2DB4-SB-048	561289.89	2373830.488
LL2DB4-SB-049SN	561325.948	2373857.676
LL2DB4A-SB-013SN	560839.517	2373905.839
LL2DB4A-SB-014SN	560864.999	2373952.2
LL2DB4A-SB-015SN	560889.217	2373986.134
LL2DB4A-SB-016SN	560919.039	2374030.552
LL2DB4A-SB-017SN	560943.195	2374028.185
LL2DB4A-SB-018SN	560938.103	2374074.014
LL2DB4A-SB-019SN	560901.466	2374063.539
LL2DB4A-SB-020SN	560879.483	2374024.299
LL2DB4A-SB-021SN	560853.573	2373978.645
LL2DB4A-SB-022SN	560829.275	2373941.729
LL2DB4A-SB-023SN	560800.847	2373925.06
LL2DB4A-SB-024SN	560820.388	2373966.552
LL2DB4A-SB-025SN	560844.716	2373999.557
LL2DB4A-SB-026SN	560848.602	2374044.237
LL2DB4A-SB-027SN	560841.6	2374081.96
LL2DB4A-SB-028SN	560891.256	2374094.346
LL2DB4AVP1-SS-088SN	560762.761	2374029.859
LL2DB4VP1	561390.701	2373691.594
LL2DB8	561979.127	2372780.189
LL2DB8-SS-031SN	560843.055	2373440.256
LL2DB802-1	559664.65	2374531.211
LL2DB9-055	561467.961	2373522.662
LL2DB9A-SS-008SN	560580.477	2374006.55
LL2DC1-SS-086SN	559921.419	2374577.359
LL3EA28-SS-034SN	559879.174	2371254.507
LL3EA28A-SS-054SN	559433.596	2371492.832
LL3EA6-SB-086SN	559842.908	2371296.11
LL3EA6-SB-087SN	559833.487	2371276.86
LL3EA6-SB-088SN	559853.147	2371279.112
LL3EA6-SB-089SN	559864.616	2371261.705
LL3EA6-SB-090SN	559872.602	2371279.112
LL3EA6A-SB-083SN	559429.243	2371499.95
LL3EB10-SB-013SN	559976.493	2370424.747
LL3EB10-SB-014SN	560024.541	2370398.694
LL3EB10-SB-015SN	560074.426	2370384.086
LL3EB10-SB-016SN	560111.63	2370354.082
LL3EB10-SB-017SN	560158.865	2370330.716
LL3EB10-SB-018SN	560146.669	2370356.468

## Appendix G: Soil Core Location Coordinates (Obtained from GPS Unit)

POINTNAME	NORTHING	EASTING
LL3EB10-SB-019SN	560095.761	2370382.372
LL3EB10-SB-020SN	560047.454	2370405.928
LL3EB10-SB-021SN	560007.986	2370433.501
LL3EB10-SB-022SN	559994.178	2370458.096
LL3EB10-SB-023SN	560039.554	2370431.195
LL3EB10-SB-024SN	560082.908	2370399.558
LL3EB10-SB-025SN	560126.227	2370385.02
LL3EB10-SB-026SN	560180.59	2370358.779
LL3EB10VP1-SS_000SN	560113.965	2370468.465
LL3EB10VP2-SS-000SN	560044.336	2370506.052
LL3EB10VP2-TNT	560060.418	2370507.969
LL3EB19-SS-001SN	558152.298	2371440.302
LL3EB2-SS-002SN	558213.008	2371401.042
LL3EB20-SS-079SN	558333.178	2371396.455
LL3EB22-SS-003SN	558377.927	2370904.596
LL3EB25-SS-077SN	558797.453	2371107.146
LL3EB4-SB-037SN	559568.941	2370708.815
LL3EB4-SB-038SN	559593.694	2370748.29
LL3EB4-SB-039SN	559621.552	2370789.93
LL3EB4-SB-040SN	559645.74	2370828.937
LL3EB4-SB-041SN	559663.583	2370833.507
LL3EB4-SB-043SN	559630.735	2370866.41
LL3EB4-SB-044SN	559607.404	2370823.769
LL3EB4-SB-045SN	559595.047	2370784.484
LL3EB4-SB-046SN	559568.25	2370741.225
LL3EB4-SB-047SN	559535.617	2370736.196
LL3EB4-SB-048SN	559556.512	2370775.936
LL3EB4-SB-049SN	559579.239	2370822.28
LL3EB4-SB-050SN	559603.849	2370848.058
LL3EB4-SB-051SN	559599.737	2370893.133
LL3EB4-SB-052SN	559628.425	2370908.608
LL3EB4A-SB-058SN	559229.374	2371142.571
LL3EB4A-SB-059SN	559221.232	2371083.654
LL3EB4A-SB-060SN	559203.167	2371080.532
LL3EB4A-SB-061SN	559175.784	2371038.645
LL3EB4A-SB-063SN	559128.199	2370961.489
LL3EB4A-SB-064SN	559122.749	2370981.872
LL3EB4A-SB-065SN	559149.042	2371026.852
LL3EB4A-SB-067SN	559199.129	2371116.596
LL3EB4A-SB-068SN	559201.562	2371150.825
LL3EB4A-SB-069SN	559170.708	2371125.357
LL3EB4A-SB-070SN	559169.32	2371111.083
LL3EB4A-SB-070SN	559182.227	2371111.053
LL3EB4A-SB-071SN	559155.59	2371062.555
LL3EB4A-SB-072SN	559122.135	2371020.222
LL3EB4A-SB-073SN	559105.155	2370980.237
LL3EB4AVP1-SS	559055.586	2371082.16
LL3EB4VP1-SS-033SN	559679.441	2370737.448
LL3EB9-SS-032SN-0001	559766.214	2370571.554
LL4G10-SS-039SN-0001	555676.72	2365359.326
LL4G11-SS-023SN-SO	556089.479	2365196.02
LL4G13-SS-020SN-0001	555205.445	2364631.91
LL4G13A-SS-019SN	555180.047	2364533.896
LL4G13V2-SS-030SN	555095.512	2364654.318
LL4G15-SB-031SN	555353.528	2364614.753
LL4G15-SB-032SN	555340.045	2364621.494
LL4G16-SS-021SN-0001	555769.838	2364404.606
LL4G17-SS-026SN-0001	555051.867	2364235.117
LL4G18-SS-027SN-SO	555078.444	2364123.71
LL4G19-SS-037SN-0001	554993.338	2364104.727
LL4G19A-SS-038SN	555046.94	2364080.779
LL4G2-SS-029SN-0001	555907.34	2366366.19
LL4G20-SS-036SN	555065.729	2365955.285
LL4G6-SS-035SN-0001	555118.851	2365853.806
LL4G6A-SS-028SN-0001	554540.768	2364439.737
LL4G7-SS-003SN	555591.717	2365575.64
LL4G8-SB-001SN	555491.533	2365395.502
LL4G8-SB-002SN	555480.857	2365425.746
LL4G8-SB-003SN	555516.779	2365449.895
LL4G8-SB-004SN	555529.591	2365486.092
LL4G8-SB-005SN	555546.225	2365531.588
LL4G8-SB-006SN	555568.989	2365493.072
LL4G8-SB-007SN	555556.058	2365452.626
LL4G8-SB-008SN	555541.643	2365405.177
LL4G8-SB-009SN	555540.183	2365379.442
LL4G8-SB-010SN	555569.08	2365428.886
LL4G8-SB-011SN	555583.777	2365466.05
LL4G8-SB-012SN	555606.014	2365516.062
LL4G9-SB-033SN-SO	555966.364	2364904.301
LL4G9-SB-034SN-SO	555978.573	2364914.246



