### SITE ASSESSMENT REPORT FOR PILSEN AREA SOIL SITE: RAILROAD/ALLEY CHICAGO, COOK COUNTY, ILLINOIS

#### **Revision 3**

Prepared for:

#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Emergency Response Branch Region 5 77 West Jackson Boulevard Chicago, IL 60604-3507

Prepared by:

#### WESTON SOLUTIONS, INC.

750 E Bunker Ct, Ste 500 Vernon Hills, IL 60061

Date Prepared April 2, 2014

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#### LIST OF ABBREVIATIONS AND ACRONYMS

μm Micrometer

μg/m<sup>3</sup> Microgram per cubic meter

μg/L Milligrams per liter

% Percent

ANOVA Analysis of variance
ARD Air and Radiation Division
bgs Below ground surface

BNSF Burlington Northern Santa Fe Railway
Cabeno Environmental Field Services, LLC

CFR Code of Federal Regulations

Crawford Station Midwest Generation's Crawford Station coal-fired power plant

DOJ Department of Justice

FIELDS Field Environmental Decision Support

Fisk Station Midwest Generation Fisk Station coal-fired power plant

°F Degrees Fahrenheit

ft Feet, foot

ft<sup>2</sup> Square feet, square foot g/s Grams per second GLM General Linear Model H. Kramer H. Kramer and Company

HQ Hazard quotient

IEPA Illinois Environmental Protection Agency
Juarez Benito Juarez Community Academy

LA-ICP-MS Laser ablation-inductively coupled plasma-mass spectrometry

mg/kg Milligram per kilogram
mg/L Milligrams per liter
MDC Madalina Paramas Gran

MRG Modeling Resource Group

NAAQS National Ambient Air Quality Standard

NCP National Oil and Hazardous Substances Pollution Contingency Plan

NEIC National Enforcement Investigations Center

NFR No Further Remediation

NOAA National Oceanic and Atmospheric Administration

OSC On-Scene Coordinator

Perez Manuel Perez Jr. Elementary School

PERRO Pilsen Environmental Rights & Reform Organization

Pilsen Lower West Side

PPE Personal protective equipment

REE Rare earth elements

RCRA Resource Conservation and Recovery Act

RML Removal Management Level

SAU Site Assessment Unit

SEM/EDS Scanning electron microscopy with energy dispersive spectrometry

SOP Standard Operating Procedure

## LIST OF ABBREVIATIONS AND ACRONYMS (CONTINUED)

SRP Site Remediation Program

START Superfund Technical Assessment and Response Team

STAT Analysis Corporation

TCLP Toxicity Characteristic Leaching Procedure

TDD Technical Direction Document

TRI Toxic Release Inventory
TSP Total suspended particulate

USCS Unified Soil Classification System USGS United States Geological Survey

WESTON Weston Solutions, Inc. XRF X-ray fluorescence

yd<sup>3</sup> Cubic yards

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1. INTRODUCTION

The United States Environmental Protection Agency tasked the Weston Solutions, Inc.

(WESTON®), Superfund Technical Assessment and Response Team (START) to assist EPA On-

Scene Coordinator (OSC) Ramon Mendoza in performing a site assessment at an alley (owned

by the City of Chicago) and a railroad spur (owned by Burlington Northern Santa Fe Railway

[BNSF]) located adjacent to the H. Kramer and Company (H. Kramer) facility in the Pilsen

neighborhood of Chicago, Cook County, IL (the Site, Figure 1-1). The objective of the site

assessment was to determine the impact of present and historical industrial sources of heavy

metal air emissions on Site soil. For an assessment of the impact of present and historical

industrial sources of heavy metal air emissions on soil on residential properties in the Pilsen

community, see "Site Assessment Report for Pilsen Soil Site: Downwind Residential Area"

(WESTON START, March, 2014).

Under Technical Direction Document (TDD) No. S05-0001-1211-002, EPA requested that

WESTON START document and photograph current Site conditions, conduct X-ray

fluorescence (XRF) screening, collect and analyze soil samples, and evaluate the potential for

imminent and substantial threats to the public health, welfare, or the environment posed by Site-

related conditions. In December 2012, May 2013, and August 2013, WESTON START

conducted three site assessment field sampling events.

This site assessment report is organized into the following sections:

• **Introduction** – Provides a brief description of the scope of site assessment activities.

• Site Background – Details the Site description and summarizes previous environmental

investigations in the vicinity of the Site.

• Site Assessment Activities – Discusses methods and procedures used during the site

assessment.

• Analytical Results – Discusses analytical results for samples collected during the site

assessment.

• **Soil Lithology** – Summarizes the soil characteristics at the Site.

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• Threats to Human Health and the Environment – Identifies Site conditions that may warrant a removal action under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

- **Summary and Conclusions** Summarizes the site assessment conclusions.
- **References** Provides a list of references used to prepare this site assessment report.

Figures and tables are presented after the conclusions section. This site assessment report contains four appendices. **Appendix A** provides photographic documentation of Site conditions and activities at the time of the site assessment. **Appendix B** provides soil boring logs. **Appendix C** provides the laboratory analytical and data validation reports for samples collected during the site assessment. **Appendix D** provides supplemental soil data analysis by EPA's Field Environmental Decision Support (FIELDS) group.

#### 2. SITE BACKGROUND

#### 2.1 SITE DESCRIPTION

The Site consists of a railroad spur owned by BNSF and an alley owned by the City of Chicago. **Figure 2-1** presents the Site features. The Site is located in the Lower West Side (Pilsen) area of the City of Chicago. The alley is approximately 460 feet (ft) long and 18 ft wide (approximately 8,280 square feet [ft²] in area) and is roughly paved with asphalt over 25% of its length from the east side. The remaining 75% of the alley is bare soil. The alley connects South Loomis Street and South Throop Street, south of West 21<sup>st</sup> Street and north of West Cermak Road. The alley is bordered to the north by H. Kramer, the east by South Throop Street, to the south by commercial and industrial businesses, and to the west by the railroad spur then South Loomis Street. According to a historical Sanborn fire insurance map, the alley existed since at least 1914.

The section of the railroad spur investigated in this site assessment is approximately 19,600 ft<sup>2</sup>. The railroad spur consists of an unused rail track and bare soil. The western portion of the railroad spur is located in the northeast region of a property occupied by the Benito Juarez Community Academy (Juarez), located at 1450-1510 West Cermak Road. The railroad spur curves to the south, crosses South Loomis Street, and extends along the west boundary of H.

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Kramer, a 6.5-acre active brass and bronze smelter located at 1345 West 21st Street. The eastern

portion of the railroad spur is bordered by a tire service company to the west (Tire Grading

Company, 1358 West Cermak Road), a metal processing company to the east (Wheeling Metal

Processing Company, 1338 West Cermak Road), and West Cermak Road to the south.

According to a historical Sanborn fire insurance map, the railroad spur existed since at least

1914.

Two schools are located within a ¼-mile-radius of the Site: Juarez and the Manuel Perez Jr.

Elementary School (Perez). Two City of Chicago parks are located within a ½-mile-radius of the

Site, Dvorak Park and Throop Park. In 2010, approximately 40,983 people lived within 1 mile

of the Site (EPA 2014). The Chicago Sanitary and Ship Canal is located approximately 0.45

miles to the south. According to National Oceanic and Atmospheric Administration (NOAA)

meteorological data collected from 1928 to 2013, the predominant wind direction in the Chicago,

Illinois area is from the southwest. Figure 2-2 presents a projected wind direction swath

superimposed over the southwest region of the Site.

Among the suspected present and historical industrial sources of lead air emissions in the Site

area are H. Kramer and the Midwest Generation Fisk Station coal-fired power plant (Fisk

Station. H. Kramer is a corporation that owns and operates a secondary nonferrous metals facility

manufacturing primarily brass and bronze ingots, where a portion of the facility's production

capacity is devoted to lead-containing metal alloys. In general, the secondary production of lead

begins with the recovery of old scrap from worn-out, damaged, or obsolete products and new

scrap that is made of product wastes and smelter-refinery drosses, residues, and slags. Secondary

lead processing results in the generation of air emissions and solid-phase wastes. Reverberatory

and blast furnaces used in smelting account for the vast majority of the total lead emissions.

