



Weston Solutions, Inc.  
4710-A Interstate Drive  
Cincinnati, OH 45246  
[www.westonsolutions.com](http://www.westonsolutions.com)

**The Trusted Integrator for Sustainable Solutions**

February 27, 2009

Mr. Steven L. Renninger  
On-Scene Coordinator  
Emergency Response Branch  
U.S. Environmental Protection Agency Region V  
26 West Martin Luther King Drive, Office G-41  
Cincinnati, OH 45268

Re: Site Assessment Report  
Rose Exterminator Site  
Norwood, Hamilton County, Ohio  
Technical Direction Document No. S05-0001-0811-008  
WESTON START Contract No. EP-S5-06-04

Dear Mr. Renninger:

The Weston Solutions, Inc. (WESTON®), Superfund Technical Assessment and Response Team (START) is submitting the enclosed site assessment report for the Rose Exterminator Site in Norwood, Hamilton County, Ohio. If you have any questions or comments regarding the report or require additional copies, please contact me at (513) 703-3092 or Frank Beodray at (440) 202-2806.

Sincerely,  
WESTON SOLUTIONS, INC.

A handwritten signature in black ink that reads "Frank L. Beodray".

Frank Beodray  
WESTON START Project Manager

A handwritten signature in blue ink that reads "John Sherrard".

John Sherrard  
WESTON START Project Leader

Enclosure

cc: WESTON START DCN File

**SITE ASSESSMENT REPORT  
FOR  
ROSE EXTERMINATOR SITE  
NORWOOD, HAMILTON COUNTY, OHIO**

**NPL STATUS: NON-NPL**

Prepared for:

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

Region V  
Emergency Response Branch  
26 West Martin Luther King Drive, Office G-41  
Cincinnati, OH 45268

Prepared by:

**WESTON SOLUTIONS, INC.**

4710-A Interstate Drive  
Cincinnati, OH 45246

Date Prepared	February 27, 2009
TDD Number	S05-0001-0811-008
Document Control Number	565-2A-AADM
Contract Number	EP-S5-06-04
START Project Manager	Frank Beodray
Telephone Number	(440) 202-2806
U.S. EPA On-Scene Coordinator	Steven L. Renninger

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Prepared by:

**WESTON SOLUTIONS, INC.**  
4710-A Interstate Drive  
Cincinnati, OH 45246

February 27, 2009

Prepared by:  Date: 2/27/09  
John Sherrard  
START Project Lead

Approved by:  Date: 2/27/09  
Pamela Bayles  
START Program Manager

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## LIST OF ACRONYMS AND ABBREVIATIONS

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CFR	<i>Code of Federal Regulations</i>
ESA	Environmental Site Assessment
mg/kg	Milligram per kilogram
mg/L	Milligram per liter
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NHD	Norwood Health Department
NIOSH	National Institute for Occupational Safety and Health
Ohio EPA	Ohio Environmental Protection Agency
OSC	On-Scene Coordinator
RCRA	Resource Conservation and Recovery Act
START	Superfund Technical Assessment and Response Team
TCLP	Toxicity Characteristic Leaching Procedure
TDD	Technical Direction Document
Tetra Tech	Tetra Tech EM Inc.
U.S. EPA	United States Environmental Protection Agency
WESTON	Weston Solutions, Inc.
XRF	X-ray fluorescence

## 1. INTRODUCTION

The United States Environmental Protection Agency (U.S. EPA) tasked the Weston Solutions, Inc. (WESTON®), Superfund Technical Assessment and Response Team (START) to perform a site assessment for the Rose Exterminator Site (Site) in Norwood, Hamilton County, Ohio, under Technical Direction Document (TDD) Number S05-0001-0811-008. START was directed to perform the following activities:

- Compile available site information;
- Develop site-specific safety and sampling plans;
- Perform a site reconnaissance;
- Collect surficial soil samples;
- Procure analytical laboratory services;
- Provide photographic documentation of the Site (see Appendix A);
- Provide a written log documenting all on-site activities;
- Validate analytical data (see Appendix B);
- Evaluate potential threats posed by the Site to human health and the environment; and
- Prepare and deliver this site assessment report.

The site assessment was performed to evaluate Site conditions and possible threats to human health, public welfare, and the environment in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Title 40 of the *Code of Federal Regulations* (CFR), 300.415(b)(2).

This site assessment report is organized into the sections summarized below.

- **Introduction** – Provides a brief description of the objective and scope of site assessment activities.
- **Site Background** – Details the Site description and history.
- **Site Assessment Activities** – Discusses the methods and procedures used during the site assessment.
- **Analytical Results** – Discusses the analytical results for samples collected during the site assessment.

- **Threats to Human Health and the Environment** – Identifies conditions at the Site that warrant a removal action under the NCP.
- **Conclusions** – Provides a summary of the site assessment findings.

## **2. SITE BACKGROUND**

This section discusses the description and history of the site.

### **2.1 SITE DESCRIPTION**

The Site is located at 5421 Carthage Avenue, Norwood, Hamilton County, Ohio (Figure 1). The geographical coordinates for the Site are Latitude 39.17393° North and Longitude 84.45535° West. The site consists of a 0.055-acre parcel located in a primarily mixed land use area that includes commercial and residential properties. The site is bounded by a former automobile repair garage and restaurant to the north; Carthage Avenue to the east; a residence to the south; and residences to the west (Figure 2). One vacant cinder-block building is located at the Site approximately 100 feet from Carthage Avenue. The building measures approximately 33 by 20 feet, has 9-foot-tall cinder-block walls, and has no roof. The building structure is damaged. Debris including concrete blocks, wood beams, toys, vegetation, and trash is scattered inside the building, which contains evidence of trespassing. White staining (arsenic contamination) is visible on the inside walls of the building

### **2.2 SITE HISTORY**

The Site currently is vacant and owned by the estate of John Rogers, Jr. According to the City of Norwood, approximately 65 years ago, the founder of the Rose Exterminator Company (a local exterminating company) used the building for small-scale production of a rodenticide containing arsenic. According to Site records, the product was mixed and packaged in the building until the 1940s. The company ceased operations in 1974, and the building has remained unoccupied since.

The Norwood Health Department (NHD) conducted a site investigation on April 29, 1974, with assistance from the National Institute for Occupational Safety and Health (NIOSH). Based on available documentation, samples were collected and analyzed for arsenic only. NIOSH personnel sampled the building rafter wood and collected wipe grab samples from the floor, walls, and other surfaces in the building. Sample results indicated elevated arsenic concentrations, prompting the submittal of a letter dated 1974 to the owner (Rose Exterminator Company) requesting the proper

cleanup and decontamination of the building. NHD continued to conduct site inspections in 1977, 1978, and 1980, with no apparent response from the Rose Exterminator Company.

A new owner, John Rogers, Jr., acquired the Site property in 1981 and expressed an interest in demolishing the Site building. NHD contacted the new owner regarding past contamination and recommended decontamination before building demolition. In 1981, NIOSH completed a health hazard evaluation report in response to an NHD request to determine the extent of arsenic contamination in the building. A total of 14 dust wipe samples were collected from various surfaces in the building. Sample results indicated arsenic contents as high as 41 percent and laboratory analytical results ranging from 1.4 to 2,100 micrograms per square inch. NIOSH recommended the decontamination and demolition of the Site building. In September 1982, the property owner received a permit to decontaminate and demolish the Site building. No further correspondence is available until September 2004, when an NHD Nuisance Investigation Report was initiated.

On September 14, 2004, NHD conducted a site inspection. NHD observations include an old oil tank at the rear of the Site and a large dumping area containing dirt, concrete, and asphalt.

In a report dated June 25, 2008, Tetra Tech EM Inc. (Tetra Tech) completed a Phase I environmental site assessment (ESA) at the Site. The Ohio Environmental Protection Agency (Ohio EPA) Division of Emergency and Remedial Response tasked Tetra Tech to perform the Phase I ESA of the vacant building.

In a letter dated January 29, 2009, the Ohio EPA requested U.S. EPA assistance in conducting a removal site evaluation and potential time-critical removal action at the Site because of elevated arsenic and lead concentrations.