**APPENDIX H**  
**Comment Response Table**

**DRAFT OF THE SAMPLING AND SCREENING ANALYSIS OF SOILS BELOW FLOOR SLABS AT RVAAP-09 LOAD LINE 2,  
RVAAP-10 LOAD LINE 3, AND RVAAP-11 LOAD LINE 4  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA OHIO  
COMMENT RESPONSE TABLE  
July 1, 2009**

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Comment Number	Page No./ Line No.	New Page or Sheet	Comment	Recommendation	Response
<i>Ohio EPA (Eileen Mohr)</i>					
1	General		In at least one area, red staining in soil and surface water appeared after the screening had taken place. This area was noted by Ohio EPA and sampled on the same date for explosives compounds. The area was subsequently covered with plastic and designated as an excavation area.	Questions: a. has there been a concerted effort to walk the load lines to ensure that this was the only area where this occurred? If so, when?; and, b. if not, how can we be confident that we have identified all areas needing clean-up for future OHARNG usage?	All building footprints were walked and inspected during the MI sampling (which occurred after the field screening). Additionally, the high potential buildings with covered plastic areas have been walked weekly since the cover was installed.
2	General		There is concern regarding the usage of the screening samples for identifying potential excavation areas based upon the results presented in this report. The excavation areas (based on lack of correlation between field and lab samples) may have been underestimated.	The TNT screen seemed to consistently underestimate the reported laboratory concentrations.  a. Were areas where any screening results that were approximately 878 mg/kg (or greater) for TNT covered with plastic? Please confirm, as at that concentration it appears that the established CUG could be exceeded.  b. The text later on (pg 3-4) indicates that these areas should conservatively be proposed for excavation. It is Ohio EPA's position that these areas must be excavated based upon the screen/lab correlation results.  c. There is a sample in which the TNT screen was reported at 206 mg/kg but which was	a. As stated on pg. 3-3, there was one field screening sample where TNT was detected above 878 mg/kg, but below the IROD cleanup goal. This occurred at Building EB-4, which was covered with plastic.  b. Agree. The word "should" was changed to "will"

**DRAFT OF THE SAMPLING AND SCREENING ANALYSIS OF SOILS BELOW FLOOR SLABS AT RVAAP-09 LOAD LINE 2,  
RVAAP-10 LOAD LINE 3, AND RVAAP-11 LOAD LINE 4  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA OHIO  
COMMENT RESPONSE TABLE  
July 1, 2009**

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<b>Comment Number</b>	<b>Page No./ Line No.</b>	<b>New Page or Sheet</b>	<b>Comment</b>	<b>Recommendation</b>	<b>Response</b>
			<p>reported by the lab to be 2040 mg/kg. Not all screening samples had related laboratory confirmation samples. In an instance such as this, how can we be assured that we do not have other areas that are being screened as under the CUG, yet in actuality may be exceeding the CUG based upon lab analysis?</p> <p>d. There is some speculation in the text that the lack of correlation may be due to inconsistency in sample prep. That may be part of the issue. Discussion is needed regarding sample type and preparation as well as the use of screening techniques.</p> <p>e. At this point in time, it does not seem to me that we have clear-cut evidence to state that all areas needing excavation have been identified at Load Lines 2, 3, and 4. Discussion is needed.</p> <p>f. This is a carry-over issue that needs to be resolved prior to working on Load Line 1.</p> <p>g. Are the maps that depict proposed excavation areas based upon the 878 mg/kg TNT screening number?</p>		<p>c/d. URS can only surmise as to the reasons for the variation in the analytical results. The entire screening sampling program is based upon the sampling of designated discrete sample areas. The acknowledged inconsistencies in discrete soil sampling results for explosive compounds are the primary drivers for MI soil sampling. It is entirely reasonable to hypothesize that a small grain of explosive compound was entrained in the split of the sample that went to the laboratory but not in the field screening portion. Or that the laboratory processing of the entire soil sample produced a more representative analysis due to the processing itself. The homogeneity of the MI and Method 8330 B processing itself have been proven to provide a more representative sample analysis through duplicate sampling QA. The laboratory-selected aliquot for actual extraction and analysis from the jar represents the entire sample jar volume regardless of any included original segregated grains of explosive compounds.</p> <p>Field screening is not in any way considered confirmatory sampling. It is used for safety purposes and to give us an idea where to start excavation as well as cover an area immediately after slab demolition to help prevent the spread of contamination.</p> <p>e Agreed. URS is prepared to provide technical assistance regarding the knowledge base assimilated to date.</p> <p>f This issue is being discussed with regard to the Load Line 1 Work Plan.</p>

**DRAFT OF THE SAMPLING AND SCREENING ANALYSIS OF SOILS BELOW FLOOR SLABS AT RVAAP-09 LOAD LINE 2,  
RVAAP-10 LOAD LINE 3, AND RVAAP-11 LOAD LINE 4  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA OHIO  
COMMENT RESPONSE TABLE  
July 1, 2009**

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<b>Comment Number</b>	<b>Page No./ Line No.</b>	<b>New Page or Sheet</b>	<b>Comment</b>	<b>Recommendation</b>	<b>Response</b>
					g. Yes. Since there was only one detection between 878 mg/kg and the TNT cleanup goal of 1,646 mg/kg, and that detection was in a boring where there already was a TNT exceedance, the figures represent exceedances based upon the 878 mg/kg screening number.
3	General		The issue of sampling outside of the building footprints needs resolution. Ohio EPA formally invoked the additional work clause on this issue on 02/15/2007.	Request dialogue with the Army to resolve this outstanding issue. Resolution should occur prior to commencing LL1 work.	It is agreed that contamination could have spread into areas outside of building footprints during slab and building demolition. This issue will require further stakeholder discussions and may be addressed outside of the current URS contract.
4	General		Ultimately the decisions regarding limits of final excavation are going to need to be made based upon processed MI samples.	It is unclear where we are left on this project given the uncertainty and lack of correlation between the screening and laboratory samples. Discussion needed.	The field screening reported here is not in any way confirmatory sampling. The confirmatory MI sampling done either after screening or after excavation will be used to support remedial decisions.
5	2-1/25		The text discusses taking 3 samples within the core that best represent the range of materials found in the core.	What criteria is this based on? Staining? Lithology? Etc. Please explain.	<p>The soil screening cores were sampled by collecting the top and bottom intervals. Each core was then evaluated for any visible indications of impact such as staining. If there were no visible indications of impact then an effort was made to ensure that all soil lithology types (sand, clay, and silt) were sampled for analysis within the recovered interval.</p> <p>The text has been modified as follows:  <i>“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.”</i></p>
6	2-1/28		The text indicates that the most	On what basis was the most representative	The reference in the text to the “most representative core” is