Other emissions from secondary smelting include oxides of sulfur and nitrogen, antimony,

arsenic, copper, and tin. The solid-phase wastes generated by secondary processing include

emission control dust and slag. Slag produced during lead processing is composed of iron,

calcium, and silicon oxides, aluminum, and potentially several other metals in smaller amounts

including antimony, arsenic, beryllium, cadmium, chromium, cobalt, copper, lead, manganese,

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mercury, molybdenum, silver, and zinc. For a detailed description of secondary lead processing,

see EPA's Profile of the Nonferrous Metals Industry (EPA 1995). H. Kramer is listed in the EPA

Toxic Release Inventory (TRI) System. TRI facilities are legally required to report to EPA and

EPA has tracked both fugitive and stack emissions from H. Kramer from 1987 to 2013. Fugitive

emissions are emissions that could not reasonably pass through a stack, chimney, vent, or other

functionally equivalent opening, and often occur during leaks from pressurized equipment or during

material transfer. From 1987, approximately 54,366 pounds of lead, 832,567 pounds of zinc, and

6,782 pounds of copper have been released via fugitive and stack emissions (EPA 2013a). The

Fisk Station is a 66-acre former coal-fired power plant located at 1111 West Cermak Road. The

plant ceased electricity generation operations in August 2012. Fisk Station is also listed in the

EPA TRI System (EPA, 2013b). From 1998 to 2012, approximately 1,197 pounds of lead, 236

pounds of zinc, 373 pounds of copper, and 805 pounds of mercury have been released via

fugitive and stack emissions.

2.2 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

This section presents summaries of previous environmental investigations conducted in the

vicinity of the Site related to the Pilsen neighborhood, H. Kramer, and Fisk Station.

2.2.1 PERRO Surface Soil Investigation

In March 2005, the Pilsen Environmental Rights & Reform Organization (PERRO) collected 12

surface soil samples in the Site Area around the vicinity of H. Kramer (Subra Company 2005).

Lead was detected in soil samples collected from eight locations above the 2012 EPA Removal

Management Level (RML) with a hazard quotient (HQ) of 3 for residential soil of 400 milligram

per kilogram (mg/kg). Lead concentrations ranged from 440 to 37,000 mg/kg. Copper was

detected in one soil sample above the 2012 EPA RML HQ 3 for residential soil of 9,300 mg/kg,

with a concentration of 14,000 mg/kg. Zinc was detected in one soil sample above the 2012 EPA

RML HQ 3 for residential soil of 23,000 mg/kg, with a concentration of 100,000 mg/kg.

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2.2.2 H. Kramer Enrollment in the IEPA SRP

In June 2005, the Illinois Environmental Protection Agency (IEPA) Site Assessment Unit (SAU)

identified heavy metal contamination, particularly lead, on the H. Kramer property and in the

nearby vicinity. Lead concentrations in 15 of the 17 samples collected by the SAU exceeded

1,000 mg/kg. In September 2005, H. Kramer entered the IEPA Site Remediation Program (SRP).

Remedial action was implemented via in situ treatment or excavation in areas where lead or

cadmium exceeded the Toxicity Characteristic Leaching Procedure (TCLP) concentrations set

forth in Title 40 of the Code of Federal Regulation (CFR) Part 261, Subpart C, 261.24 (b),

thereby representing materials that meet the definition of hazardous waste by virtue of the

characteristic of toxicity.

On September 7, 2005, approximately 5 to 7 cubic yards (vd<sup>3</sup>) of soil were removed from an area

measuring 22 ft by 10 ft, and approximately 0.75 ft deep. The excavation area was then

backfilled with clean, imported gravel. Additionally, a small amount of soil located on top of the

sidewalk near the northeastern corner of the H. Kramer property was removed.

In the fall of 2011, in situ stabilization of shallow soils was conducted where TCLP lead

concentrations exceeded levels set forth in 40 CFR Part 261, Subpart C, 261.24 (b). A total of

2,769 yd<sup>3</sup> of impacted soils were stabilized in treatment cells with a mixture of kiln dust and

phosphorus. Confirmation samples of the treated soils were collected at a rate of one sample per

250 yd<sup>3</sup>. All samples confirmed that stabilization was achieved.

In December 2011 and March 2012, H. Kramer submitted to IEPA a Remedial Action

Completion Report and an Addendum to the Remedial Action Completion Report, respectively.

On March 29, 2012, IEPA granted H. Kramer a No Further Remediation (NFR) Letter,

signifying a release from further responsibilities pursuant to Section 58.10 of the Illinois

Environmental Protection Act (415 ILCS 5/1 et seq.). Requirements outlined in the NFR

included, but were not limited to, the following: (1) the remediation site should be restricted to

industrial/commercial land use; (2) a safety plan should be developed to address possible worker

exposure in the event that any future excavation and construction activities may occur within the

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contaminated soil that exists beneath the engineered barriers; (3) an asphalt barrier must remain

over the contaminated soils, and must be properly maintained to inhibit inhalation and ingestion

of the contaminated media; (4) a concrete cap barrier must remain over the contaminated soils,

and must be properly maintained as an engineered barrier to inhibit inhalation and ingestion of

the contaminated soil.

2.2.3 Pilsen IEPA Air Monitoring Study

In January 2010, IEPA placed an air monitoring station on the roof of Perez Elementary School

to sample ambient air concentrations of lead in the area. Air samples at the Perez monitor were

collected once every six days. In 2010, lead was detected in 11 of the approximately 60 samples

at concentrations above the National Ambient Air Quality Standard (NAAQS) of 0.15

microgram per cubic meter (µg/m<sup>3</sup>), averaged over three months. IEPA installed a second air

monitoring station at Juarez to the west of H. Kramer and Perez. According to IEPA, results

from the second air monitoring station indicated that H. Kramer was the primary contributor to

the elevated ambient air lead levels in the area. As a result, IEPA requested that the Illinois

Attorney General initiate legal action against H. Kramer relative to its contribution to a violation

of the lead NAAQS. EPA addressed this issue in a 2011 enforcement action (see Section 2.2.6).

2.2.4 NEIC Pilsen Investigations

In March 2011, EPA Region 5 requested EPA's National Enforcement Investigations Center

(NEIC) to examine particulate matter from H. Kramer and Fisk Station and total suspended

particulate (TSP) matter collected in ambient air on glass fiber filters from area air monitoring

stations to determine if material from either facility was present on the TSP filters. As described

in Section 2.2.3, in January 2010, IEPA began operating a source-oriented TSP air monitoring

station at Perez. This station is in the predominantly downwind direction of H. Kramer. In March

2011, a second TSP air monitoring site was established at Juarez.

On August 21, 2011, NEIC submitted a report to EPA Region 5 entitled "Characterization of

Lead-Bearing Particulate Matter," presenting analytical results of filters containing the highest

and lowest concentrations of lead collected at the Perez air monitoring site from January 2010 to

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January 2011, as well as baghouse dust samples collected at H. Kramer (EPA NEIC 2011). Analytical results indicated cadmium, copper, tin, and zinc were co-contaminants of the lead-bearing particulate matter collected on the TSP filters. These co-contaminants were metals used in alloys produced at H. Kramer and were also found in similar proportions in H. Kramer baghouse dust samples. Lead-bearing, micrometer (µm) sized (1–10 µm) aggregates of zinc-oxide crystallites were common in ambient air in the Pilsen neighborhood on at least six days in 2010, and were similar to the predominant baghouse dust particles from H. Kramer. The report concluded that H. Kramer's furnaces were likely the primary source of lead-bearing airborne particulate matter in the Pilsen neighborhood based on the location of its facility, wind direction, and analytical results of TSP filters and baghouse dust from its facility. However, the Fisk Station could not be excluded as a possible contributing source of lead contamination at the Perez air monitoring site because particulate matter similar to coal fly ash was observed on the filters collected from Perez. For more information, refer to EPA NEIC (2011).

On August 24, 2012, NEIC submitted a second report to EPA Region 5 entitled "Additional Characterization of Lead-Bearing Particulate Matter," presenting additional analytical results of lead-bearing particulate matter on TSP filters from the Juarez and Perez air monitoring stations and in coal and fly ash collected from the Fisk Station and Midwest Generation's Crawford Station coal-fired power plant (Crawford Station), in addition to any contribution from H. Kramer. In all, nine TSP filter samples collected at the Juarez air monitoring station and 32 TSP filter samples collected at the Perez air monitoring station were selected for analysis, along with baghouse dust samples from H. Kramer and coal and fly ash samples from both the Fisk and Crawford Stations. Relative elemental abundances were determined by laser ablation-inductively coupled plasma-mass spectrometry (LA-ICP-MS). Coal and fly ash from Crawford and TSP filters collected at Perez and Juarez air monitoring stations were analyzed by scanning electron microscopy with energy dispersive spectrometry (SEM/EDS) to characterize individual particles for elemental composition, morphology, and size. Analytical results of TSP filters were compared against each other and with facility sample results. The three key main findings from these analyses are summarized as follows:

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1) H. Kramer was indicated as the major contributor of airborne lead-bearing particulate matter

in the Pilsen neighborhood, both during and outside the NAAQS exceedance period of

October 2010 to February 2011.