On December 30, 2008, U.S. EPA conducted a site assessment to document Site conditions and evaluate the Site for a time-critical removal action (see Section 3.0).

### **3. SITE ASSESSMENT ACTIVITIES**

Site reconnaissance activities were conducted on December 18, 2008, and site assessment activities were conducted on December 30, 2008. Four surficial soil samples were collected from the Site. Each activity was conducted to evaluate potential threats to human health and the environment. The site reconnaissance and sampling activities are discussed below.

#### **3.1 SITE RECONNAISSANCE**

On December 18, 2008, WESTON START member John Sherrard and U.S. EPA On-Scene Coordinator (OSC) Steve Renninger conducted a site reconnaissance. WESTON START observed a vacant concrete-block storage building with no roof at the Site. The door to the building was secured by a nailed wood board. Evidence of trespassing was indicated by toys and trash piled inside the building. WESTON START also observed residential homes within 50 feet of the storage shed on the Site's western and southern perimeters. Before leaving the Site, OSC Renninger and WESTON START formulated a sampling plan for the site assessment to be conducted on December 30, 2008.

#### **3.2 SAMPLING ACTIVITIES**

On December 30, 2008, at 2:00 p.m., WESTON START members John Sherrard and Randy Kirkland mobilized to the Site to conduct site assessment activities. To evaluate whether Site soil poses a threat to human health and the environment, WESTON START used an INNOV-X model Alpha 4000 portable handheld x-ray fluorescence (XRF) analyzer to screen surface soil at 32 locations around the Site and to screen concrete-block walls at 3 locations in the building. XRF screening results indicated total arsenic and total lead concentrations high as 73,101 and 1,795 milligrams per kilogram (mg/kg), respectively, in Site surface soils. Wall screening results indicated total arsenic at concentrations as high as 2,529 mg/kg. Table 3-1 summarizes the XRF screening results, and Figure 3 summarizes the XRF results and shows the screening locations.

**TABLE 3-1  
 SUMMARY OF XRF SCREENING FOR ARSENIC AND LEAD**

<b>XRF Screening Location #</b>	<b>Medium</b>	<b>Total Arsenic (mg/kg)</b>	<b>Total Lead (mg/kg)</b>
1	Surface Soil	71 ± 8	35 ± 5
2	Surface Soil	58 ± 16	<LOD ± 37
3	Surface Soil	144 ± 10	115 ± 7
4	Surface Soil	157 ± 16	100 ± 11
5	Surface Soil	694 ± 39	1,795 ± 41
6	Surface Soil	2,321 ± 40	374 ± 13
7	Surface Soil	1,768 ± 30	196 ± 8
8	Surface Soil	73,101 ± 1,588	54 ± 16
9	Surface Soil	2,370 ± 39	137 ± 8
10	Surface Soil	455 ± 13	124 ± 6
11	Wall Surface	2,529 ± 50	<LOD ± 17
12	Surface Soil	1,475 ± 24	134 ± 7
13	Surface Soil	2,104 ± 32	63 ± 5
14	Wall Surface	763 ± 24	<LOD ± 18
15	Surface Soil	386 ± 22	544 ± 18
16	Wall Surface	1,481 ± 36	25 ± 6
17	Surface Soil	346 ± 12	58 ± 5
18	Surface Soil	21,704 ± 335	125 ± 10
19	Surface Soil	30,423 ± 501	49 ± 9
20	Surface Soil	4,191 ± 59	105 ± 7
21	Surface Soil	1,414 ± 25	130 ± 7
22	Surface Soil	162 ± 10	106 ± 7
23	Surface Soil	<LOD ± 41	463 ± 13
24	Surface Soil	65 ± 14	377 ± 13
25	Surface Soil	634 ± 21	428 ± 14
26	Surface Soil	<LOD ± 29	106 ± 8
27	Surface Soil	230 ± 14	153 ± 9
28	Surface Soil	558 ± 28	361 ± 18
29	Surface Soil	281 ± 12	86 ± 7
30	Surface Soil	166 ± 9	104 ± 6
31	Surface Soil	2,619 ± 42	359 ± 12
32	Surface Soil	612 ± 22	562 ± 16
33	Surface Soil	690 ± 37	1,037 ± 32
34	Surface Soil	2,720 ± 55	140 ± 10
35	Surface Soil	2,641 ± 49	1,637 ± 30

Notes:

<LOD = Less than level of detection for the XRF analyzer  
 mg/kg = Milligram per kilogram  
 XRF = X-ray fluorescence  
 ± = plus or minus

OSC Renninger also tasked WESTON START to collect (1) three surface soil samples from the XRF screening locations yielding the three highest total arsenic concentrations in the building and (2) one surface soil sample from the XRF screening location outside the building that yielded the highest total arsenic and total lead concentrations.

At 3:00 p.m., WESTON START collected three surface soil samples (samples No. S-1 through S-3) from inside the building and one surface soil sample (sample No. S-4) from outside the building as summarized below (see Figure 3).

- Sample No. S-1 correlates to XRF screening location #8.
- Sample No. S-2 correlates to XRF screening location #19.
- Sample No. S-3 correlates to XRF screening location #18.
- Sample No. S-4 correlates to XRF screening location #35.

WESTON START donned Level D personal protection equipment to collect the soil samples. All soil samples were collected using dedicated plastic scoops. Sampling gloves were replaced prior to the collection of each sample.

Under chain-of-custody form No. 378961, WESTON START submitted the four soil samples for analysis for total Resource Conservation and Recovery Act (RCRA) metals and Toxicity Characteristic Leachate Procedure (TCLP) RCRA metals. Test America of Dayton, Ohio, analyzed the samples under analytical TDD No. S05-0001-0811-009. WESTON START requested a turnaround time of 14 business days. Section 4 discusses the analytical results.

#### 4. ANALYTICAL RESULTS

Test America of Dayton, Ohio, analyzed all of the site assessment samples for total RCRA and TCLP metals. Tables 4-1 and 4-2 summarize the analytical results. Appendix B contains the validated analytical results. The analytical results for the samples are discussed below.

The four soil samples contained total arsenic concentrations ranging from 2,980 to 68,800 mg/kg, total lead concentrations ranging from nondetect to 1,560 mg/kg, and TCLP arsenic concentrations ranging from 0.557 to 7.44 milligrams per liter (mg/L). All total arsenic results exceeded the Ohio Department of Health (ODH) residential arsenic action level of 20 mg/kg. The total lead result of 1,560 mg/kg exceeded the ODH residential lead action level of 400 mg/kg. The TCLP arsenic result of 7.44 mg/L exceeded the TCLP arsenic regulatory action level of 5.0 mg/L.

**TABLE 4-1  
 SUMMARY OF TOTAL RCRA METALS SAMPLE RESULTS**

Analyte	Sample Identification No.			
	S-1 (mg/kg)	S-2 (mg/kg)	S-3 (mg/kg)	S-4 (mg/kg)
Arsenic	<b>68,800</b>	<b>45,300</b>	<b>17,800</b>	<b>2,980</b>
Barium	95	105	102	1,420
Cadmium	ND	ND	153	9.45
Chromium	ND	ND	ND	12.7
Lead	ND	ND	170	<b>1,560</b>
Mercury	11	9.63	5.24	1.5
Selenium	ND	ND	ND	ND
Silver	ND	ND	ND	ND

Notes:

**Highlighted bold results** exceed applicable ODH residential action levels.

mg/kg = Milligram per kilogram

ND = Not detected at laboratory method detection limits

**TABLE 4-2  
 SUMMARY OF TCLP RCRA METALS SAMPLE RESULTS**

Analyte	Regulatory Action Level	Sample Identification No.			
		S-1 (mg/kg)	S-2 (mg/kg)	S-3 (mg/kg)	S-4 (mg/kg)
Arsenic	5.0	<b>7.44</b>	2.2	2.58	0.557
Barium	100.0	0.225	0.186	0.205	0.545
Cadmium	1.0	ND	ND	0.398	ND
Chromium	5.0	ND	ND	ND	ND
Lead	5.0	ND	ND	ND	ND
Mercury	0.2	ND	ND	ND	ND
Selenium	1.0	ND	ND	ND	ND
Silver	5.0	ND	ND	ND	ND

Notes:

**Highlighted bold results** exceed applicable TCLP regulatory action levels.

mg/kg = Milligram per kilogram

ND = Not detected at laboratory method detection limits

## 5. THREATS TO HUMAN HEALTH AND THE ENVIRONMENT

Factors to be considered when determining the appropriateness of a potential removal action at a site are delineated in the NCP at 40 CFR 300.415(b)(2). The factors applicable to the Site are summarized below.