**DRAFT OF THE SAMPLING AND SCREENING ANALYSIS OF SOILS BELOW FLOOR SLABS AT RVAAP-09 LOAD LINE 2,  
RVAAP-10 LOAD LINE 3, AND RVAAP-11 LOAD LINE 4  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA OHIO  
COMMENT RESPONSE TABLE  
July 1, 2009**

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<b>Comment Number</b>	<b>Page No./ Line No.</b>	<b>New Page or Sheet</b>	<b>Comment</b>	<b>Recommendation</b>	<b>Response</b>
			representative core was used for screening.	core determined? Were all available intervals that were recovered screened?	a reference to the core attempt (at least 5 made per sample location with refusal prior to 4.0 ft bgs) with the most recovery which is considered to be the most representative.  The text was modified as follows: <i>“After several sampling attempts, the most representative core (best recovery) was used for screening.”</i>
7	2-1/38		The text indicates that one discrete sample was obtained from the medium priority buildings and screened for TNT/RDX.  This comment also applicable to low priority buildings.	Please confirm that this is what is in the SOW/workplan. (I do not have it in front of me.) We may need to re-think this based upon the poor correlation we are seeing between the field and lab results. One sample may not be enough and perhaps it should be MI vs. discrete.	The Work Plan required one discrete sample from each low and medium potential building.  This item is being discussed within the context of the Load Line 1 Work Plan.
8	2-2/10		The text discusses slab removal clearance by BRACD.	Further discussion of this step is warranted, as it was not a requirement in the SOW, nor in the workplan (I believe).	This procedure was discussed during the field kick-off meeting held March 25, 2008.  This item is being discussed further within the context of the Load Line 1 Work Plan. The BRACD contractor has informed URS that slabs are inspected after demolition and bulk quantities of contamination are cleared.
9	2-2/34-38		This section discusses modifications to field screening efforts subsequent to a field visit by Dr. Jenkins.	With respect to bullets 1 (decon of the knife) and 4 (documentation of control sample results on a daily basis, I am unclear as to why these were not a part of the process already. This is standard for projects at RVAAP. Please clarify.	The knife used to open the JMC core sleeves was decontaminated by inspecting for any residual soils from the previous sample and wiping with a clean paper towel (similar to the procedures followed with a Geoprobe®). The knife blade was put through a full multi-stage decontamination on a regular basis during the day. Each day the operation started with a clean wrapped knife blade.

**DRAFT OF THE SAMPLING AND SCREENING ANALYSIS OF SOILS BELOW FLOOR SLABS AT RVAAP-09 LOAD LINE 2,  
RVAAP-10 LOAD LINE 3, AND RVAAP-11 LOAD LINE 4  
RAVENNA ARMY AMMUNITION PLANT, RAVENNA OHIO  
COMMENT RESPONSE TABLE  
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					<p>Based upon the discussions with Dr. Jenkins during the QA inspection, the knife blade was fully decontaminated using the multi-stage process after each core sleeve opening and the inspection/paper towel wipe was discontinued.</p> <p>Prior to Dr. Jenkins' audit, control samples results that were out of range were not recorded on the daily sheet. Only the results that indicated the system was in control were documented. After his visit, all control sample results regardless of outcome were included on the laboratory bench sheets.</p>
10	2-3/1-3		The text references that Dr Jenkins indicated that the results prior to his audit may have been biased low. Additionally it references a personal communication indicating that "none of the results obtained for RDX or TNT were near the established action levels."	<p>In the report, basically any screening result at or greater than 878 mg/kg TNT could be assumed to be at or greater than the CUG of 1646 mg/kg. Also seen is a screening result of 206 mg/kg that had a 2040 mg/kg TNT lab result.</p> <p>How many tests were conducted prior to changing procedures? What is the potential impact on the project?</p> <p>Please supply a copy of Dr Jenkins report.</p>	<p>Dr. Jenkins' report will be included as an Appendix to the Field Screening Report and is attached to this table.</p> <p>The audit was conducted March 28, 2008, the third day of field screening analysis. A total of 80 samples were screened on March 14 and March 21, 2008. The highest detection of TNT in these samples was 2.0 mg/kg. The control sample results were all within an acceptable range for these dates. Dr. Jenkins' suggestions were made to help streamline, expedite, and document the process.</p>
11	2-3/15-16		The text discusses mixing the soil sample in the bag and withdrawing a portion for the field screen. The rest of the sample is then sent to the lab where it is processed.	<p>Additional discussion is needed regarding field screen and lab sample preparation. If lack of consistent prep results in the poor correlation that we are seeing between field and lab, this issue needs to be re-thought.</p>	<p>The issue is the extraordinary procedure in the laboratory to get a sufficiently homogenized sample for analysis.</p> <p>Duplicating this in the field negates the ability of the field screening technique to provide quick turnaround results. There is an additional safety concern with regard to mechanically disturbing the soil to that degree before it is</p>

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					known whether the soil is explosive.
12	2-4/5-9		The text discusses that after the screening sample collection that photo-reaction of TNT with sunlight resulted in some stained areas.	<p>How much later did this occur?</p> <p>Can we be sure that any areas in which this may have occurred were caught during the rest of the field work?</p> <p>We need to establish protocols for handling this in the LL1 project and for re-evaluating LLs2-4.</p>	<p>The actual time required is not known and is probably quite variable. Many factors impact the time for the color reaction: weather (amount of sunlight, rain), soil moisture content, and explosive content of the soils. Additionally the impact of rain on the soils may serve as a method to expose explosive contaminated soils to sunlight. Since the MI sampling was conducted at least several weeks after screening sampling the time lapse should have been sufficient for photoreaction of any soils with concentrations sufficient for photoreaction.</p> <p>For Load Line 1, a minimum of 48 hours will be allowed before conducting field screening to allow photoreaction to take place.</p>
13	Fig 2-4		Make changes to the figure.	<p>a. high potential building should be depicted in purple in the key.</p> <p>b. add some contour numbers to contour lines.</p> <p>c. add rectangle (building) to the key.</p> <p>d. add polygon shape to the key.</p> <p>e. add walkways to the key.</p> <p>f. fix RR tracks on map and key to be consistent.</p>	<p>a. The key has been changed to purple.</p> <p>b. Additional contour line elevations, where available, have been added.</p> <p>c. The rectangles have been keyed as additional outbuildings.</p> <p>d. The polygon shapes have been keyed as the vacuum pump system bag house.</p> <p>e. Walkways have been added to the key.</p> <p>f. The railroad tracks key has been made consistent.</p>
14	Fig 2-5		Make changes to the figure.	<p>a. add basins to key and clarify what they were used for.</p> <p>b. add rectangle (building) to the key.</p> <p>c. add walkways to the key.</p> <p>d. fix RR tracks on map and key to be consistent</p>	<p>a. The basins have been added to the key and their use added to the figure.</p> <p>b. The rectangle has been added to the key..</p> <p>c. Walkways have been added to the key.</p> <p>d. The railroad track key has been made consistent.</p>