2) Spherical Calcium-Aluminum-Silicon-oxide particles and correlations of rare earth elements

(REE) on TSP filters collected at Perez and Juarez were consistent with coal fly ash. Fisk

Station was the coal-generated power plant located closest to the air monitoring sites. The

next closest power plant, Crawford, was approximately seven times farther away. No other

likely sources of spherical Calcium-Aluminum-Silicon-oxide particles were identified in the

surrounding area. Furthermore, spherical Ca-Al-Si-oxide particles were the most common on

TSP filters collected during the 24-hour collection periods when the predominant wind

direction put Fisk Station upwind of the collection site.

3) Fisk Station contributed insignificant quantities of lead-bearing particulate matter relative to

H. Kramer during (and outside) the NAAQS exceedance period of October 2010 to February

2011.

For details supporting these conclusions, refer to EPA NEIC (2012).

2.2.5 H. Kramer 2011 Litigation and Emission Control Implementation

In 2011, the United States brought three claims against H. Kramer. First, the United States

alleged that H. Kramer violated the Illinois State Implementation Plan by causing or allowing the

emission of lead into the air to cause air pollution and/or to prevent the attainment or

maintenance of the revised NAAQS for lead. Second, the United States alleged that H. Kramer

failed to maintain and operate the rotary furnaces at the facility in a manner consistent with good

air pollution control practice, as required by the Standards of Performance for New Stationary

Sources. Third, the United States alleged that H. Kramer failed to operate and maintain all

furnace melting operations in a manner consistent with good air pollution control practices as

required by the National Emissions Standards for Hazardous Air Pollutants.

Negotiations between EPA, IEPA, the Attorney General's Office, Department of Justice (DOJ),

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and H. Kramer resulted in an Agreed Preliminary Injunction Order being filed in state court on

September 2, 2011. Pursuant to the order, H. Kramer made significant repairs to the facility,

including pollution control upgrades, cleanup, and paving of the facility's yard, and reduction in

the production of two lead alloys. A final Consent Decree was filed in federal court and executed

on March 28, 2013. More specifically, the decree required installation and operation of two new

baghouses to better control emissions from the rotary furnaces located in the south foundry

building. A construction permit was issued in January 2012 for H. Kramer to install the two new

baghouses.

2.2.6 City of Chicago Metal Concentrations in Ambient Surface Soils Study

In June 2001 and January 2002, the U.S. Geological Survey (USGS), in cooperation with the

City of Chicago, Department of Environment, collected soil samples from 57 areas near

residential, commercial, and industrial land use areas to assess the concentration of metals and

polynuclear aromatic hydrocarbons in ambient surface soils within the City of Chicago (USGS

2003). Ambient soils are defined as those soils whose chemical composition is affected by

ubiquitous natural and anthropogenic processes rather than the site-specific disposal of waste

materials. Soil samples were collected from the upper 6 inches of the soil horizon (from 0 to 6

inches in an undisturbed soil horizon or from the upper 6 inches of a soil horizon where it may

be covered by gravel) using a dedicated stainless steel spoon or trowel.

The mean concentration of arsenic, mercury, calcium, magnesium, phosphorus, copper,

molybdenum, zinc, and selenium was from two to six times higher in Chicago soil than soils in

agricultural areas within 500 kilometers of Chicago, and concentrations of lead were

approximately 20 times higher than in soil from the surrounding area. Inter-element correlation

coefficients for the inorganic analytes were calculated to provide additional insight into the

sources of the inorganic constituents. The sets of elements showing strong mutual correlations

can indicate causative factors for the observed concentrations and distribution of these elements.

Although the bulk of the compositional trends in Chicago soils are explainable by varying

proportions of dolomite and shale, which likely are soil parent material, the elevated (in

comparison to surrounding agricultural soils) concentrations of arsenic, copper, lead, mercury,

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molybdenum, nickel, phosphorus, selenium, and zinc indicate a potential anthropogenic source of these elements. Lead (concentration factor of 20.4), zinc (7.4), and mercury (4.5) are enriched relative to background soils and all seem likely to indicate substantial and widespread anthropogenic modifications to the trace-element character of the soil. Sampling results for copper, lead, zinc, and mercury are presented as follows:

Constituent	No. of Samples Collected	No. of Detections	Arithmetic Mean (mk/kg)	Standard Deviation (mk/kg)	Range of Detected Concentrations (mg/kg)	
Copper	57	57	150.5	373.7	9-2,780	
Lead	57	57	395	494.2	13-1,910	
Zinc	57	57	396.6	410.8	79-1,690	
Mercury	57	56	0.6	1.9	<0.02-13.1	

The high correlation between lead and zinc ( $R^2 = 0.91$ ) suggests that the two elements have been added to soils largely from the same material or process rather than as independently distributed constituents (USGS 2003). Mercury shows low correlation with all other constituents, including organic carbon ( $R^2 = 0.135$ ). In many natural settings, mercury and organic carbon are highly correlated so the lack of correlation in Chicago soil suggests an anthropogenic addition largely independent of natural processes.

#### 3. SITE ASSESSMENT ACTIVITIES

In December 2012, May 2013, and August 2013, EPA and WESTON START conducted a site assessment to determine the impact of present and historical industrial sources of heavy metal air emissions at the locations of the Site.

To fulfill these objectives, the following site assessment activities were conducted:

- December 19, 2012: Alley field sampling event.
- May 6, 2013: Railroad spur field sampling event.
- August 12-15, 2013: Little Italy reference area residential property field sampling event.

All sampling activities were conducted in Level D personal protective equipment (PPE) in accordance with the approved site-specific health and safety plan. Fresh sampling gloves were donned before sampling activities began at each new location, and for each sample to avoid

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cross-contamination. Non-disposable equipment that could potentially cross-contaminate

samples (e.g., Geoprobe® cutting shoe) was decontaminated between each sampling location

using an alconox wash and a potable water rinse. Specific sampling activities are discussed in the

following sections. Figures and tables are presented after the References section (Section 8).

**Appendix A** provides photographic documentation of Site conditions and activities at the time of

the site assessment, and **Appendix B** provides soil boring logs.

3.1 ALLEY SITE ASSESSMENT ACTIVITES

On December 19, 2012, EPA and WESTON START conducted a field sampling event at the

alley. The December 19, 2012, field sampling event was conducted in accordance with the "Field

Sampling Plan for the Pilsen Area Soil Site Assessment," dated December 17, 2012. It was also

conducted in overall accordance with the Quality Assurance Project Plan for the Region 5

START III Contract, dated June 2006. EPA received a permit from the City of Chicago for soil

boring activities between December 18 and 20, 2012. The alley was divided into 10 sections of

roughly equal surface area. Within each section, WESTON START subcontractor Cabeno

Environmental Field Services, LLC (Cabeno), of Joliet, IL, used a Geoprobe® drill rig to advance

two soil borings to a depth up to 4 ft below ground surface (bgs). Twenty soil borings were

conducted (AY-01 through AY-20; Figure 3-1). The soil from each 4-ft core was inspected and

observations were recorded in a soil boring log in accordance with the Unified Soil Classification

System (USCS) (Appendix B). Documentation was recorded regarding any fill materials, odors,

discoloration, or staining suggesting potential contamination.

The 0- to 6-, 6- to 12-, 12- to 24-, 24- to 36-, and 36- to 48-inch bgs intervals from each soil

boring were placed into disposable polyethylene bags, homogenized, and screened by EPA

FIELDS for total metals using a handheld Innov-X Delta XRF analyzer. WESTON START

collected a total of 23 samples (21 investigative and two field duplicates) as follows:

• Ten composite samples were collected from the 10 sections of the alley, one composite from each section. Composite soil samples consisted of an aliquot of soil

from both borings in a section, taken from the depth interval showing the highest total

lead XRF screening concentration

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• One additional composite sample was collected at location AY-03, consisting of soil aliquots collected from 0 to 6 inches bgs from location AY-03 and three step-out locations 5 ft to the west, south, and east of AY-03 (AY-03W, AY-03S, and AY-03E).

• Ten grab soil samples were also collected from the alley. One grab soil sample was collected from one of the two borings within each of the 10 sections at the depth interval showing the highest total lead XRF screening concentration.

Soil samples were submitted under chain-of-custody to STAT Analysis Corporation in Chicago, IL, for at least one of the following analyses:

- Total Resource Conservation and Recovery Act (RCRA) metals (silver, arsenic, barium, cadmium, chromium, mercury, lead, and selenium) plus antimony, copper, tin, and zinc.
- Total lead
  - Coarse-grained fraction (grain size > 250 μm).
  - Fine-grained fraction (grain size  $\leq 250 \mu m$ ).
- Bioavailable lead.
- TCLP RCRA metals.
- pH.
- Moisture content.

**Table 3-1** presents a summary of the sampling, including the sampling identification, sampling location, and analytical parameters.