- **Actual or potential exposure of nearby human populations, animals, or the food chain to hazardous substances or pollutants or contaminants**

During the December 30, 2008, U.S. EPA site investigation, WESTON START noted that the Site building structure was damaged. Debris including concrete blocks, wood beams, toys, vegetation, and trash is scattered inside the building, which contains evidence of trespassing. White staining (arsenic contamination) is visible on the inside walls of the building.

WESTON START used an INNOV-X model Alpha 4000 portable handheld XRF analyzer to screen surface soil inside and outside the building for total metals. WESTON START documented the XRF readings summarized below.

- XRF results for soil inside the building ranged from 346 to 73,101 mg/kg total arsenic and 40 to 1,795 mg/kg total lead.
- XRF results for soil outside the building ranged from nondetect to 2,720 mg/kg total arsenic and nondetect to 1,637 mg/kg total lead.
- XRF results for the walls in the building ranged from 763 to 2,529 mg/kg total arsenic.

Sample Nos. S-1 through S-4 contained total arsenic concentrations of 68,800, 45,300, 17,800 and 2,980 mg/kg, respectively, and Sample No. S-4 contained a total lead concentration of 1,420 mg/kg, which exceed the ODH residential arsenic action level of 20 mg/kg and the ODH residential lead action level of 400 mg/kg.

According to 40 CFR 261.2, a solid waste is considered a hazardous waste if it exhibits any of the characteristics of ignitability, corrosivity, toxicity, and/or reactivity.

Sample No. S-1 yielded a TCLP arsenic concentration of 7.44 mg/L. According to 40 CFR 261.24(b), a solid waste exhibits the characteristic of toxicity if the TCLP value is greater than the TCLP regulatory limit stated in 40 CFR 261.24 ,Table 1. The TCLP regulatory limit for arsenic is 5.0 mg/L. Therefore, by definition, Sample No. S-1 represents a hazardous waste.

Exposure to arsenic can be through ingestion, inhalation, or skin absorption. Once absorbed, arsenic is widely distributed throughout the body tissues, including the liver, abdominal viscera, bone, and skin. Acute arsenic poisoning in humans is usually through accidental or intentional ingestion. Although rare, acute poisoning may be followed by difficulty swallowing, irritation of the mouth, epigastric pain, vomiting, and diarrhea, followed by stupor, coma, and death. Long-term arsenic exposure is linked to liver, lung, prostate, bladder, kidney, and non-melanoma skin cancers. Arsenic apparently is not linked to Non-Hodgkin's lymphoma or other leukemias.

Lead is a well-documented poison that causes a variety of health effects, including developmental delays and lowered intelligent quotients (IQ) in children. Other health effects linked to long-term lead exposure include brain and kidney damage. Children and fetuses are particularly vulnerable to lead.

Residential areas are located within 50 feet of the Site. Even through Site access is restricted (the building door is nailed shut), trespassing has occurred and contact with an accidental or intentional release of hazardous materials is possible. The close proximity of residences immediately next to the Site (within 50 feet) greatly increases the likelihood of human health and environmental impacts. In addition, WESTON START noted that rainwater enters the building (which has no roof), so arsenic and lead contamination is migrating into the environment. Potential exposure could occur through each migration pathway and imminently endanger human health and the environment. Exposure pathways include direct contact and inhalation associated with uncontrolled arsenic contamination in and around the Site building.

- **Hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate or pose a threat of release**

Surface soil samples collected from the Site indicate the presence of arsenic and lead at concentrations as high as 68,800 and 1,560 mg/kg, respectively. In addition, laboratory analysis has confirmed that Sample No. S-1 contained a TCLP arsenic level of 7.44 mg/L, which is greater than the TCLP arsenic regulatory level of 5.0 mg/L. The potential exists for hazardous substances to migrate as runoff during storm events or to become airborne as contaminated dust.

- **Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released**

Sampling analytical results document surface soil arsenic contamination at levels as high as 68,800 mg/kg and lead contamination as high as 1,560 mg/kg. The potential exists for hazardous substances to migrate as runoff during storm events or to become airborne as contaminated dust. Winds could cause dust particles containing arsenic and lead to migrate off the Site to surrounding residential areas.

- **The availability of other appropriate federal or state response mechanisms to respond to the release**

In a letter dated January 29, 2009, the Ohio EPA requested U.S. EPA Region 5 assistance with conducting a time-critical removal action at the Site. The State of Ohio and the City of Norwood do not have the funds required to remove contaminated soil found at the Site.

## 6. CONCLUSIONS

On December 30, 2008, WESTON START used an INNOV-X model Alpha 4000 portable handheld XRF analyzer to screen surface soil at 32 locations around the Site and to screen concrete-block walls at 3 locations in the building. XRF screening results indicated total arsenic and total lead concentrations high as 73,101 and 1,795 milligrams per kilogram (mg/kg), respectively, in Site surface soils. Wall screening results indicated total arsenic at concentrations as high as 2,529 mg/kg.

WESTON START collected four surface soil samples for total and TCLP RCRA metals analysis. Sample Nos. S-1 through S-4 contained total arsenic concentrations of 68,800, 45,300, 17,800 and 2,980 mg/kg, respectively, and Sample No. S-4 contained a total lead concentration of 1,420 mg/kg, which exceed the ODH residential arsenic action level of 20 mg/kg and the ODH residential lead action level of 400 mg/kg. In addition, Sample No. S-1 contained a TCLP arsenic concentration of 7.44 mg/L, which is greater than the TCLP regulatory level of 5.0 mg/L.

Based on analytical results and Site conditions observed during the site assessment, the Site meets four criteria for a removal action pursuant to 40 CFR 300.415(b)(2). The surficial soil arsenic and lead contamination at the Site poses an imminent health threat and is a danger to the public and environment.