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15	Fig 2-6		Make changes to the figure.	a. clarify why there are sample results presented on this figure and not others in this section. b. add some contour numbers to contour lines. c. add rectangle (building) to the key. d. add walkways to the key. e. fix RR tracks on map and key to be consistent.	a. The sample results have been removed from this figure. b. Contour line values have been added as available. c. The rectangle has been added to the key. d. Walkways have been added to the key. e. The railroad track key has been made consistent.
16	Fig 2-7		Make changes to the figure.	a. add basins to key and clarify what they were used for. b. add some contour numbers to contour lines. c. add rectangle (building) to the key. d. add walkways to the key. e. fix RR tracks on map and key to be consistent. f. clarify why there are sample results presented on this figure and not others in this section.	a. The basins have been added to the key and their use added to the figure b. Contour line values have been added as available. c. The rectangle has been added to the key. d. Walkways have been added to the key. e. The railroad track key has been made consistent. f. The sample results have been removed from this figure.
17	Fig 2-8		Make changes to the figure.	a. add basins to key and clarify what they were used for. b. add some contour numbers to contour lines. c. add walkways to the key. d. fix RR tracks on map and key to be consistent. e. building EA-28A... not completely depicted?	a. The basins have been added to the key and their use added to the figure. b. The rectangle has been added to the key. c. Walkways have been added to the key. d. The railroad track key has been made consistent. e. Building footprint for EA-28A has been added.
18	Fig 2-9		Make changes to the figure.	a. add some contour numbers to contour lines. b. add walkways to the key. c. fix RR tracks on map and key to be	a. Contour line elevations have been added as available. b. Walkways have been added to the key. c. The railroad tracks have been made consistent.



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				consistent. d. add rectangle (building) to the key.	d. The rectangle has been added to the key.
19	Fig 2-10		Make changes to the figure.	a. add some contour numbers to contour lines. b. add walkways to the key. c. add rectangle (building) to the key. d. there is a structure that looks like a blast wall. Whatever the structure, please add to the key.	a. Contour line elevations have been added as available. b. Walkways have been added to the key. c. The rectangle has been added to the key. d. The structure being referred to is the rail road tie blast wall removed in 2005. The figure has been modified to label this as a former blast wall.
20	Fig 2-11		Make changes to the figure.	a. add some contour numbers to contour lines. b. add walkways to the key. c. fix RR tracks on map and key to be consistent.	a. Contour line elevations have been added as available. b. Walkways have been added to the key. c. The railroad tracks have been made consistent.
21	Fig 2-12		Make changes to the figure.	a. add some contour numbers to contour lines.	a. Contour line elevations have been added as available.
22	Table 2-1		Clarification requested.	Are these the actual number obtained, or the projected numbers from the SOW.	These are the numbers planned, as indicated by the use of the word "planned" in the Table title.
23	3-2/1		The text references other explosives that did not exceed 10 mg/kg.	Provide a short discussion at an appropriate point in the text regarding the other explosives and the corresponding concentrations.	The following insert was added to the text: <i>"Table 3-5 indicates the range of detected concentrations of the other explosives as follows: 1,3,5-trinitrobenzene: 0.259 to 9.84 mg/kg 1,3-dinitrobenzene: 0.163 to 0.257 mg/kg 2,4-dinitrotoluene: 0.422 to 2.08 mg/kg 2,6-dinitrotoluene: 1.07 mg/kg 2-amino-4,6-dinitrotoluene: 0.772 to 1.96 mg/kg 4-amino, 4,6-dinitrotoluene: 0.267 to 5.68 mg/kg"</i>
24	3-2/8		Clarification requested.	Provide a short description of a constant error variance.	The following text has been added:  <i>"The linear regression model assumes that the standard deviations of the error terms (the part of the equation not</i>

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					<i>explained by the independent variable) must be constant and not dependent on the independent variable (i.e., the fixed laboratory results, in this case). A common technique to remedy this is to transform the data. A transformation of the data...."</i>
25	3-2/ graph		Typo.	Change "AT" to "At a."	"AT" has been changed to "At a".
26	3-3/3		Text revision needed.	Change to read: "...and the cleanup level of 1646 mg/kg will be interpreted as..."	"could" has been changed to "will".
27	3-3/8		Text revision requested.	Revise to read: "...will be considered exceedences for the purpose of making remediation decisions."	"should" has been changed to "will".
28	3-3/1-21		Clarification requested.	Confirm that any areas identified with a TNT screening concentration of 878 mg/kg of TNT was covered with plastic.	Please see the response to General Comment 2a.
29	3-3/26-28		Clarification requested.	Was the area with a reported 206 mg/kg screening result for TNT (lab= 2040 mg/kg) covered with plastic?	Yes. This is stated on Pg. 3-3, lines 11-12.
30	3-3/26-34		Additional discussion warranted.	Due to the lack of correlation between screening results and lab results for TNT, there needs to be discussion regarding consistent sample preparation, prior to starting the LL1 project. Either that, or screening samples should not be utilized, i.e. we should just use lab samples for the initial screens.	This item is being discussed within the context of the Load Line 1 Work Plan.
31	3-4/10-11		Text revision requested.	Revise text to read: "Remediation will be conducted at locations where the TNT screening result is at, or above, 878 mg/kg."	The text has been revised as follows: <i>"Remediation will be conducted at locations where the TNT screening results are at, or above 878 mg/kg."</i>
32	3-4/10-11		Confirmation requested.	Confirm that all areas with a TNT screening concentration of at or above 878 mg/kg are	Please see the response to General Comment 2a. All building foot prints where TNT screening results above 878

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				covered with plastic. If these areas were not covered with plastic in the SOW timeframe (because they were initially assumed to not be an issue), please provide a chart detailing the timeframe in which they were covered.	mg/kg were covered within the prescribed time frame.
33	3-4/13-15		Additional discussion and resolution required from the Army.	The text indicates that several samples were collected outside of the building footprints and many contained concentrations of TNT well above the established CUG. The additional work clause under the DFFO was invoked (several times) by Ohio EPA beginning on February 15, 2007. As of this date, the Army has not provided the Ohio EPA with a proposed solution to this issue. Additional sampling needs to be conducted.	It is agreed that contamination could have spread into areas outside of building footprints during slab and building demolition. This issue will require further stakeholder discussion; but may be addressed outside of the current URS contract.
34	3-4/25		Text change requested.	Change to read: "...preliminary, and will change pending review..."	The word "may" has been changed to "will".
35	3-4/28		Text change requested.	Change to read: "Preliminary-draft facility-wide cleanup..."	The words " <i>preliminary draft</i> " have been added to the sentence.
36	3-4/32		Text change requested.	Change to read: "...preliminary and will change pending review..."	The word "may" has been changed to "will".
37	Fig 3-1		Figure changes requested.	a. the figure depicts areas proposed for excavation. In the key, add the screening level on which this is based (i.e. minimally it should be 878 mg/kg). b. add basins to the key and clarify what they were used for . c. fix RR tracks on map and key to be consistent.	a. " <i>Based on a screening level of 878 mg/kg TNT</i> " has been added to the figure. b. Basins have been added to the key along with their use. c. The railroad tracks have been made consistent with the key.
38	Fig 3-2		Figure changes requested.	a. the figure depicts areas proposed for	a. " <i>Based on a screening level of 878 mg/kg TNT</i> " has