#### 3.2 RAILROAD SPUR SITE ASSESSMENT ACTIVITES

EPA tasked WESTON START with conducting additional site assessment activities based on analytical results from the alley soil samples. On May 62013, EPA and WESTON START conducted a field sampling event at the railroad spur. The May 62013, field sampling event was conducted in accordance with the document entitled "Field Sampling Plan for the Pilsen Area Soil Site Assessment, Revision 2," dated April 30, 2013. It was also conducted in overall accordance with the Quality Assurance Project Plan for the Region 5 START III Contract, dated June 2006. EPA FIELDS used a Geoprobe® drill rig to advance 16 soil borings to 2 ft bgs (RR-01 through RR-16; **Figure 3-1**). The soil from each 2-ft core was inspected and observations

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were recorded in a soil boring log in accordance with the USCS (Appendix B). Documentation

was recorded noting any fill materials, odors, discoloration, or staining suggesting potential

contamination. The 0- to 6-, 6- to 12-, and 12- to 24-inch bgs intervals of each soil boring were

placed into disposable polyethylene bags, homogenized, and screened by WESTON START for

total metals using EPA's Innov-X Alpha Series XRF analyzer.

Thirteen composite soil samples (12 investigative and one field duplicate) were collected from

13 locations on the railroad spur. Composite samples consisted of aliquots collected from two or

three adjacent borings, from either 0 to 6 or 6 to 24 inches bgs. Composite samples consisted of

aliquots collected from the same depth interval. No samples were collected from locations RR-

03, RR-05, or RR-09 as a result of relatively lower XRF lead screening values. Soil samples

were submitted under chain-of-custody to STAT Analysis Corporation in Chicago, IL, for at

least one of the following analyses:

• Select total metals (antimony, copper, cadmium, chromium, mercury, lead, tin, and zinc).

• Total lead, fine-grained fraction (grain size  $< 250 \mu m$ ).

• Bioavailable lead.

pH.

3.3 LITTLE ITALY REFERENCE AREA SITE ASSESSMENT ACTIVITES

In August 2013, EPA and WESTON START conducted a field sampling event in the Little Italy

residential neighborhood (Little Italy reference area). The August 2013 field sampling event was

conducted in accordance with the document entitled "Field Sampling Plan for the Pilsen Area

Soil Site Assessment, Revision 2, Amendment 1," dated July 5, 2013, and with EPA's

"Superfund Lead-Contaminated Residential Sites Handbook" (EPA 2003). It was also conducted

in overall accordance with the Quality Assurance Project Plan for the Region 5 START III

Contract, dated June 2006. Data collected from this area served as a reference of soil suspected

to be less impacted by industrial sources, such as H. Kramer and Fisk Station due to an increased

distance from these sources. The Little Italy reference area is approximately 110 acres and

located approximately 1.2 miles north of the Site. The Little Italy reference area is bound to the

north by West Lexington Street, to the east by South Ada Street, to the south by West Taylor

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Street, and to the west by South Laflin Street (Figure 1-1).

WESTON START advanced soil borings to 24-inches bgs using a 2-, 3-, or 4-inch stainless steel soil auger. Two to five-point composite samples were collected from 0- to 2-, 0- to 6-, 6- to 12-, 12- to 18-, and 18- to 24-inch bgs depth intervals from either the front yard or backyard of residents in the Little Italy reference area. Composite samples were placed into disposable polyethylene bags and mixed. Samples were not collected from gardens, drip zone areas, or areas near painted surfaces. WESTON START described each soil sampling interval in accordance with the USCS. Soil descriptions were recorded in the Site logbook to create a detailed record of the lithology and potential contaminant characteristics of each sampling location. Documentation was recorded noting any fill materials, odors, discoloration, or staining suggesting potential contamination. The 0- to 2-, 0- to 6-, 6- to 12-, 12- to 18-, and 18- to 24-inch bgs intervals of each soil boring were then screened by the by WESTON START for total metals using EPA's Innov-X Alpha Series XRF analyzer. Sampled intervals were transferred directly into laboratory-provided glass sample jars and placed on ice. Any unused soil was returned to the location from which it was collected. All boring locations in residential locations were filled to the original grade with commercially available fill dirt, and then seeded with grass seed.

EPA and WESTON START collected 16 soil samples (14 investigative and two field duplicates) from 11 residential properties located within the Little Italy reference area (**Table 3-1**, **Figure 3-2**). The 0- to 6-inch bgs composite sample was submitted for analytical laboratory analysis at all locations. If XRF screening showed the 0- to 2-inch bgs composite sample was an order of magnitude different in lead concentration from the 0- to 6-inch bgs composite sample, both composites were submitted for analytical laboratory analysis. At approximately 30% of the locations, a composite sample was collected from below 6 inches bgs and submitted for analytical laboratory analysis. Submitted composite samples collected from below 6 inches bgs had a range (low, medium, and high) of XRF lead concentrations.

Soil samples were submitted under chain-of-custody to STAT Analysis Corporation in Chicago, IL, for the following analyses:

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• Select total metals (antimony, copper, cadmium, chromium, mercury, lead, tin, and zinc).

• Total lead, fine-grained fraction (grain size  $< 250 \mu m$ ).

#### 4. ANALYTICAL RESULTS

#### 4.1 ALLEY SAMPLING RESULTS

#### TCLP Metals (Toxicity)

TCLP metal analytical results were compared to the screening criteria in 40 CFR, Part 261, Subpart C 261.24 (b) to determine if the samples were considered hazardous. TCLP metals results from the four soil samples collected from the alley location are presented on **Table 4-1** and **Figures 4-1** and **4-2**, and are summarized as follows:

• Soil samples PA-AC03(0-6)-121912, PA-AC04(0-6)-121912, and PA-AY05(6-12)-121912 contained TCLP lead at concentrations of 12, 12, and 9.6 milligrams per liter (mg/L), respectively. These TCLP lead concentrations exceed the TCLP lead regulatory limit of 5.0 mg/L. According to 40 CFR Part 261, Subpart C, 261.24 (b), these samples represent materials that meet the definition of hazardous waste by virtue of the characteristic of toxicity.

#### Total Metals

Total metal analytical results were compared to the EPA RMLs for residential soil, HQ 3. Total metal results from the 23 soil samples collected from the alley location are presented on **Table 4-1**, in **Figures 4-1** and **4-2** (for contaminants of concern), and are summarized as follows:

- Antimony was detected in soil samples PA-AC03(0-6)-121912, PA-AC06(0-6)-121912, PA-AY04(6-12)-121912, PA-AY05(6-12)-121912, PA-AY09(12-24)-121912, and PA-AY13(12-24)-121912 at estimated concentrations ranging from 110 to 640 mg/kg. Antimony was detected in soil sample PA-AY07(12-24)-121912 at a concentration of 1,200 mg/kg. These concentrations exceed the RML for antimony of 94 mg/kg.
- Arsenic was detected in soil sample PA-AY05(6-12)-121912 at an estimated concentrations of 73 mg/kg, respectively. Arsenic was detected in PA-AY04(6-12)-121912 and PA-AY07(12-24)-121912 at concentrations ranging of 86 and 93 mg/kg, respectively. These concentrations exceed the RML for arsenic of 61mg/kg.
- Copper was detected in soil samples PA-AY05(6-12)-121912, PA-AY07(12-24)-121912, PA-AY18(6-12)-121912, and PA-AY19(12-24)-121912 at concentrations

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ranging from 12,000 to 33,000 mg/kg, exceeding the RML for copper of 9,400 mg/kg.

- Lead was detected in 21 of 23 soil samples (all samples except PA-AC09(0-6)-121912 and PA-AC10(0-6)-121912) in concentrations exceeding the RML for lead of 400 mg/kg. Total lead concentrations exceeding the RML ranged from 570 to 16,000 mg/kg.
- Fine-grained lead was detected in 22 of 23 soil samples (all samples except PA-AC10(0-6)-121912) in concentrations exceeding the RML for lead of 400 mg/kg.
   Fine-grained lead concentrations exceeding the RML ranged from 1,000 to 9,300 mg/kg.

#### Lead Bioavailability

Lead bioavailability ranged from 30.2% to 99.5% in the 23 samples collected from the alley.

#### 4.2 RAILROAD SPUR AREA SAMPLING RESULTS

#### TCLP Metals (Toxicity)

Soil samples PA-RR04,06(0-6)-050613, and PA-RR07,08(6-24)-050613 contained TCLP lead at concentrations of 12 and 13 mg/L, respectively. These TCLP lead concentrations exceed the TCLP lead regulatory limit of 5.0 mg/L. Therefore, according to 40 CFR Part 261, Subpart C, 261.24 (b), these samples represent materials that meet the definition of hazardous waste by virtue of the characteristic of toxicity.