## FIGURES

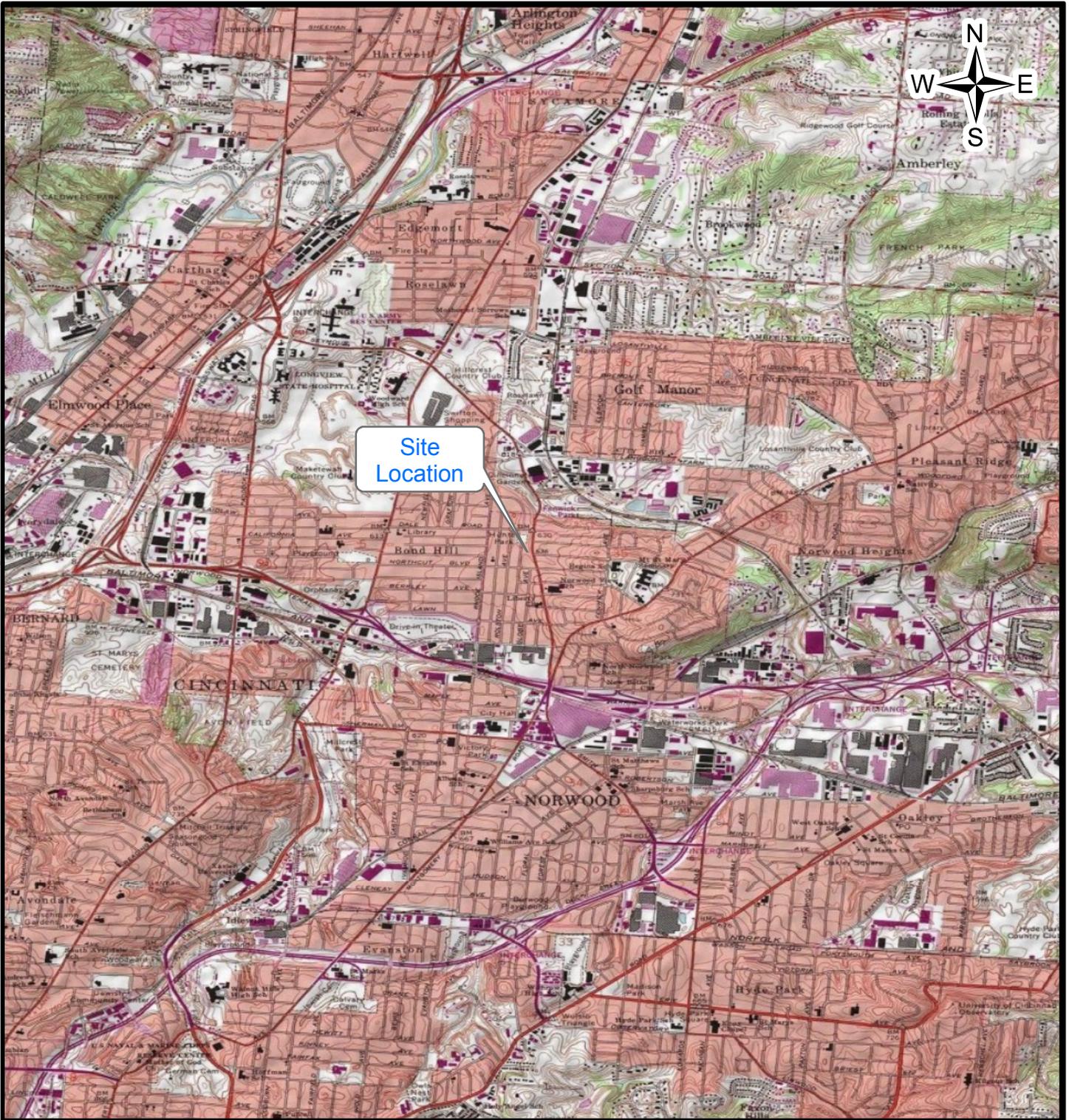


Image Source: National Geographic Society

Norwood, Hamilton County, Ohio



Figure 1



Prepared for:  
**U.S. EPA Region 5**  
 Contract No: EP-S5-06-04

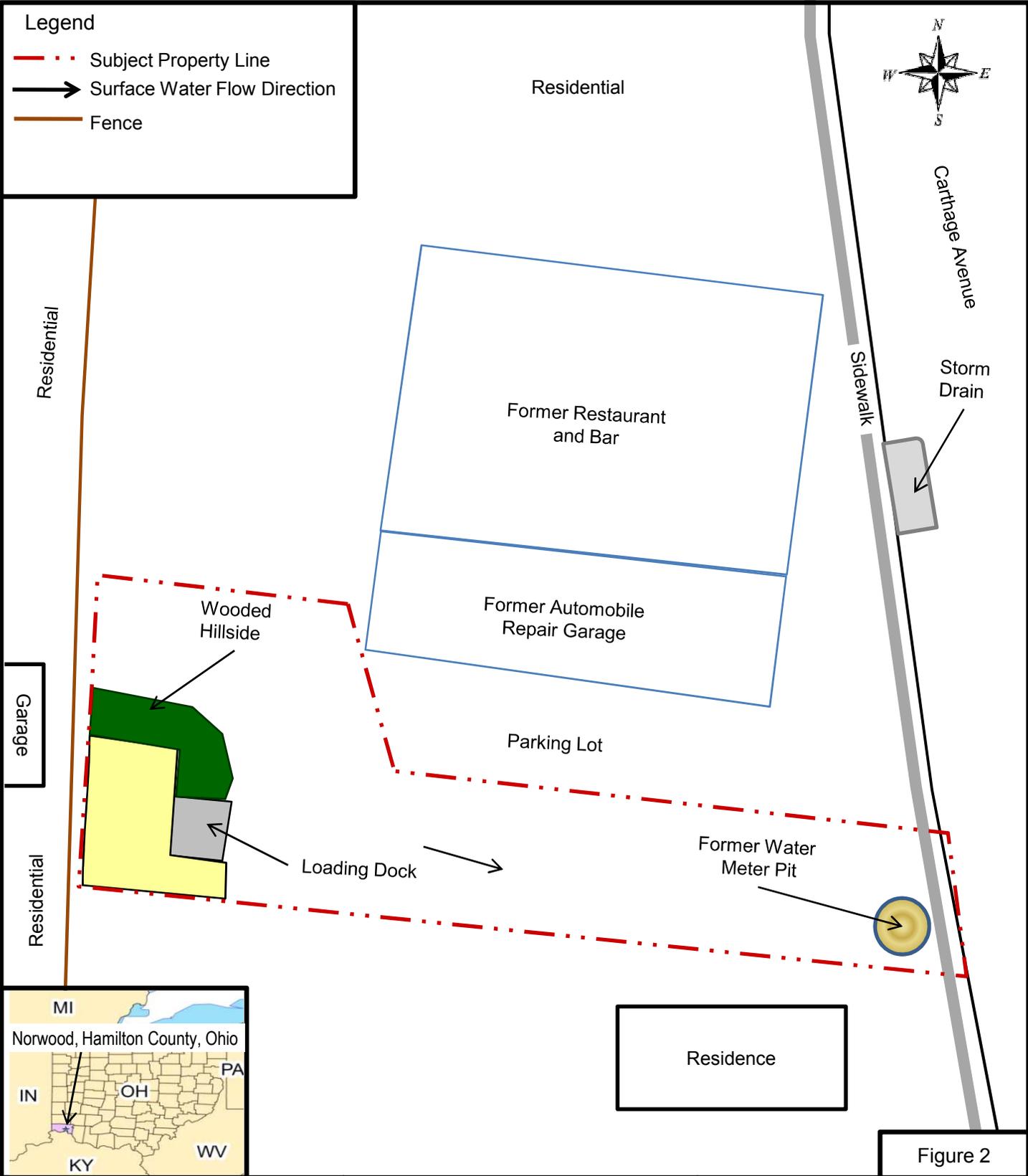


Prepared by:  
**Weston Solutions, Inc.**  
 4710 Interstate Dr., Suite A  
 West Chester, OH 45246

TDD No.: S05-0001-0811-008  
 DCN: 565-2A-AADM

Site Location Map  
 Rose Exterminator Site  
 Norwood, Hamilton County, Ohio  
 February 24, 2009

Scale: Miles



Prepared for:  
**U.S. EPA Region V**  
Contract: EP-S5-06-04

TDD No.: S05-001-0811-008  
DCN: 565-2A-AADM



Prepared by:  
**Weston Solutions, Inc.**  
4710 Interstate Dr., Suite A  
West Chester, Ohio 45246

Site Layout Map  
Rose Exterminator Site  
Norwood, Hamilton County, Ohio  
February 24, 2009