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				excavation. In the key, add the screening level on which this is based (i.e. minimally it should be 878 mg/kg). b. add basins to the key and clarify what they were used for . c. fix RR tracks on map and key to be consistent.	been added to the figure. b. Basins have been added to the key along with their use. c. The railroad tracks have been made consistent with the key.
39	Table 3-1		Add footnote.	Add a clarifying footnote to the table that it will be MI samples that determine whether or not, and how much, excavation will occur.	Footnote "3" has been added to the table that states the following: <i>"3"Any remediation at low potential buildings will be based on the results of the MI samples."</i>
40	Table 3-2		Add footnote.	Add a clarifying footnote to the table that it will be MI samples that determine whether or not, and how much, excavation will occur.	Footnote "3" has been added to the table that states the following: <i>"3"Any remediation at medium potential buildings will be based on the results of the MI samples."</i>
41	Table 3-3		Table clarifications requested.	a. why were there several samples where RDX was not field analyzed? b. please refer to other comments regarding the correlation between screening results and lab results.	a. In several instances, the TNT sample had to be diluted and re-run. In those cases, RDX did not need to be re-analyzed for that particular sample. RDX was analyzed in the original, undiluted sample. b. Please see responses to other comments.
42	Table 3-4		Clarification requested.	a. please ensure that any areas $\geq$ 878 mg/kg (TNT) are included in this table. b. please ensure that the TNT screen result of 206 mg/kg (lab result 2040 mg/kg) is added to this table, as this area needed to be excavated.	a. There are no additional areas where the TNT results were between 878 and 1,646 mg/kg. The additional exceedance of 878 mg/kg TNT from one of the subsamples from LL3EB4-SB-042SN was added to the table. b. This table is titled field screening. Therefore, it would be inappropriate to include the false negative screening result. However, a footnote explaining the exceedance via the fixed laboratory result has been added.
43	Table 3-6		The table depicts a screening result of 206 mg/kg TNT with a	Refer to the numerous comments in this correspondence regarding reliance on the	The field screening is only screening and is not in any way confirmatory sampling. It is used for safety purposes, to

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			corresponding lab result of 2040 mg/kg.	screening samples to initially determine excavation areas. We are not seeing good correlation. Additional discussion needs to occur to determine whether or not we have accurately determined the areas that need excavation. Lessons learned from this project need to be applied to LL1.	determine areas where cover should be applied immediately after slab demolition to help prevent the spread of contamination, and to provide where initial excavation should begin. Confirmatory multi-increment sampling will provide confirmation that the top 1 foot of soil does not exceed cleanup goals.
44	Table 3-7		This table summarizes results outside of the building footprints.	The issue of sampling outside of the building footprints that Ohio EPA invoked the additional work clause on, needs resolution.	It is agreed that contamination could have spread into areas outside of building footprints during slab and building demolition. This issue will require further stakeholder discussion; but may be addressed outside of the current URS contract.
45	4-1/3-6		Text addition/revision requested.	The final determination as to whether or not excavation will be needed at the low and medium priority buildings will be based upon MI sampling.	The following sentence was added to this paragraph: <i>"However, the final determination regarding remediation at the low and medium potential buildings will be based on the results of the MI sampling."</i>
46	4-1/7-15		Text addition requested.	Any areas where the TNT screen exceeded 878 mg/kg needs to be excavated. Additionally, the area where the 206 mg/kg TNT screen (2040 mg/kg TNT result) needs to be excavated.	These areas were included in the text. The third sentence was revised as follows: <i>"Eight exceedances (based on TNT screening levels greater than 878 mg/kg) ranged from 1,130 mg/kg to 4,860 mg/kg....The exceedances at Building EB-4 occurred in one soil core sample at two depths".</i>
47	4-1/21		Text revision requested.	The samples taken by Ohio EPA were not confirmation samples. They were samples of pink water and red soil that appeared after URS has screened different areas in the vicinity.  Additionally, Ohio EPA again raises the issue of whether or not other areas of the load lines	The samples were collected and field screened to confirm the results that the Ohio EPA had reported. The sentence was revised as follows: <i>"....and additional samples at the location where the Ohio EPA had sampled after screening were collected...."</i>  Please see the response to Comment 1.

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				were walked (post D/D, post screening and MI samples) to determine whether all impacted areas were identified.	
48	4-1/28 – 4-2/2		Text additions requested.	a. add approximate depths to all the excavation area bullets. b. confirm whether the 3 foot depth in the first bullet (vs. 4 feet) is due to refusal. c. were these areas based upon the 878 mg/kg TNT screen? d. have all impacted areas been identified and evaluated?	a. The text was modified to include the approximate depth information for each building.  b. Yes. The deepest interval sampled was at 2.9 feet because of refusal. The exceedances occurred at the surface and just above the last sample depth. This has been added to the report text. c. Yes. d. All reasonable efforts to identify potentially impacted areas have been completed as per the SOW.
49	4-2/3-8		This text discusses areas not delineated by the screening efforts.	These areas need to be delineated and excavated if above CUGs.	This is true and represents a data gap that needs to be addressed during the remediation phase of the project.
50	4-2/11-30		Text additions requested.	a. add approximate depths to the 3 <sup>rd</sup> bullet. b. confirm whether the 3 foot depth in the first bullet (vs. 4 feet) is due to refusal. c. why were no samples taken at depth from the area described in the second bullet? d. were these areas based upon the 878 mg/kg TNT screen? e. have all impacted areas been identified and evaluated?	a. Approximate depths at each location have been added. b. The 3 feet bgs reference is based upon a direct observation of the elevator sump shaft excavation side wall. c. This area was discovered on 05-16-08. All areas of the visual impact are outside of any building foot print. The shallow sampling was requested by the USACE and completed on a quick turn basis by URS within 2 hours of notification. It was not possible to safely complete vertical sampling in the short time frame. The areas were covered immediately after sampling. d. Yes. e. All reasonable efforts to identify potentially impacted areas have been completed as per the SOW.
51	Fig 4-1		Figure revisions requested.	a. add some contour numbers to contour lines.	a. Contour elevation values have been added as available.

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				<ul style="list-style-type: none"> <li>b. add walkways to the key.</li> <li>c. fix RR tracks on map and key to be consistent.</li> <li>d. add rectangle (building) to the key.</li> <li>e. change entry in key to read: Proposed Excavation Area.</li> <li>f. add basins to the key and clarify what they were used for .</li> <li>g. clarify that the results depicted are screening results.</li> <li>h. clarify why some depth intervals are italicized.</li> <li>i. depths determined by refusal? Please specify.</li> </ul>	<ul style="list-style-type: none"> <li>b. Walkways have been added to the key.</li> <li>c. The railroad track symbols have been made consistent.</li> <li>d. A rectangle has been added to the key.</li> <li>e. The key and Figure Title has been changed to read "Proposed Excavation Area".</li> <li>f. Basins and their use have been added to the key.</li> <li>g. A footnote has been added that indicates results are based on field screening</li> <li>h. The figure has been revised so that none of the depth intervals are italicized.</li> <li>i. At all locations where the deepest interval was less than 4 feet the reason was refusal. This has been added to the report text.</li> </ul>
52	Fig 4-2		Figure revisions requested.	<ul style="list-style-type: none"> <li>a. add some contour numbers to contour lines.</li> <li>b. add walkways to the key.</li> <li>c. fix RR tracks on map and key to be consistent.</li> <li>d. add rectangle (building) to the key.</li> <li>e. change entry in key to read: Proposed Excavation Area.</li> <li>f. clarify that the results depicted are screening results.</li> <li>g. clarify why some depth intervals are italicized.</li> <li>h. depths determined by refusal? Please specify.</li> <li>i. the text on page 3-3 references core 82A, 4<sup>th</sup> interval where the TNT screen result was 206 mg/kg. This cannot be found on the</li> </ul>	<ul style="list-style-type: none"> <li>a. Contour elevation values have been added as available.</li> <li>b. Walkways have been added to the key.</li> <li>c. The railroad track symbols have been made consistent.</li> <li>d. A rectangle has been added to the key.</li> <li>e. The key and Figure Title has been revised to read "Proposed Excavation Area"</li> <li>f. A footnote has been added that indicates results are based on field screening</li> <li>g. The figure has been revised so that none of the depth intervals are italicized.</li> <li>h. At all locations where the deepest interval was less than 4 feet the reason was refusal. This has been added to the report text.</li> <li>i. The boring selected for confirmation analysis (82A) was a duplicate of a boring collected the previous day (82). The screening results for boring 82 were included on the figure</li> </ul>