#### Total Metals

Total metal analytical results were compared to the EPA RMLs for Residential Soil, HQ of 3. Total metal results from the 13 soil samples collected from the alley location are presented on **Table 4-2** and in **Figure 4-3** (for contaminants of concern), and are summarized as follows:

- Copper was detected in soil sample PA-RR04,06(0-6)-050613 at a concentration of 11,000 mg/kg, exceeding the RML for copper of 9,400 mg/kg.
- Lead was detected in 13 of 13 soil samples at concentrations exceeding the RML for lead of 400 mg/kg. Total lead concentrations ranged from 940 to 11,000 mg/kg.
- Fine-grained lead was detected in 13 of 13 soil samples in concentrations exceeding the RML for lead of 400 mg/kg. Total lead concentrations ranged from 900 to 23,000 mg/kg.

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• Zinc was detected in soil sample PA-RR04,06(0-6)-050613 at a concentration of 78,000 mg/kg, exceeding the RML for zinc of 70,000 mg/kg.

Lead Bioavailability

Lead bioavailability was analyzed in soil sample PA-RR04,06(0-6)-050613, which contained

78.3% bioavailable lead.

4.3 LITTLE ITALY REFERENCE AREA RESULTS

Total Metals

Total metal analytical results were compared to the EPA RMLs for Residential Soil, HQ of 3.

Total metal results from the 16 soil samples collected from the Little Italy reference location are

presented on **Table 4-3** and in **Figure 4-4**, and are summarized as follows:

• Lead was detected in two of 16 soil samples at concentrations exceeding the RML for lead of 400 mg/kg. Total lead concentrations were 760 to 930 mg/kg in these two

samples.

• Fine-grained lead was detected in three of 16 soil samples at concentrations

exceeding the RML for lead of 400 mg/kg. Fine-grained lead concentrations ranged

from 520 to 1,400 mg/kg among these samples.

• No other metals were detected in samples above EPA RMLs for Residential Soil, HQ

of 3.

4.4 EPA FIELDS XRF QUALITY ASSURANCE ANALYSIS

EPA FIELDS and WESTON START used the EPA's Innov-X Delta and Alpha Series XRF

devices in accordance with EPA standard operating procedure (SOP) 302A, "Standard Operating

Procedure of Analysis of Metals in Soil using X-Ray Fluorescence." EPA FIELDS and

WESTON START conducted an instrument standardization procedure each time the XRF device

was activated to verify that the XRF device was operating and performing within manufacturer

specifications. EPA FIELDS used simple linear regression and regression diagnostics to find the

"best fitting" linear relationship between XRF measurements of lead concentrations in soil

samples and their corresponding analytical laboratory concentrations using SAS® software. This

relationship is quantified in a model (equation). The data included all field sampling events

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conducted by EPA and WESTON START in 2012 and 2013, including those performed during the Pilsen downwind residential property site assessment presented in "Site Assessment Report for Pilsen Soil Site: Downwind Residential Area" (WESTON START March, 2014). The EPA FIELDS model equation shows a significant relationship between the lead XRF concentrations and its corresponding laboratory measurement (P<0.05). The EPA FIELDS coefficient of determination (denoted by R²) for the regression model was 0.92. The EPA FIELDS regression model did not violate the assumptions of no extreme residuals, normal distribution of residuals, and homoscedasticity of residuals. See **Appendix D** for more detail on the development and results of the EPA FIELDS regression model.

# 4.5 COMPARISON BETWEEN AREAS OF LEAD, FINE-GRAINED LEAD, ZINC, COPPER, TIN, AND CADMIUM CONCENTATIONS

EPA FIELDS used SAS® statistical software to compare cadmium, copper, lead, fine-grained lead, tin, and zinc analytical laboratory concentrations between the Site, the Little Italy reference area, and City of Chicago background (USGS 2003). Of samples collected from the Site and the Little Italy reference area, only samples collected from the 0- to 6-inch bgs interval were used in these comparisons. Note that fine-grained lead samples collected by WESTON START were sieved using a 250 μm sieve and all samples collected by USGS (2003) were sieved using a 180 μm sieve. Data were not normally distributed (shown by the Shapiro-Wilk test for normality) and therefore were ranked to perform nonparametric analyses. SAS® statistical software was used to compare the areas using one-way analysis of variance (ANOVA) on the ranked data with the general linear models (GLM) procedure. The Type III Sums of Squares result was used since the areas had an unbalanced number of samples. The Least Squares Means Tukey-Kramer Multiple Comparisons test was used to determine differences between the areas. The Least Squares Means Tukey-Kramer Multiple Comparisons test was selected because it accommodates unequal sample sizes and is the most robust test for pairwise comparisons.

There was a significant difference between the three areas for cadmium, copper, lead, tin, and zinc (p-value < 0.05). **Appendix D** presents the methodology and boxplots for each metal for each area. The results of the Least Squares Means Tukey-Kramer Multiple Comparisons test are shown as follows:

	Significant Difference (p-value < 0.05)						
Areas	Cadmium	Copper	Lead	Fine- Grained Lead	Tin	Zinc	
Site & Little Italy Reference Area	Yes	Yes	Yes	Yes	Yes	Yes	
Site & City of Chicago Background	Yes	Yes	Yes	Yes	Yes	Yes	
Little Italy Reference Area & City of Chicago Background	Yes	No	No	No	Yes	No	

#### Comparison between the Site and the Little Italy Reference Area

Concentrations of cadmium, copper, lead, fine-grained lead, tin, and zinc in Site soil were significantly higher than the Little Italy reference area. These results may suggest the Little Italy reference area, which is located approximately 1.2 miles north of H. Kramer, has not been impacted by the same historic emitters of heavy metals, including H. Kramer. See **Appendix D** for more detail on the EPA FIELDS ANOVA analysis.

#### Comparison between the Site and the City of Chicago Background

Concentrations of cadmium, copper, lead, fine-grained lead, tin, and zinc concentrations in the Site soil were significantly higher than the City of Chicago background concentrations. These results may suggest the Site has been more impacted by historic emitters of heavy metals than the background soils in the City of Chicago. See **Appendix D** for more detail on the EPA FIELDS ANOVA analysis.

#### Comparison between the Little Italy Reference Area and the City of Chicago Background

Concentrations of cadmium and tin in the Little Italy reference area soil were significantly lower than the City of Chicago background concentrations. Concentrations of copper, lead, fine-grained lead, and zinc were not significantly different in the Little Italy reference area soil and the City of Chicago background concentrations. See **Appendix D** for more detail on the EPA FIELDS ANOVA analysis.

#### 4.6 COMPARISON OF LEAD, ZINC, AND COPPER RELATIVE ABUNDANCES

EPA FIELDS qualitatively compared the relative abundances of lead, zinc, and copper between the Site, City of Chicago background (USGS 2003), Little Italy reference area, and two H.

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Kramer baghouse samples. Appendix D presents a graphical depiction of the relative

abundances of zinc, lead, and copper in samples collected from the City of Chicago background

(USGS 2003), Little Italy reference area, Site, and H. Kramer baghouse. Two sets of H. Kramer

baghouse results were analyzed. The first set of H. Kramer baghouse data were provided by H.

Kramer's consultant Conestoga-Rovers & Associates and TRC Environmental Corporation

(2005). The second set of H. Kramer baghouse data was provided by WESTON START, who

submitted baghouse samples collected by the EPA Air and Radiation Division (ARD) to STAT

Analysis Corporation in Chicago, IL on July 10, 2013 for total metals analysis.

Zinc, lead, and copper were present in the City of Chicago background samples at approximately

42, 42, and 16 %, respectively. Similarly, zinc, lead, and copper were present in Little Italy

reference area samples at approximately 44, 47, and 9 %, respectively. A higher relative

abundance of zinc and a lower relative abundance of lead were present in surface soil samples

collected from the Site at approximately 66, 16, and 17 % zinc, lead, and copper, respectively.

An even higher relative abundance of zinc and lower relative abundance of lead were present in

H. Kramer baghouse samples at approximately 92, 7, and 1 % zinc, lead, and copper,

respectively for samples analyzed by H. Kramer (2005) and 90, 5, and 5 % zinc, lead, and

copper, respectively for baghouse samples analyzed by WESTON START. Based on the higher

abundance of zinc (22-24 % higher) and lower relative abundance of lead (26-31 % lower) in

Site soils compared to the City of Chicago background and the Little Italy reference area, the

Site appears to have been impacted by a release of zinc. H. Kramer baghouse samples contained

90-92 % zinc and approximately 832,567 pounds of zinc have been released via fugitive and

stack emissions since 1987 (EPA 2013a). While this analysis does not attribute a release of lead

to H. Kramer, within the City of Chicago, detections of lead and zinc have been found to be

highly correlated ( $R^2 = 0.91$ ), suggesting that two elements have been added to soil largely from

the same material or process rather than independently distributed constituents (USGS 2003).