Scale: Not to Scale

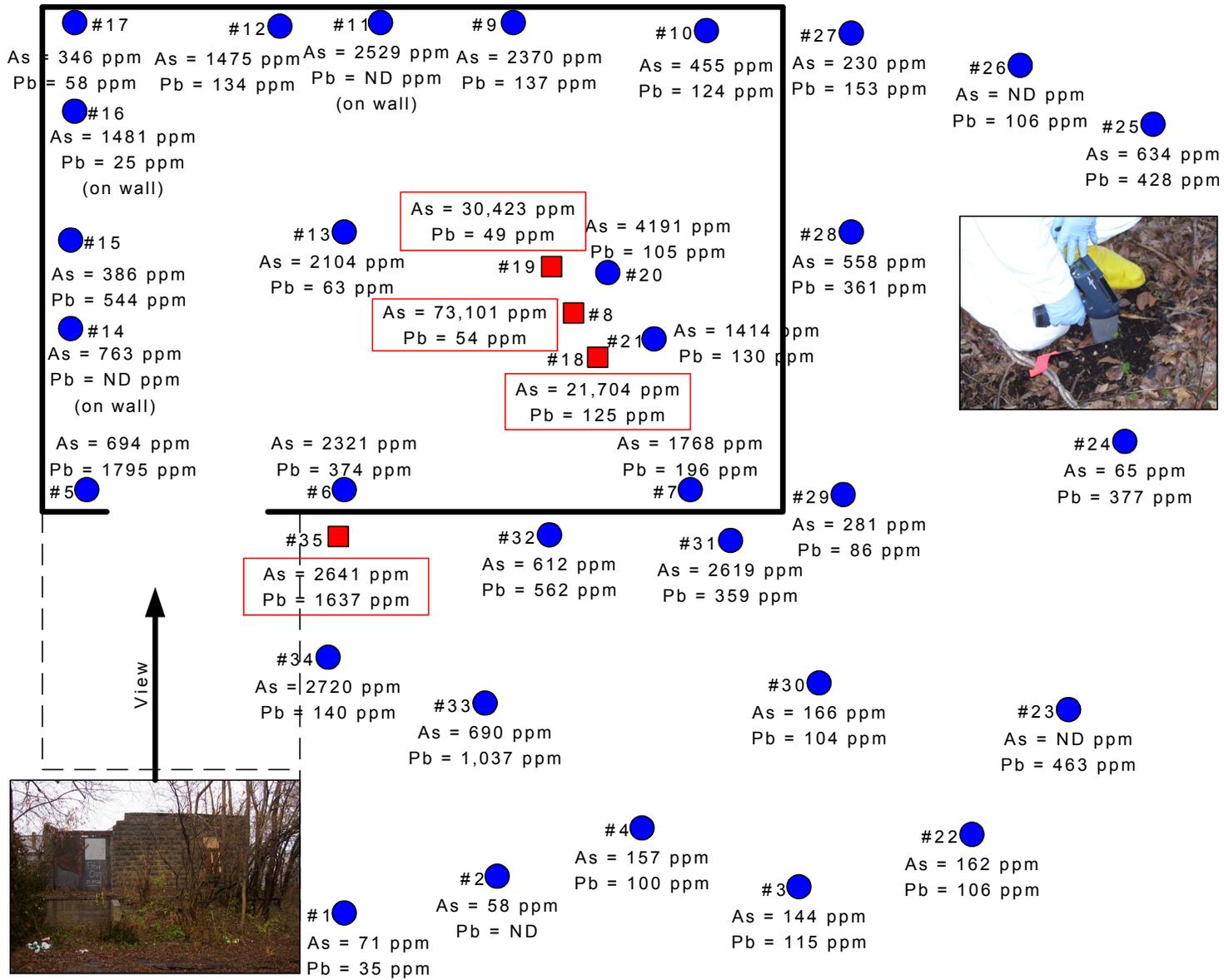


Figure 3  
 XRF Summary Map  
 Rose Exterminator Site  
 Norwood, Hamilton County, Ohio  
 February 24, 2009  
 Scale: Not to Scale

Prepared for:  
**U.S. EPA Region V**  
 Contract No: 5P-S5-06-04

TDD No.: S05-0001-0811-008  
 DCN: 565-2A-AADM

Prepared by:  
  
 Weston Solutions, Inc.  
 4710 Interstate Dr, Suite A  
 West Chester, OH 45246

Legend

- XRF Survey Location
- Soil Sample Location



**APPENDIX A**  
**PHOTOGRAPHIC LOG**



**Site:** Rose Exterminator Site

**Photograph No.:** 1

**Direction:** West

**Subject:** Vacant storage building viewed from Carthage Avenue

**Date:** December 30, 2008

**Photographer:** John Sherrard



**Site:** Rose Exterminator Site

**Photograph No.:** 2

**Direction:** West

**Subject:** Vacant storage building

**Date:** December 30, 2008

**Photographer:** John Sherrard



**Site:** Rose Exterminator Site

**Photograph No.:** 3

**Direction:** West

**Subject:** Residences next to western Site perimeter

**Date:** December 30, 2008

**Photographer:** John Sherrard



**Site:** Rose Exterminator Site

**Photograph No.:** 4

**Direction:** South

**Subject:** Residences next to southern Site perimeter

**Date:** December 30, 2008

**Photographer:** John Sherrard



**Site:** Rose Exterminator Site

**Photograph No.:** 5

**Direction:** Not Applicable (NA)

**Subject:** WESTON START using INNOV-X x-ray fluorescence (XRF) unit to screen surface soil

**Date:** December 30, 2008

**Photographer:** John Sherrard



**Site:** Rose Exterminator Site

**Photograph No.:** 6

**Direction:** NA

**Subject:** Close-up view of XRF unit

**Date:** December 30, 2008

**Photographer:** John Sherrard

**APPENDIX B**

**DATA VALIDATION REPORT AND VALIDATED ANALYTICAL  
RESULTS**

**ROSE EXTERMINATOR  
NORWOOD, OHIO  
DATA VALIDATION REPORT**

**Date:** February 18, 2009

**Laboratory:** TestAmerica, Dayton, Ohio

**Laboratory Project #:** DRL1340

**Data Validation Performed By:** Lisa Graczyk, Weston Solutions, Inc. (WESTON) Superfund Technical Assessment and Response Team (START)

**Weston Analytical Work Order #:** 20405.016.001.0566.00

This data validation report has been prepared by WESTON START under the START III Region V contract. This report documents the data validation for four soil samples collected for the Rose Exterminator Site that were analyzed for total and toxicity characteristic leaching procedure (TCLP) metals using U.S. Environmental Protection Agency (U.S. EPA) SW-846 Methods 6010B, 7471A, 7470A, and 1311.

A level II data package was requested from TestAmerica. The data validation was conducted in general accordance with the U.S. EPA "Contract Laboratory Program National Functional Guidelines for Inorganic Data Review" dated October 2004. The Attachment contains the results summary sheets with any hand-written qualifiers applied during data validation.

**TOTAL AND TCLP METALS BY U.S. EPA SW-846 METHODS 6010B, 7471A, 7470A, AND 1311**

**1. Samples**

The following table summarizes the samples for which this data validation is being conducted.

<b>Sample ID</b>	<b>Lab ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Analyzed</b>
S-1	DRL1340-01	Soil	12/30/2008	1/05/2009 – 1/13/2009
S-2	DRL1340-02	Soil	12/30/2008	1/05/2009 – 1/13/2009
S-3	DRL1340-03	Soil	12/30/2008	1/05/2009 – 1/13/2009
S-4	DRL1340-04	Soil	12/30/2008	1/05/2009 – 1/13/2009

**2. Holding Times**

The samples were analyzed within the holding time limit of 28 days from sample collection for mercury and 180 days from sample collection for all other metals.

**3. Blank Results**

The laboratory blanks analyzed with the samples were free of target contamination above the reporting limit.

**4. LCS Results**

The LCS recoveries were within the laboratory-established QC limits.

**5. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results**

For the total and TCLP metals analyses, an MS and MSD were analyzed using sample S-1 for the spiked sample. The MS and MSD recoveries were outside the QC limits for total arsenic, total lead, and total mercury. For total arsenic and mercury, the sample concentration is greater than four times the amount of the spike added; therefore, no qualification is required in accordance with the data validation guidance for these two metals. For total lead, the detected result in the sample used for the spike was below the reporting limit and not listed in the sample results summary. No qualification was applied for total lead.

**6. Laboratory Duplicate Results**

TestAmerica analyzed a laboratory duplicate for TCLP metals using sample S-2. The relative percent difference (RPD) between the laboratory duplicate were acceptable.

**7. Overall Assessment**

The metals data are acceptable for use based on the information received.

Data Validation Report  
Rose Exterminator  
TestAmerica  
Laboratory Project #: DRL1340

**ATTACHMENT**

**TESTAMERICA**  
**RESULTS SUMMARY**

January 14, 2009

Client:

Weston Solutions Inc. (Dayton, OH)  
714 East Monument Ave. Suite 107  
Dayton, OH 45402

Work Order: DRL1340  
Project Name: Rose Exterminator Site Assessment  
Project Number: 20405.016.001.0566.00

Attn: Randy Kirkland

Date Received: 12/31/08

**Samples logged in at Dayton laboratory.**

An executed copy of the Chain of Custody is also included as an addendum to this report.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at the number shown above.