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				figure. The only one close is the one with a listed concentration of 4020 mg/kg... is this supposed to be the lab result of 2040 mg/kg? If so, are screening and lab results being mixed on these figures?	because of the exceedance (4,020 mg/kg). Thus, only screening results are shown on this figure. The text on pg. 3-3 has been revised to correct the 2,110 mg/kg result to 4,020 mg/kg for the original boring.
53	Fig 4-3		Figure revisions requested.	<ul style="list-style-type: none"> <li>a. add some contour numbers to contour lines.</li> <li>b. add walkways to the key.</li> <li>c. fix RR tracks on map and key to be consistent.</li> <li>d. add rectangle (building) to the key.</li> <li>e. change entry in key to read: Proposed Excavation Area.</li> <li>f. clarify that the results depicted are screening results.</li> <li>g. clarify why some depth intervals are italicized.</li> <li>h. depths determined by refusal? Please specify.</li> <li>i. add vacuum pump houses to the key.</li> <li>j. discussion needed regarding excavation at location DB4-SB-048 due to elevated screening result of TNT (just under 878 mg/kg).</li> <li>k. what is the confidence level that the lateral extent of the proposed excavation area on the western and northern sides has been determined?</li> </ul>	<ul style="list-style-type: none"> <li>a. Contour elevation values have been added as available.</li> <li>b. Walkways have been added to the key.</li> <li>c. The railroad track symbols have been made consistent.</li> <li>d. A rectangle has been added to the key.</li> <li>e. The key and Figure Title have been revised to read "Proposed Excavation Area"</li> <li>f. A footnote has been added that indicates results are based on field screening</li> <li>g. The figure has been revised so that none of the depth intervals are italicized.</li> <li>h. At all locations where the deepest interval was less than 4 feet the reason was refusal. This has been added to the report text.</li> <li>i. Vacuum bag houses have been added to the key.</li> <li>j. Since the adjusted CUG was not exceeded, this area was not proposed for remediation. Confirmatory sampling at depth is currently being discussed among stakeholders, which would confirm whether this area requires remediation.</li> <li>k. All reasonable efforts to identify potentially impacted areas have been completed as per the SOW. There is no way to be completely sure that "all areas" have been identified. This issue will be addressed during the excavation phase of the project.</li> </ul>



**DRAFT OF THE SAMPLING AND SCREENING ANALYSIS OF SOILS BELOW FLOOR SLABS AT RVAAP-09 LOAD LINE 2,  
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54	Fig 4-4		Figure revisions requested.	<ul style="list-style-type: none"> <li>a. add some contour numbers to contour lines.</li> <li>b. add walkways to the key.</li> <li>c. fix RR tracks on map and key to be consistent.</li> <li>d. add rectangle (building) to the key.</li> <li>e. change entry in key to read: Proposed Excavation Area.</li> <li>f. clarify that the results depicted are screening results.</li> <li>g. clarify why some depth intervals are italicized.</li> <li>h. depths determined by refusal? Please specify.</li> <li>i. discussion needed on extent of excavation (laterally and vertically) depicted on the north side of DB-10. How was this determined?</li> </ul>	<ul style="list-style-type: none"> <li>a. Contour elevation values have been added as available.</li> <li>b. Walkways have been added to the key.</li> <li>c. The railroad track symbols have been made consistent.</li> <li>d. A rectangle has been added to the key.</li> <li>e. The key and Figure Title have been revised to read "Proposed Excavation Area".</li> <li>f. A footnote has been added that indicates results are based on field screening.</li> <li>g. The figure has been revised so that none of the depth intervals are italicized.</li> <li>h. At all locations where the deepest interval was less than 4 feet the reason was refusal. This has been added to the report text.</li> <li>i. The excavation estimates were based upon the sample analytical results and visually stained areas. The stained areas are not contiguous and the entire area was highly disturbed by demolition activities. Therefore, the entire horizontal area between the stained locations is included in the designated "excavation area". Vertically the estimated depth is based upon soil conditions observed during sampling. This information was added to the text on Page 4-2.</li> </ul>
55	Fig 4-5		Figure revisions requested.	<ul style="list-style-type: none"> <li>a. add some contour numbers to contour lines.</li> <li>b. add walkways to the key.</li> <li>c. fix RR tracks on map and key to be consistent.</li> <li>d. add rectangle (building) to the key.</li> <li>e. change entry in key to read: Proposed Excavation Area.</li> </ul>	<ul style="list-style-type: none"> <li>a. Contour elevation values have been added as available.</li> <li>b. Walkways have been added to the key.</li> <li>c. The railroad track symbols will be made consistent.</li> <li>d. A rectangle has been added to the key.</li> <li>e. The key and Figure Title have been edited to read "Proposed Excavation Area".</li> <li>f. A footnote has been added that indicates results are</li> </ul>

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				<p>f. clarify that the results depicted are screening results.</p> <p>g. clarify why some depth intervals are italicized.</p> <p>h. depths determined by refusal? Please specify.</p> <p>i. discussion needed on extent of excavation (laterally and vertically) depicted on the NW side of EB-4A. How was this determined?</p> <p>j. discussion needed regarding lack of excavation in the vicinity of EB4A-SB-58. The 4 foot interval is close to the 878 mg/kg screen number.</p>	<p>based on field screening.</p> <p>g. The figure has been revised so that none of the depth intervals are italicized.</p> <p>h. At all locations where the deepest interval was less than 4 feet, the reason was refusal.</p> <p>i. The estimated excavation area is based horizontally upon the visually stained area and the analytical results from LL3EB4A URS-EPA1, 2, 3, and 4. The horizontal estimate is based upon analytical results from LL3EB4A-SB-058-SN which indicates impact (not exceedance) to 4.0 feet bgs.</p> <p>Additionally, the sump at EB-4AWN is assumed to be the source area. The elevation of the sump bottom (4 ft below the building slab elevation) so the 4.0 ft bgs is below the former sump bottom.</p> <p>j. Since the adjusted CUG was not exceeded, this area does not require remediation. Confirmatory sampling at depth is currently being discussed among stakeholders, which would confirm whether this area requires remediation.</p>
56	App B		Quality surveillance forms generated by previous BRACD RVAAP interim facility manager.	<p>Discussion needed on whether or not this is carried over to the LL1 project. It was not part of the original SOW. While Ohio EPA does not have an issue with this inspection being conducted for potential safety purposes, it cannot impact the schedule regarding sampling and potentially covering with plastic.</p> <p>If they are used, they are to be filled out</p>	<p>This issue is being discussed relative to the Load Line 1 Work Plan.</p> <p>URS agrees to do everything possible to ensure the sampling and plastic covering schedules are not impacted. However, URS had no control over the completion of these forms.</p> <p>These forms are no longer being used by BRACD and, therefore, will not be used during future sub-slab sampling.</p>