5. SOIL LITHOLOGY

In general, soils on the alley and the railroad spur properties consisted of silty, sandy, and

gravelly fill materials. Some to trace wood chips, cinders, and pieces of glass, brick, plastic, and

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slag were observed in numerous borings across the property. In particular, slag was observed in soil borings advanced at the following locations: AY-01, AY-03, AY-07, AY-10, AY-11, AY-14, AY-17, AY-18, and RR-02. Slag is a solid-phase waste generated by secondary lead processing (EPA 1995). Soils in the Little Italy reference area consisted sandy and gravelly silts and clays. Little to trace fill materials including wood chips, cinders, and pieces of glass, plastic, brick were observed in soil at the following properties: 489, 491, 492, 493, 494, 500, and 501.

#### 6. THREATS TO HUMAN HEALTH AND THE ENVIRONMENT

Factors to be considered in determining the appropriateness of a potential removal action at a Site are delineated in the NCP at 40 CFR 300.415(b)(2). A summary of the factors applicable to this Site is presented as follows:

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

Hazardous substances, pollutants, and contaminants were documented in surface and subsurface soil samples collected during the site assessment. Soil samples PA-AC03(0-6)-121912, PA-AC04(0-6)-121912, and PA-AY05(6-12)-121912 collected from the alley contained TCLP lead at concentrations of 12, 12, and 9.6 mg/L, respectively. Soil samples PA-RR04,06(0-6)-050613 and PA-RR07,08(6-24)-050613 contained TCLP lead at concentrations of 12 and 13 mg/L, respectively. These TCLP lead concentrations exceed the TCLP lead 40 CFR Part 261, Subpart C, 261.24 (b) regulatory limit of 5.0 mg/L, indicating these soils are hazardous for the characteristic of toxicity. In addition, antimony, arsenic, copper, lead, and zinc were detected in Site soil above EPA RMLs for residential soil, HQ 3.

Mercury was not detected above the EPA RML of 30 mg/kg in any sample collected from the Site. In addition, meteorological data collected from 1928 to 2013 suggests that the predominant wind direction in the Chicago, IL area is from the southwest. As a result, the Site may not been as heavily impacted by the Fisk Station, which has released 805 pounds of mercury into the air from stack emissions from 1998 to 2012 and is located southeast of the Site.

Analytical laboratory concentrations of cadmium, copper, lead, fine-grained lead, tin, and zinc in Site soil samples were significantly higher (p-value < 0.05) than in the samples collected from the Little Italy reference area and the City of Chicago background. These results suggest the Site has been more greatly impacted by historic emitters of heavy metals. In addition, based on the higher abundance of zinc (24-25 % higher) and lower relative abundance of lead (27-33 % lower) in Site soils compared to the City of Chicago background and the Little Italy reference area, the Site appears

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to have been impacted by a release of zinc. The Site is located adjacent to H. Kramer, from which approximately 54,366 pounds of lead, 832,567 pounds of zinc, and 6,782 pounds copper have been released via fugitive and stack emissions since 1987 (EPA 2013a).

The Site is located in an industrial, commercial, and residential area of the Pilsen neighborhood in the City of Chicago. Two schools are located within a ¼-mile radius of the Site, Juarez and Perez. School children my use the Site as a walkway, commuting to and from Juarez. In 2010, approximately 40,983 people lived within 1 mile of the Site.

Potential migration pathways and exposure mechanisms include human and animal activities, surface drainage, and wind dispersion. Potential receptors include nearby residents and workers at the adjacent industrial and commercial businesses. Direct contact with hazardous substances is possible, and the close proximity of residential areas to the Site greatly increases the likelihood of exposure of human populations. Exposure could cause imminent endangerment of human health and the environment.

## • High levels of hazardous substances, pollutants, or contaminants in soils largely at or near the surface that may migrate.

In general, Site soils consisted of silty, sandy, and gravelly fill materials. Some to trace wood chips, cinders, and pieces of glass, brick, plastic, and slag were observed in numerous borings across the Site. In particular, slag was observed in soil borings advanced at the following locations: AY-01, AY-03, AY-07, AY-10, AY-11, AY-14, AY-17, AY-18, and RR-02. Slag is a solid-phase waste generated by secondary lead processing (EPA 1995). H. Kramer owns and operates a secondary nonferrous metals facility manufacturing primarily brass and bronze ingots.

Site assessment analytical results document high levels of hazardous substances in soils at or near the surface. Surface soil samples PA-AC03(0-6)-121912, PA-AC04(0-6)-121912, and PA-RR04,06(0-6)-050613 were collected from 0 to 6 inches bgs and contained TCLP lead at concentrations exceeding TCLP lead 40 CFR Part 261, Subpart C, 261.24 (b) regulatory limit of 5.0 mg/L. In addition, arsenic, antimony, copper, lead, and zinc were detected in surface soil collected from 0 to 6 inches bgs above EPA RMLs for residential soil, HQ 3. Based on site assessment sampling results, the Site's unrestricted nature, and a lack of an impermeable barrier of the Site, hazardous substances in soils at or near the surface pose a threat of migration.

## • Weather conditions that may cause hazardous substances, pollutants, or contaminants to migrate or be released

Cook County, IL, receives a substantial amount of precipitation, and temperatures are normally below freezing during the winter, with regular snowfall. In the winter, the average temperature is 25.1°F and the average daily minimum temperature is 17.3°F. In the summer, the average temperature is 71.7°F, and the average daily maximum temperature is 81.7°F. The average total annual precipitation is 38.65 inches and the

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average seasonal snowfall is 32.6 inches. These weather conditions may cause water, wind, and freeze-thaw erosion of Site soils. Eroded soils may migrate via wind and/or surface water runoff to nearby residences or to the Chicago Shipping and Sanitary

Canal to the south.

7. SUMMARY AND CONCLUSIONS

The EPA tasked WESTON START with evaluating the potential impacts of possible aerial

deposition of heavy metals from historic industrial activity in the vicinity of the Site. The Site is

an alley (owned by the City of Chicago) and railroad spur (owned by BSNF railway) located

adjacent to H. Kramer in an industrial, commercial, and residential area of the Pilsen

neighborhood in the City of Chicago. Two schools are located within a 1/4-mile radius of the Site,

Juarez and Perez. School children may use the Site as a walkway, commuting to and from

Juarez. In 2010, approximately 40,983 people lived within 1 mile of the Site.

On December 19, 2012, the EPA and WESTON START advanced 20 soil borings and submitted

23 samples for analytical laboratory analysis from the alley, located adjacent to the H. Kramer

facility to the south. Three samples contained TCLP lead concentrations that exceeded the TCLP

lead regulatory limits. Therefore, these samples represent materials that meet the definition of

hazardous waste by virtue of the characteristic of toxicity. Antimony, arsenic, copper, lead, and

fine-grained lead were detected at concentrations above EPA RMLs for residential soil, HQ 3.

On May 6, 2013, EPA and WESTON START advanced 16 soil borings and submitted 13

samples for analytical laboratory analysis from the railroad spur, located west and south of the H.

Kramer property. Two samples contained TCLP lead concentrations that exceeded the TCLP

lead regulatory limits. Therefore, these samples represent materials that meet the definition of

hazardous waste by virtue of the characteristic of toxicity. Copper, lead, fine-grained lead, and

zinc were detected in concentrations were detected in concentrations above EPA RMLs for

residential soil, HQ 3.

Site soils generally consisted of silty, sandy, and gravelly fill materials. Some to trace wood

chips, cinders, and pieces of glass, brick, plastic, and slag were observed in numerous borings

across the Site. In particular, slag was observed in soil borings advanced at the following

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locations: AY-01, AY-03, AY-07, AY-10, AY-11, AY-14, AY-17, AY-18, and RR-02. Slag is a

solid-phase waste generated by secondary lead processing (EPA 1995). H. Kramer owns and

operates a secondary nonferrous metals facility manufacturing primarily brass and bronze ingots.

In August 2013, EPA and WESTON START conducted a field sampling event in the Little Italy

reference area. Data collected from this area served as a reference for soil suspected to be less

impacted by heavy metal emitters such as H. Kramer and the Fisk Generating Station. Within the

Little Italy reference area, lead was detected in two of 16 soil samples in concentrations

exceeding the EPA RMLs for residential soil, HQ 3, for lead of 400 mg/kg. Total lead

concentrations were 760 and 930 mg/kg among these two samples. Fine-grained lead was

detected in three of 16 soil samples at concentrations exceeding the RML for lead of 400 mg/kg.

Fine-grained lead concentrations ranged from 520 to 1,400 mg/kg among these samples.