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
S-1	DRL1340-01	12/30/08 14:00
S-2	DRL1340-02	12/30/08 14:10
S-3	DRL1340-03	12/30/08 14:20
S-4	DRL1340-04	12/30/08 14:30

Ohio Certification Number: 4074, 857

*Reproduction of this analytical report is permitted only in its entirety. This report shall not be reproduced except in full without the written approval of the laboratory.*

*TestAmerica Laboratories, Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our Laboratory.*

Report Approved By:



This report has been electronically signed.

**TestAmerica Dayton**

Deidre Taylor  
Project Manager

Weston Solutions Inc. (Dayton, OH)  
 714 East Monument Ave. Suite 107  
 Dayton, OH 45402  
 Randy Kirkland

Work Order: DRL1340  
 Project: Rose Exterminator Site Assessment  
 Project Number: 20405.016.001.0566.00

Received: 12/31/08  
 Reported: 01/14/09 09:22

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
<b>Sample ID: DRL1340-01 (S-1 - Non-aqueous)</b>				<b>Sampled: 12/30/08 14:00</b>			<b>Recvd: 12/31/08 08:55</b>		
General Chemistry Parameters									
% Solids	43.1		%	0.100	1	01/02/09 15:13	jlb	9010023	SW 846
Total Metals									
Arsenic	68800		mg/kg dry	384	50	01/05/09 11:45	JPP	8121224	SW 6010B
Barium	95.0		mg/kg dry	76.8	50	01/05/09 11:45	JPP	8121224	SW 6010B
Cadmium	<115	RL7	mg/kg dry	115	50	01/05/09 11:45	JPP	8121224	SW 6010B
Chromium	<153	RL7	mg/kg dry	153	50	01/05/09 11:45	JPP	8121224	SW 6010B
Lead	<307	RL7	mg/kg dry	307	50	01/05/09 11:45	JPP	8121224	SW 6010B
Mercury	11.0	M	mg/kg dry	0.374	20	01/07/09 18:00	MJW	9010078	SW 7471A
Selenium	<384	RL7	mg/kg dry	384	50	01/05/09 11:45	JPP	8121224	SW 6010B
Silver	<153	RL7	mg/kg dry	153	50	01/05/09 11:45	JPP	8121224	SW 6010B
TCLP Metals by 1311/6000/7000									
Arsenic	7.44		mg/L	0.500	1	01/06/09 15:16	JPP	9010074	SW 6010B
Barium	0.225		mg/L	0.100	1	01/06/09 15:16	JPP	9010074	SW 6010B
Cadmium	<0.150		mg/L	0.150	1	01/06/09 15:16	JPP	9010074	SW 6010B
Chromium	<0.200		mg/L	0.200	1	01/06/09 15:16	JPP	9010074	SW 6010B
Lead	<0.400		mg/L	0.400	1	01/06/09 15:16	JPP	9010074	SW 6010B
Mercury	<0.00100		mg/L	0.00100	1	01/13/09 12:55	MJW	9010348	SW 7470A
Selenium	<0.500		mg/L	0.500	1	01/06/09 15:16	JPP	9010074	SW 6010B
Silver	<0.200		mg/L	0.200	1	01/06/09 15:16	JPP	9010074	SW 6010B
Extraction	ND		N/A	NA	1	01/06/09 12:18	TAD	9010071	SW 1311
<b>Sample ID: DRL1340-02 (S-2 - Non-aqueous)</b>				<b>Sampled: 12/30/08 14:10</b>			<b>Recvd: 12/31/08 08:55</b>		
General Chemistry Parameters									
% Solids	40.5		%	0.100	1	01/02/09 15:13	jlb	9010023	SW 846
Total Metals									
Arsenic	45300		mg/kg dry	310	40	01/05/09 11:49	JPP	8121224	SW 6010B
Barium	105		mg/kg dry	62.0	40	01/05/09 11:49	JPP	8121224	SW 6010B
Cadmium	<93.2	RL7	mg/kg dry	93.2	40	01/05/09 11:49	JPP	8121224	SW 6010B
Chromium	<124	RL7	mg/kg dry	124	40	01/05/09 11:49	JPP	8121224	SW 6010B
Lead	<248	RL7	mg/kg dry	248	40	01/05/09 11:49	JPP	8121224	SW 6010B
Mercury	9.63		mg/kg dry	0.202	10	01/07/09 18:02	MJW	9010078	SW 7471A
Selenium	<310	RL7	mg/kg dry	310	40	01/05/09 11:49	JPP	8121224	SW 6010B
Silver	<124	RL7	mg/kg dry	124	40	01/05/09 11:49	JPP	8121224	SW 6010B
TCLP Metals by 1311/6000/7000									
Arsenic	2.20		mg/L	0.500	1	01/06/09 15:21	JPP	9010074	SW 6010B
Barium	0.186		mg/L	0.100	1	01/06/09 15:21	JPP	9010074	SW 6010B
Cadmium	<0.150		mg/L	0.150	1	01/06/09 15:21	JPP	9010074	SW 6010B
Chromium	<0.200		mg/L	0.200	1	01/06/09 15:21	JPP	9010074	SW 6010B
Lead	<0.400		mg/L	0.400	1	01/06/09 15:21	JPP	9010074	SW 6010B
Mercury	<0.00100		mg/L	0.00100	1	01/13/09 12:58	MJW	9010348	SW 7470A
Selenium	<0.500		mg/L	0.500	1	01/06/09 15:21	JPP	9010074	SW 6010B
Silver	<0.200		mg/L	0.200	1	01/06/09 15:21	JPP	9010074	SW 6010B
Extraction	ND		N/A	NA	1	01/06/09 12:18	TAD	9010071	SW 1311

Weston Solutions Inc. (Dayton, OH)  
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 Randy Kirkland

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Received: 12/31/08  
 Reported: 01/14/09 09:22

## ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	Rpt Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
<b>Sample ID: DRL1340-03 (S-3 - Non-aqueous)</b>				<b>Sampled: 12/30/08 14:20</b>			<b>Recvd: 12/31/08 08:55</b>		
General Chemistry Parameters									
% Solids	59.6		%	0.100	1	01/02/09 15:13	jlb	9010023	SW 846
Total Metals									
Arsenic	17800		mg/kg dry	105	20	01/05/09 11:54	JPP	8121224	SW 6010B
Barium	102		mg/kg dry	21.1	20	01/05/09 11:54	JPP	8121224	SW 6010B
Cadmium	153		mg/kg dry	31.7	20	01/05/09 11:54	JPP	8121224	SW 6010B
Chromium	<42.1	RL7	mg/kg dry	42.1	20	01/05/09 11:54	JPP	8121224	SW 6010B
Lead	170	RL7	mg/kg dry	84.3	20	01/05/09 11:54	JPP	8121224	SW 6010B
Mercury	5.24		mg/kg dry	0.138	10	01/07/09 18:04	MJW	9010078	SW 7471A
Selenium	<105	RL7	mg/kg dry	105	20	01/05/09 11:54	JPP	8121224	SW 6010B
Silver	<42.1	RL7	mg/kg dry	42.1	20	01/05/09 11:54	JPP	8121224	SW 6010B
TCLP Metals by 1311/6000/7000									
Arsenic	2.58		mg/L	0.500	1	01/06/09 15:26	JPP	9010074	SW 6010B
Barium	0.205		mg/L	0.100	1	01/06/09 15:26	JPP	9010074	SW 6010B
Cadmium	0.398		mg/L	0.150	1	01/06/09 15:26	JPP	9010074	SW 6010B
Chromium	<0.200		mg/L	0.200	1	01/06/09 15:26	JPP	9010074	SW 6010B
Lead	<0.400		mg/L	0.400	1	01/06/09 15:26	JPP	9010074	SW 6010B
Mercury	<0.00100		mg/L	0.00100	1	01/13/09 13:00	MJW	9010348	SW 7470A
Selenium	<0.500		mg/L	0.500	1	01/06/09 15:26	JPP	9010074	SW 6010B
Silver	<0.200		mg/L	0.200	1	01/06/09 15:26	JPP	9010074	SW 6010B
Extraction	ND		N/A	NA	1	01/06/09 12:18	TAD	9010071	SW 1311
<b>Sample ID: DRL1340-04 (S-4 - Non-aqueous)</b>				<b>Sampled: 12/30/08 14:30</b>			<b>Recvd: 12/31/08 08:55</b>		
General Chemistry Parameters									
% Solids	63.3		%	0.100	1	01/02/09 15:13	jlb	9010023	SW 846
Total Metals									
Arsenic	2980		mg/kg dry	25.6	5	01/02/09 19:12	JPP	8121224	SW 6010B
Barium	1420		mg/kg dry	5.12	5	01/02/09 19:12	JPP	8121224	SW 6010B
Cadmium	9.45		mg/kg dry	7.69	5	01/02/09 19:12	JPP	8121224	SW 6010B
Chromium	12.7		mg/kg dry	10.2	5	01/02/09 19:12	JPP	8121224	SW 6010B
Lead	1560		mg/kg dry	20.5	5	01/02/09 19:12	JPP	8121224	SW 6010B
Mercury	1.50		mg/kg dry	0.0647	5	01/07/09 18:06	MJW	9010078	SW 7471A
Selenium	<25.6		mg/kg dry	25.6	5	01/02/09 19:12	JPP	8121224	SW 6010B
Silver	<10.2		mg/kg dry	10.2	5	01/02/09 19:12	JPP	8121224	SW 6010B
TCLP Metals by 1311/6000/7000									
Arsenic	0.557		mg/L	0.500	1	01/06/09 15:30	JPP	9010074	SW 6010B
Barium	0.545		mg/L	0.100	1	01/06/09 15:30	JPP	9010074	SW 6010B
Cadmium	<0.150		mg/L	0.150	1	01/06/09 15:30	JPP	9010074	SW 6010B
Chromium	<0.200		mg/L	0.200	1	01/06/09 15:30	JPP	9010074	SW 6010B
Lead	<0.400		mg/L	0.400	1	01/06/09 15:30	JPP	9010074	SW 6010B
Mercury	<0.00100		mg/L	0.00100	1	01/13/09 13:07	MJW	9010348	SW 7470A
Selenium	<0.500		mg/L	0.500	1	01/06/09 15:30	JPP	9010074	SW 6010B
Silver	<0.200		mg/L	0.200	1	01/06/09 15:30	JPP	9010074	SW 6010B
Extraction	ND		N/A	NA	1	01/06/09 12:18	TAD	9010071	SW 1311

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## LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
<b>Total Metals</b>														
Arsenic	8121224			mg/kg wet	N/A	3.33	<3.33							
Barium	8121224			mg/kg wet	N/A	0.666	<0.666							
Cadmium	8121224			mg/kg wet	N/A	1.00	<1.00							
Chromium	8121224			mg/kg wet	N/A	1.33	<1.33							
Lead	8121224			mg/kg wet	N/A	2.66	<2.66							
Selenium	8121224			mg/kg wet	N/A	3.33	<3.33							
Silver	8121224			mg/kg wet	N/A	1.33	<1.33							
Mercury	9010078			mg/kg wet	N/A	0.00833	<0.00833							
<b>TCLP Metals by 1311/6000/7000</b>														
Arsenic	9010074			mg/L	N/A	0.500	<0.500							
Barium	9010074			mg/L	N/A	0.100	<0.100							
Cadmium	9010074			mg/L	N/A	0.150	<0.150							
Chromium	9010074			mg/L	N/A	0.200	<0.200							
Lead	9010074			mg/L	N/A	0.400	<0.400							
Selenium	9010074			mg/L	N/A	0.500	<0.500							
Silver	9010074			mg/L	N/A	0.200	<0.200							
Arsenic	9010074			mg/L	N/A	0.500	<0.500							
Barium	9010074			mg/L	N/A	0.100	<0.100							
Cadmium	9010074			mg/L	N/A	0.150	<0.150							
Chromium	9010074			mg/L	N/A	0.200	<0.200							
Lead	9010074			mg/L	N/A	0.400	<0.400							
Selenium	9010074			mg/L	N/A	0.500	<0.500							
Silver	9010074			mg/L	N/A	0.200	<0.200							
Mercury	9010348			mg/L	N/A	0.000200	<0.000200							
Mercury	9010348			mg/L	N/A	0.00100	<0.00100							

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### LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
<b>General Chemistry Parameters</b>													
<b>QC Source Sample: DRL1327-01</b>													
% Solids	9010023	72.5		%	N/A	0.100	72.1				1	20	
<b>Total Metals</b>													
<b>QC Source Sample: DRL1340-02</b>													
Mercury	9010078	9.63		mg/kg dry	N/A	1.01	9.27				4	10	
<b>TCLP Metals by 1311/6000/7000</b>													
<b>QC Source Sample: DRL1340-02</b>													
Arsenic	9010074	2.20		mg/L	N/A	2.50	2.12				4	200	
Barium	9010074	0.186		mg/L	N/A	0.500	0.180				3	200	
Cadmium	9010074	0.00940		mg/L	N/A	0.750	0.0190					200	
Chromium	9010074	<0.040		mg/L	N/A	1.00	<1.00					200	
Lead	9010074	0.0250		mg/L	N/A	2.00	0.132					200	
Selenium	9010074	<0.10		mg/L	N/A	2.50	<2.50					200	
Silver	9010074	<0.040		mg/L	N/A	1.00	<1.00					200	

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### LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
<b>Total Metals</b>														
Arsenic	8121224		33.3	mg/kg wet	N/A	3.33	31.2		94		80-120			
Barium	8121224		33.3	mg/kg wet	N/A	0.666	32.9		99		80-120			
Cadmium	8121224		33.3	mg/kg wet	N/A	1.00	33.4		100		80-120			
Chromium	8121224		33.3	mg/kg wet	N/A	1.33	32.4		97		80-120			
Lead	8121224		33.3	mg/kg wet	N/A	2.66	32.5		97		80-120			
Selenium	8121224		33.3	mg/kg wet	N/A	3.33	31.3		94		80-120			
Silver	8121224		33.3	mg/kg wet	N/A	1.33	31.6		95		80-120			
Mercury	9010078		0.0833	mg/kg wet	N/A	0.00833	0.0873		105		80-120			
<b>TCLP Metals by 1311/6000/7000</b>														
Arsenic	9010074		5.00	mg/L	N/A	0.500	4.71		94		80-120			
Barium	9010074		5.00	mg/L	N/A	0.100	4.82		96		80-120			
Cadmium	9010074		5.00	mg/L	N/A	0.150	4.93		99		80-120			
Chromium	9010074		5.00	mg/L	N/A	0.200	4.88		98		80-120			
Lead	9010074		5.00	mg/L	N/A	0.400	4.95		99		80-120			
Selenium	9010074		5.00	mg/L	N/A	0.500	4.90		98		80-120			
Silver	9010074		5.00	mg/L	N/A	0.200	4.85		97		80-120			
Mercury	9010348		0.00100	mg/L	N/A	0.000200	0.00107		107		80-120			