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				completely and accurately.	
57	App C		Introduction to sampling report forms.	<p>a. please add to the introduction that the final QC review was done as a request of the regulators.</p> <p>b. for samples logged in at the same time, please provide additional discussion in paragraph 2 as to how this could have occurred.</p>	<p>a. The introductory sentence has been revised as follows: <i>"A final Quality Control check.....was done at the request of the regulators....."</i></p> <p>b. As an efficiency two sample crews were utilized simultaneously to collect the screening samples. The crews remained within very close proximity to each other enabling them to use a single data recording member to complete the sample forms for both teams with consistency. Therefore similar sample (within a few minutes) times have been recorded on the sample forms. This detail has been added to the Introduction to Appendix C. Multi-logging will not be done in future field sampling events.</p>
58	App C		Future field effort sampling forms.	<p>a. make sure they are accurately and completely filled out.</p> <p>b. when indicating refusal, document the reason why if known. Bedrock? Demo debris?</p> <p>c. unless it can be demonstrated that errors will not occur by having one person documenting sampling observations/times etc. at multiple holes at the same time... do not do this.</p> <p>d. the protocol for changing log entries (one line strike out and initial) is consistently not followed. This must be done. For example, there is more than one log in here where the sample location is clear, but it is not clear when (and by whom) it was changed. This is not acceptable.</p>	All of these issues will be addressed in any future sampling efforts.

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				e. On one log, the sample was obtained on April 21, 2008. The first time it was QC checked was 11/11/08. Again, not acceptable.	
59	App E-1		Clarification requested.	On several of the TNT soil test worksheets, there is the notation that the sample ID was corrected. When did this occur? Who corrected them? What impact could this have on the data?	Sample IDs for screening were QC checked against the Field Forms by the QC Manager (Peggy Schuler) to ensure consistency. This check was done within 24-48 hours after the sampling. This should have had no impact on the data.
60	App E-2		Clarification requested.	On several of the RDX soil test worksheets, there is the notation that the sample ID was corrected. When did this occur? Who corrected them? What impact could this have on the data?	Sample IDs for screening were QC checked against the Field Forms by the QC Manager (Peggy Schuler) to ensure consistency. This check was done within 24-48 hours after the sampling. This should have had no impact on the data.
61	App F		Addition requested.	Provide copies of the chain of custody and waybill forms (if applicable). This is a standard part of RVAAP projects.	Noted. The Chains of Custody and any way bills will be included in the final report.
62	App F		Discussion needed.	There needs to be discussion regarding the use of discrete unprocessed samples to identify areas where excavation should occur. There wasn't very good correlation observed in this project.	The low bias indicated by the correlation samples has been addressed by the adjustment to the TNT cleanup goal for making cover and remediation decisions.  It is agreed that good correlation was not observed on this project regarding field screening. However, the screening does provide information for safety purposes and where to start excavating.
63	App F		Clarification requested.	The text on page 2 (first report) indicates that sample IDs on the COC were incorrectly identified on the COCs and the resulting lab reports, but were later changed for the report. When did this occur? Who corrected them?	The chain of custody is reviewed by the QC manager, Peggy Schuler, the day after the samples are shipped. Any incorrect IDs are corrected at that time. This has no impact on the quality of the data.

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				What impact could this have on the project?	
64	App F		COC forms.	The text indicates that analyses were inadvertently left off the 04/21/08 COC. Have someone do a check of the COCs before samples are submitted to the lab to ensure that they are properly and completely filled out.	This will be done in the future.
65	App G		Core coordinates.	Indicate whether these were surveyed in or GPS was used.	The coordinates for the borings were all obtained from a GPS unit, as per the approved Work Plan. This statement will be added to header in Appendix G.

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**APPENDIX I**  
**Dr. Thomas. S. Jenkins Report, March 2008**

# Quality Assurance Inspections – Ravenna AAP

March 28, 2008

## Overview

On March 28, 2008, I met with Cindy Reis of the Louisville District, Corps of Engineers at the site of the former Ravenna Army Ammunition Plant. My assignment was to observe the soil sampling and on-site analysis being conducted by URS Corporation under contract to the Louisville District, and to make recommendations with regard to the quality of the work being conducted.

I met with Stan Levenger, the URS Project Manager, and with him and Cindy Reis I observed soil sampling being conducted on March 28. The field team collected both 1 ft depth and 4 ft depth samples during our inspection.

The samples were returned to the field laboratory, where the plastic core liners were opened, and the increments of soil from prescribed depths were placed in individual plastic bags.

The samples in plastic bags were then taken to the analysis room where I observed sample processing and on-site analysis for TNT and RDX using the EnSys colorimetric TNT and RDX tests. The field chemist conducting this portion of the work was Brenda Pratt.

Specific observations and recommendations were made to Mr. Levenger and Ms. Pratt prior to departing the site. These observations are summarized below, along with expanded explanations.

## Field Sampling

Because of the heavy snow and late spring in 2008, many of the areas to be sampled had standing water present. In some places the water was several inches deep where ground-level slabs had been removed. There seemed a difference of opinion on whether the water filled these areas immediately upon slab removal or whether the water was due to precipitation from the previous nights rainfall. The contractor was concerned about collection samples through the overlying water due the possible contamination of subsurface samples during the collection.

Four-foot core samples were collected in an area where most of the slab area was flooded. Several high spots were present, however, and these spots were used to collect the required number of core samples. There appeared to be no other option for sampling this area because there is a requirement to sample within a prescribed time after slab removal has been inspected and approved. It was not possible to observe the surface of

most of the area prior to selecting sampling locations due to the presence of the water. Overall, the sampling operation appeared to be conducted as well as possible under the field conditions present.

#### Core sample opening and collection of depth increments

The 4-ft core samples were returned to the field laboratory and placed on a fresh plastic surface where the plastic core liners were opened using a knife. The plastic was sliced twice along the entire length and the piece of plastic was removed. This allowed the removal of soil from the prescribed depths. The removal of depth samples was conducted in a careful and clean manner, with fresh gloves for each increment.

It was observed, however, that the knife used to slice open the cores came in contact with the soil inside the plastic core liner, and that the knife was not cleaned between core samples. Inspection of the knife blade did not reveal any noticeable soil clinging to the short portion that contacted the soil. Nevertheless, it is good practice to clean this blade before it is used for opening subsequent plastic liners to ensure that no carryover is possible between samples.