EPA FIELDS used SAS® statistical software to compare analytical laboratory concentrations of

cadmium, copper, lead, fine-grained lead, tin, and zinc from samples collected from 0 to 6 inches

bgs at the Site, the Little Italy reference area, and the City of Chicago background (USGS 2003).

Analytical laboratory concentrations of cadmium, copper, lead, fine-grained lead, tin, and zinc in

Site soil samples were significantly higher (p-value < 0.05) than in the samples collected from

the Little Italy reference area and the City of Chicago background. These results may suggest the

Little Italy reference area, which is located approximately 1.2 miles north of H. Kramer, and the

City of Chicago background, have not been impacted to the same degree by emitters of heavy

metals, including H. Kramer. EPA FIELDS also compared the relative abundances of lead, zinc,

and copper between the Site, City of Chicago background, Little Italy reference area, and two H.

Kramer baghouse datasets. Based on the higher relative abundance of zinc (24-25 % higher) and

lower relative abundance of lead (27-33 % lower) in Site soils compared to the City of Chicago

background and the Little Italy reference area, the Site appears to have been impacted by a

release of zinc. While this analysis does not attribute a release of lead to H. Kramer, within the

City of Chicago, detections of lead and zinc have been found to be highly correlated ( $R^2 = 0.91$ ).

suggesting that two elements have been added to soil largely from the same material or process

rather than independently distributed constituents (USGS 2003).

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Based on the presence of slag in Site soil borings, analytical laboratory results for Site soil

samples, and EPA FIELDS comparisons to the Little Italy reference area and City of Chicago

background (USGS 2003), the Site appears to have been impacted by an industrial release of

cadmium, copper, tin, zinc, and lead. H. Kramer is immediately adjacent to the Site. H. Kramer

has released approximately 54,366 pounds of lead, 832,567 pounds of zinc, and 6,782 pounds

copper via fugitive and stack emissions since 1987 (EPA 2013a). The close proximity of the Site

to H. Kramer may explain the higher surface soil metal concentrations.

Mercury was not detected above the EPA RML of 30 mg/kg in any sample collected from the

Site. In addition, meteorological data collected from 1928 to 2013 suggests that the predominant

wind direction in the Chicago, Illinois area is from the southwest. As a result, the Site may not

been as heavily impacted by the Fisk Station, which has released 805 pounds of mercury into the

air from stack emissions from 1998 to 2012, and is located in predominantly crosswind direction

southeast of the Site.

2011 and 2012 investigations conducted by NEIC also support the position that H. Kramer and

not the Fisk Station contributed to a higher degree to heavy metal contamination at the Site. On

August 21, 2011, NEIC submitted a report to EPA Region 5 presenting analytical results of

filters containing the highest and lowest concentrations of lead collected at the Perez air

monitoring site from January 2010 to January 2011, as well as baghouse dust samples collected

at H. Kramer (EPA NEIC 2011). Analytical results indicated cadmium, copper, tin, and zinc

were co-contaminants of the lead-bearing particulate matter collected on the TSP filters. These

co-contaminants are metals used in alloys produced at H. Kramer and were also found in similar

proportions in H. Kramer baghouse dust samples. Lead-bearing, um-sized (1–10 µm) aggregates

of zinc-oxide crystallites were common in ambient air in the Pilsen neighborhood on at least six

days in 2010, and were similar to the predominant baghouse dust particles from H. Kramer. The

report concluded that H. Kramer's furnaces were likely the primary source of lead-bearing

airborne particulate matter in the Pilsen neighborhood based on the location of its facility, wind

direction, and analytical results of TSP filters and baghouse dust from its facility. However, the

Fisk Station could not be excluded as a possible contributing source of lead contamination at the

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Perez air monitoring site because particulate matter similar to coal fly ash was observed on the

filters collected from Perez. On August 24, 2012, NEIC submitted a second report to EPA

Region 5 presenting additional analytical results of lead-bearing particulate matter on TSP filters

from the Juarez and Perez air monitoring stations and in coal and fly ash collected from the Fisk

Station and Midwest Generation's Crawford Station, in addition to any contribution from H.

Kramer. The three key main findings from these analyses are summarized as follows: 1) H.

Kramer was indicated as the major contributor of airborne lead-bearing particulate matter in the

Pilsen neighborhood, both during and outside the NAAQS exceedance period of October 2010 to

February 2011; 2) the Fisk Station released particles consistent with coal fly ash in the Pilsen

neighborhood; and 3) Fisk Station contributed insignificant quantities of lead-bearing particulate

matter relative to H. Kramer during (and outside) the NAAQS exceedance period of October

2010 to February 2011.

Based on the Site's unrestricted nature and a lack of an impermeable barrier, hazardous

substances in soils at or near the surface pose a threat of migration. Potential migration pathways

and exposure mechanisms include human and animal activities, surface drainage, and wind

dispersion. Potential receptors include nearby residents and workers at the adjacent industrial and

commercial businesses. Direct contact with hazardous substances is possible, and the close

proximity of residential areas to the Site greatly increases the likelihood of exposure of human

populations. Exposure could cause imminent endangerment of human health and the

environment.

8. REFERENCES

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Refiner.

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Pilsen Soil Site: Railroad/Alley Site Assessment Report Revision 3 Date: April 2, 2014 Page 27 of 27

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## **FIGURES**

FILE: D:\Pilsen\mxd\SAR\_RR\_Alley\F1-1\_Site\_Location.mxd 2/11/2014 3:42:55 PM wojdakon

Vernon Hills, Illinois 60061

DCN: 2038-2A-BLKW

FILE: D:\Pilsen\mxd\SAR\_RR\_Alley\F2-1\_Site\_Features.mxd 2/20/2014 2:40:43 PM wojdakon

Predominant Wind Pathway Map

Pilsen Area Soil Site: Railroad/Alley

Chicago, Cook County, Illinois

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1/4 Mile Radius Circle from Smelter Stack

H. Kramer and Company Smelter Stack

Contract No.: EP-S5-06-04 TDD: S05-0001-1211-002 DCN: 2038-2A-BLKW

750 E. Bunker Court

Suite 500

Vernon Hills, Illinois 60061



FILE: D:\Pilsen\mxd\SAR\_RR\_Alley\F3-2\_Res\_Samp\_

Little Italy Reference

Note: 11 soil samples collected in the Reference Area from locations: 489, 490, 491, 492, 493, 494, 500, 501, 511, 512, 513