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## MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD	RPD Limit	Q
<b>Total Metals</b>														
<b>QC Source Sample: DRL1340-01</b>														
Arsenic	8121224	68800	76.4	mg/kg dry	N/A	381	63900	69900	-6340	1480	75-125	9	20	M
Barium	8121224	95.0	76.4	mg/kg dry	N/A	76.3	172	166	101	91	75-125	4	20	
Cadmium	8121224	68.5	76.4	mg/kg dry	N/A	115	132	154	83	109	75-125	15	20	
Chromium	8121224	26.1	76.4	mg/kg dry	N/A	152	105	99.6	103	94	75-125	5	20	
Lead	8121224	261	76.4	mg/kg dry	N/A	305	303	306	55	57	75-125	1	20	M
Selenium	8121224	<3.33	76.4	mg/kg dry	N/A	381	80.9	88.0	106	113	75-125	8	20	
Silver	8121224	<1.33	76.4	mg/kg dry	N/A	152	69.5	66.9	91	86	75-125	4	20	
<b>QC Source Sample: DRL1340-01</b>														
Mercury	9010078	11.0	0.190	mg/kg dry	N/A	0.380	12.5	12.6	769	827	75-125	1	20	M
<b>TCLP Metals by 1311/6000/7000</b>														
<b>QC Source Sample: DRL1340-01</b>														
Arsenic	9010074	7.44	5.00	mg/L	N/A	0.500	11.6	12.1	83	93	75-125	4	20	
Barium	9010074	0.225	5.00	mg/L	N/A	0.100	4.95	5.15	94	99	75-125	4	20	
Cadmium	9010074	0.109	5.00	mg/L	N/A	0.150	4.99	5.18	98	101	75-125	4	20	
Chromium	9010074	<0.040	5.00	mg/L	N/A	0.200	4.90	5.09	98	102	75-125	4	20	
Lead	9010074	0.0275	5.00	mg/L	N/A	0.400	4.92	5.10	98	101	75-125	4	20	
Selenium	9010074	<0.10	5.00	mg/L	N/A	0.500	4.92	5.10	98	102	75-125	4	20	
Silver	9010074	<0.040	5.00	mg/L	N/A	0.200	4.85	5.05	97	101	75-125	4	20	
<b>QC Source Sample: DRL1340-02RE1</b>														
Mercury	9010348	<0.00020	0.00500	mg/L	N/A	0.00100	0.00554	0.00551	111	110	75-125	1	20	

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## OTHER

Analyte	Seq/ Batch	Source Result	Spike Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
<b>Total Metals</b>														
<b>QC Source Sample: DRL1340-04</b>														
Arsenic	8121224	11.6	0.500	mg/kg dry	N/A	N/A	11.8		22		75-125			S3
Barium	8121224	5.55	0.500	mg/kg dry	N/A	N/A	5.75		40		75-125			S3
Cadmium	8121224	0.0369	0.500	mg/kg dry	N/A	N/A	0.509		94		75-125			
Chromium	8121224	0.0497	0.500	mg/kg dry	N/A	N/A	0.516		93		75-125			
Lead	8121224	6.07	0.500	mg/kg dry	N/A	N/A	6.18		22		75-125			S3
Selenium	8121224	0.0153	0.500	mg/kg dry	N/A	N/A	0.478		93		75-125			
Silver	8121224	0.00215	0.500	mg/kg dry	N/A	N/A	0.477		95		75-125			
<b>QC Source Sample: DRL1340-03</b>														
Mercury	9010078	7.62	2.00	mg/kg dry	N/A	N/A	9.78		108		75-125			
<b>TCLP Metals by 1311/6000/7000</b>														
<b>QC Source Sample: DRL1340-03</b>														
Arsenic	9010074	0.517	0.500	mg/L	N/A	N/A	0.962		89		0-200			
Barium	9010074	0.0410	0.500	mg/L	N/A	N/A	0.506		93		0-200			
Cadmium	9010074	0.0797	0.500	mg/L	N/A	N/A	0.545		93		0-200			
Chromium	9010074	0.000270	0.500	mg/L	N/A	N/A	0.474		95		0-200			
Lead	9010074	0.00780	0.500	mg/L	N/A	N/A	0.475		93		0-200			
Selenium	9010074	0.00720	0.500	mg/L	N/A	N/A	0.477		94		0-200			
Silver	9010074	0.000200	0.500	mg/L	N/A	N/A	0.469		94		0-200			
<b>QC Source Sample: DRL1337-02RE1</b>														
Mercury	9010348	0.00585	1.00	mg/L	N/A	N/A	1.21		121		75-125			

Weston Solutions Inc. (Dayton, OH)  
714 East Monument Ave. Suite 107  
Dayton, OH 45402  
Randy Kirkland

Work Order: DRL1340  
Project: Rose Exterminator Site Assessment  
Project Number: 20405.016.001.0566.00

Received: 12/31/08  
Reported: 01/14/09 09:22

## CERTIFICATION SUMMARY

*Any abnormalities or departures from sample acceptance policy shall be documented on the Chain of Custody and/or Case Narrative included with this report.*

*For information concerning certifications of this facility or another TestAmerica facility, please visit our website at [www.TestAmericaInc.com](http://www.TestAmericaInc.com)*

*Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) .*

## DATA QUALIFIERS AND DEFINITIONS

**M** The MS, MSD, and/or RPD are outside of acceptance limits due to matrix interference. Please see Blank Spike (LCS).  
**RL7** Sample required dilution due to high concentrations of target analyte.  
**S3** Post digestion spike is out of acceptance limits for this analyte

## ADDITIONAL COMMENTS

Results are reported on a wet weight basis unless otherwise noted.

## ANALYSIS LOCATIONS

The analyses listed below were analyzed in satellite facilities

# Chain of Custody Record

TAL-4142 (09/07)

30

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

DDC 13410

Client: **Western Solutions** Project Manager: **Randy Kirkland** Date: **12-30-08** Chain of Custody Number: **378961**

Address: **Chicago** Telephone Number (Area Code)/Fax Number: **937-602-3089** Lab Number: **1** of **1**

City: **Chicago** State: **IL** Zip Code: **60601** Site Contact: **John Sherrard** Lab Contact: **John Sherrard**

Project Name and Location (State): **Rose Exterminator Site Assessment** Carrier/Waybill Number: **20405.016.001.0566.00**

Contract/Purchase Order/Quote No. **20405.016.001.0566.00**

Sample I.D. No. and Description (Containers for each sample may be combined on one line)

Sample I.D. No. and Description	Date	Time	Matrix				Containers & Preservatives					Analysis (Attach list if more space is needed)								
			Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH		ZnAc/NaOH							
S-1	12/30/08	1400					X													
S-2		1410					X													
S-3		1420					X													
S-4		1430					X													
*Last item																				

Possible Hazard Identification:  Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required:  24 Hours  48 Hours  7 Days  14 Days  21 Days  Other \_\_\_\_\_

1. Relinquished By: **[Signature]** Date: **12/30/08** Time: **1615**

2. Relinquished By: **[Signature]** Date: **12.31.08** Time: **8:55 A.M.**

3. Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Comments: \_\_\_\_\_

Discrepancies

Rush or Short Hold

## Cooler/Sample Receipt

if rush 24hr 2day 3day 5day other \_\_\_\_\_

**Method of Shipment:**

Are samples soils requiring USDA quarantine? Yes  No   
If yes notify PM immediately (circle one)

Walk in Fed Ex UPS DHL TAI Courier Field Other \_\_\_\_\_  
Shipping Container Type: Cooler Box Other \_\_\_\_\_

Opened Date/Time 12-31-08 Initials LMC

Receipt Questions**	Y	N	n/a	"NO" answers require a comment							
COC present	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>								
Containers in good condition (unbroken and not leaking), and appropriately filled	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>								
Appropriate containers used & Adequate volume provided	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	B5	HNO3	HCL	NaOH	H2SO4	Methanol	None	Other (Specify)
				#/size							4/802
Correct preservation on the COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>								
Numbers of samples match COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>								
If used, custody seals were intact	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>								
Was CoC free of discrepancies?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>								
Samples received within hold time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>								
VOA samples received without headspace in excess of 6 mm	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>								
Trip Blanks received for each cooler with VOAs	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>								

Tracking # \_\_\_\_\_

Temp Acceptable? YES  NO  Thermometer ID 3° S Cooler ID \_\_\_\_\_  
 Uncorrected 3 Corrected 3 °C Ice Packing Material ICE + ZIP BAG  
 Melted Ice Blue Ice None Other \_\_\_\_\_  
 If out of temperature, note affected samples \_\_\_\_\_  
 Direct from Field?  Yes  No  
 Circle one

CHECK IF ADDITIONAL SHEETS REQUIRED

\*\* May not be applicable if samples are not for compliance testing

**Client Contact Record** (required for discrepancies, unless agreement is on file with project) Date & Time \_\_\_\_\_  
 Contact via:  phone  email  other \_\_\_\_\_ Person contacted \_\_\_\_\_

Discussion/Resolution

Is a revised chain being issued? Yes No- if Yes, it must be scanned.  
 Circle one

[Signature]  
 Reviewed by PM Signature Date/Time

Page \_\_\_\_\_ of \_\_\_\_\_