#### Sample weighing and extraction

The depth increment samples were taken to the analysis area within the field laboratory where subsampling was conducted. The field chemist carefully mixed each sample as best she could and then weighed out  $10.1 \pm 0.1$  g of soil into a the plastic weigh boat supplied in the EnSys kit. The soil was then transferred to the plastic extraction vessel that contains steel ball bearings. A 50-ml portion of acetone was added and the sample shaken quickly to disperse the soil. After all the soil samples (about 10) were weighed and the acetone added. Each sample was shaken vigorously for the prescribed 3-min period. The steel balls help to break up clumps and thereby improve the extraction kinetics.

I observed that this subsampling and weighing was conducted carefully with attention to collecting a representative subsample, and making sure that cross contamination did not take place. Since the samples were wet, a small amount of soil remained in the weigh boat and could not be completely transferred to the extraction vessel. The use of a 10.1 g sample, rather than 10.0 g compensated for this situation to some degree and any uncertainty resulting is minor.

#### EnSys colorimetric TNT test

I observed Ms. Pratt as she conducted the TNT test on two control samples. The result for the first sample was low compared with the acceptance criteria for the test. The result for the second control sample was within the acceptance range. Ms. Pratt conducted the test in an appropriate manner. A possible reason for the low result will be discussed below. No operational changes are required.



### EnSys colorimetric RDX test

I observed Ms. Pratt conduct the RDX test on a number of control samples and a soil extract. The results for the control sample were consistently low compared to the acceptance criteria. I believe that some work is needed to improve the results from this test. Recommendations are given below.

### Discussion and recommendations for the TNT test

The TNT test uses chemistry discovered in the 19<sup>th</sup> century by Janowski. The test for TNT in soil was developed by Jenkins (1990) using this chemistry, and the test was commercialized with a minor modification by EnSys Corporation, which was subsequently purchased by SDI Corporation. SDI now supplies the test materials and procedure.

The test involves the reaction of TNT (and other polynitroaromatics) with base resulting in the formation of the reddish colored Janowski anion if TNT is present. The intensity of the color produced is proportional to the concentration of TNT in the sample. The absorbance at 540 nm is used to measure the intensity of the color and the concentration is calculated using the Beer-Lambert Law.

The original test developed by Jenkins used potassium hydroxide as the base. EnSys modified the test and used tetrabutyl ammonium hydroxide as the base. Otherwise the test is identical to that developed by Jenkins.

The key step in this test is the rate of reaction of TNT in the acetone extract with the base. A 3-min reaction period is specified. This reaction period was developed for temperatures near room temperature. Reaction rates for chemical reactions are strongly temperature dependent. The rule of thumb is that the rate of reaction doubles for each 10 degree centigrade increase.

It was observed that the acetone used for this test is not maintained near room temperature and its temperature slowly rises over time when the small room used to conduct this test is warmed just before sample processing is initiated. The temperature of the acetone was probably not at room temperature when the first control sample was run, and this may have been the cause of the low result for the control sample. By the time the second control sample was run, the temperature of the acetone was higher, and the second control result was within the acceptance range.

In the past, the reported control sample results were within the acceptance range, however, I am not sure that results for non-compliance control samples have been recorded. My recommendation is that the acetone and test materials for the TNT test be maintained at room temperature, or that they be warmed to room temperature for an adequate period to achieve room temperature, before the test is run.

Overall, I do not believe that results for this test that have already been run are compromised to any degree by the observations above. No samples have been near the action level, and the TNT test result would only be marginally low from the low temperature of the acetone.

#### Discussion and recommendations for the RDX test

The RDX test is also based on chemistry developed in the 19<sup>th</sup> Century. There are two steps to the test. Walsh and Jenkins (1991) utilized the two-reaction sequence to develop an on-site method for RDX. EnSys commercialized the test without modification.

In the first step, RDX (and other nitramines and organo nitrate esters) are converted to nitrous acid by zinc and acetic acid in a reaction known as the Francimont Reaction. In the second step, the nitrous acid is reacted with a Griess reagent (NitriVer reagent pillow) to convert the nitrous acid to a reddish-colored azo dye. The intensity of the color from the azo dye is proportional to concentration. The color intensity developed is measured by the absorbance at 510 nm.

Upon my introduction to Ms. Pratt, the field chemist, she immediately raised the issue of low results of the control sample for the RDX test. I had supplied a journal article (Jenkins and Walsh 1992) discussing this test and the TNT test to her (via Cindy Reis), and she had read the paper prior to my arrival on site. Ms. Pratt explained that she had contacted SDI Corporation about the low result for the control samples with the RDX test, but was not able to obtain any useful assistance from them.

I explained that the most critical step in this test is the reaction of the acetone extract with the zinc and acetic acid. The reagent contact time is critical, and if the contact time is too short, an incomplete conversion of the RDX to nitrous acid is the result, and if the contact time is too long, the nitrous acid continues to react with the zinc and is further reduced.

This step is described in the instruction supplied with the test as follows. "Remove plunger from 5cc zinc syringe and quickly pour the solution from the 13ml tube into the syringe barrel. Hold syringe over reaction vial as dripping will occur. Replace plunger and invert twice. **Rapidly** filter the solution into the 50ml Reaction vial."

As mentioned for the TNT test, the rate of chemical reactions is strongly dependent on the temperature. The acetone used to extract the RDX and the other contents of the test kit were not maintained at room temperature and were warming as tests were conducted. Thus the temperature of the reactants changed over the course of testing.

The results for control samples conducted during my observation period were consistently low, but as much as a factor of two. Discussion with Ms. Pratt indicated that

this had been the typical result. She was not able to reproduce the test result for the control samples.

I suggested that there were two possible reasons for the poor reproducibility and low results for the control samples. The first is the necessity of a small amount of water to be present when the acetone solution is reacted with the zinc. For soil extracts, this would not be a problem because the soil has sufficient water present, and this water would be extracted into the acetone. But for the control samples, the amount of water present in the commercial acetone might be inadequate. To ensure that this is not a problem, I recommended that about water should be added to the acetone to about 3% by volume.

The second potential reason is the temperature of the reactants. A low temperature could result in incomplete conversion of the RDX in the control sample to nitrous acid, and hence a low test result. My suggestion is to store acetone and the test kits at room temperature, or bring them to room temperature before conducting the test. The analyst should practice the test, paying special attention to the reaction time of the control sample with the zinc in the syringe, to ensure that reproducible results within the acceptance range are obtained. Once a constant temperature for the acetone and kit contents is achieved, some experiments to establish the proper reaction time should be conducted.

I estimate that results previously obtained using the RDX test could be low as much as a factor of two based on the absorbance values obtained for the control samples. In the future, all results for control samples should be documented to allow an assessment of the quality of analytical results obtained on a daily basis.

#### References

Jenkins, T.F. (1990) Development of a Simplified Field Method for the Determination of TNT in Soil. USACRREL Special Report 90-38.

Jenkins, T.F. and M.E. Walsh (1992) Development of Field Screening Methods for TNT, 2,4-DNT and RDX in Soil. Talanta, 39, 419-428.

Walsh, M.E. and T.F. Jenkins (1991) Development of a Field Screening Method for RDX in Soil. USACRREL Special Report 91-7.

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