175



Prepared for: U.S. EPA REGION V

Contract No.: EP-S5-06-04 TDD: S05-0001-1211-002 DCN: 2038-2A-BLKW

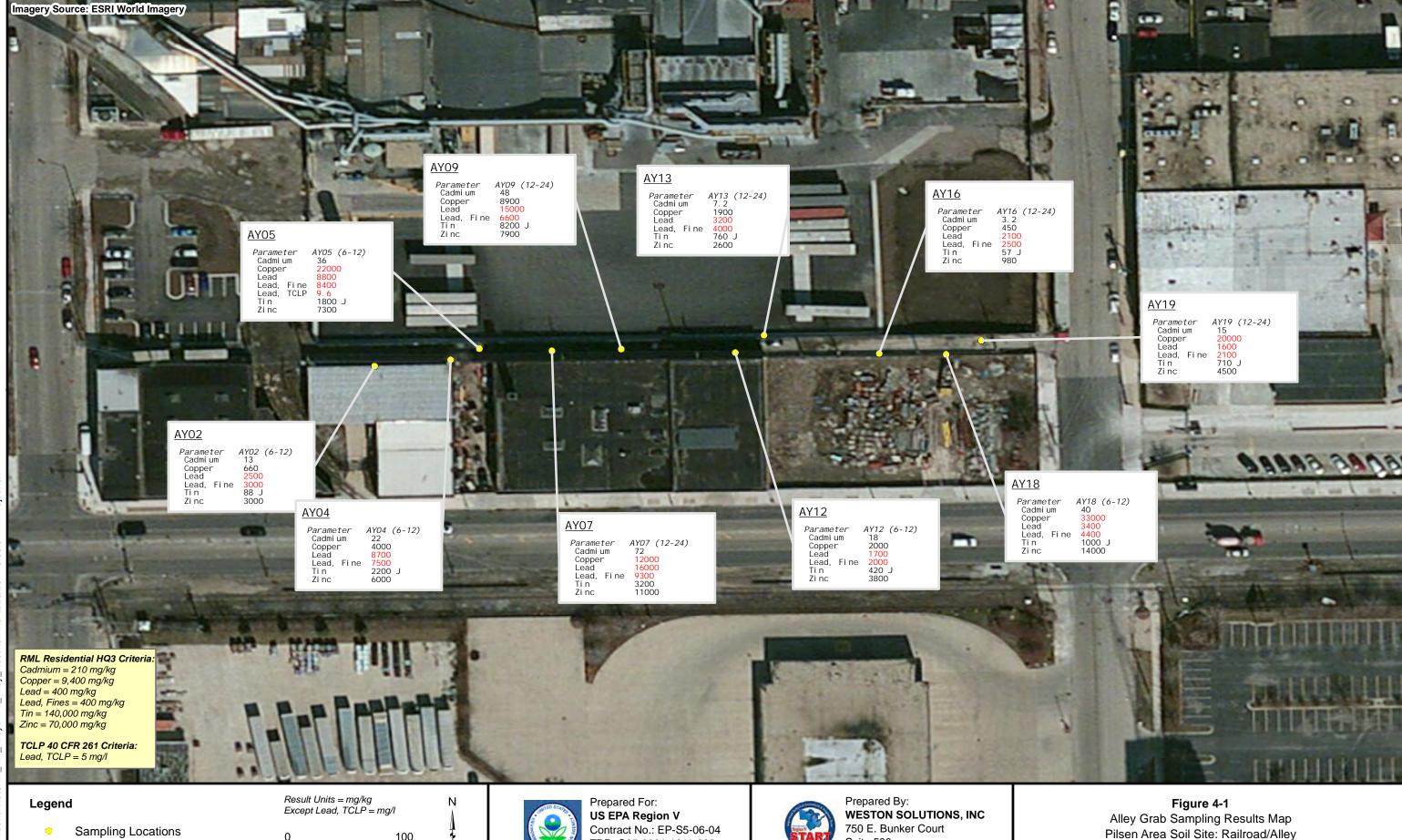


Prepared By: **WESTON** SOLUTIONS, INC

750 E. Bunker Court Suite 500 Vernon Hills, Illinois 60061

#### Figure 3-2

Little Italy Reference Area Sampling Location Map Pilsen Area Soil Site: Railroad/Alley Chicago, Cook County, Illinois



TDD: S05-0001-1211-002

DCN: 2038-2A-BLKW

Suite 500

Vernon Hills, Illinois 60061

Chicago, Cook County, Illinois

100

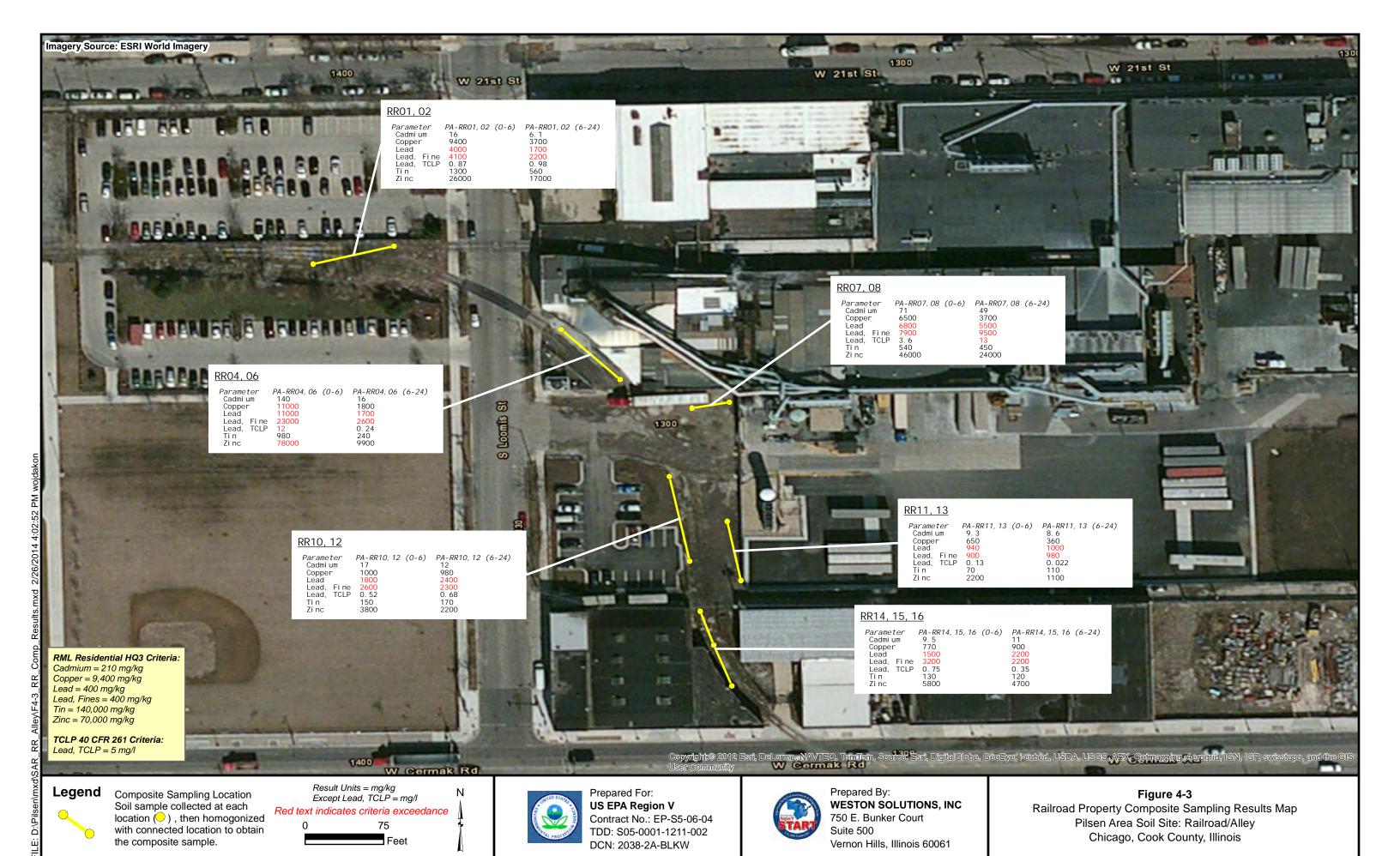
Red text indicates criteria exceedance

DCN: 2038-2A-BLKW

Vernon Hills, Illinois 60061

Chicago, Cook County, Illinois

the composite sample.



DCN: 2038-2A-BLKW

Vernon Hills, Illinois 60061

Chicago, Cook County, Illinois

(RML Residential HQ3 Criteria)

Result Units = mg/kg

Duplicate samples are not displayed

## **TABLES**

### TABLE 3-1 SOIL SAMPLE SUMMARY PILSEN AREA SOIL SITE: RAILROAD/ALLEY PILSEN, CHICAGO, ILLINOIS

								Analyse	es			Analyses	
Sample ID	Date Collected	Sampling Location	Property ID	Sample Type	Depth (in bgs)	Total Metals	Fine- Grained Lead	Coarse- Grained Lead	Bioavailable Lead	TCLP Metals	TCLP Lead	Percent Moisture	pН
December 2012 Field Sampling	Event (City o	f Chicago Alley)											
PA-AC01(0-6)-121912	12/19/2012	AY01 and AY02	-	С	0-6	X	X	X	X	-	-	X	X
PA-AC01(0-6)- 121912D	12/19/2012	AY01 and AY02	-	C	0-6	X	X	X	X	-	-	X	X
PA-AC02(0-6)-121912	12/19/2012	AY03 and AY04	-	С	0-6	X	X	X	X	-	-	X	X
PA-AC02(0-6)- 121912D	12/19/2012	AY03 and AY04	-	C	0-6	X	X	X	X	-	-	X	X
PA-AC03(0-6)-121912	12/19/2012	AY05 and AY06	-	С	0-6	X	X	X	X	X	-	X	X
PA-AC03HS(0-6)-121912	12/19/2012	AY03S and AY03W	-	С	0-6	X	X	X	X	X	-	X	X
PA-AC04(0-6)-121912	12/19/2012	AY07 and AY08	-	С	0-6	X	X	X	X	X	-	X	X
PA-AC05(0-6)-121912	12/19/2012	AY09 and AY10	-	C	0-6	X	X	X	X	-	-	X	X
PA-AC06(0-6)-121912	12/19/2012	AY11 and AY12	-	С	0-6	X	X	X	X	-	-	X	X
PA-AC07(0-6)-121912	12/19/2012	AY13 and AY14	-	С	0-6	X	X	X	X	-	-	X	X
PA-AC08(0-6)-121912	12/19/2012	AY15 and AY16	-	С	0-6	X	X	X	X	-	-	X	X
PA-AC09(0-6)-121912	12/19/2012	AY17 and AY18	-	С	0-6	X	X	X	X	-	-	X	X
PA-AC010(0-6)-121912	12/19/2012	AY19 and AY20	-	С	0-6	X	X	X	X	-	-	X	X
PA-AY02(6-12)-121912	12/19/2012	AY02	ı	Grab	6-12	X	X	X	X	_	-	X	X
PA-AY04(6-12)-121912	12/19/2012	AY04	1	Grab	6-12	X	X	X	X	-	-	X	X
PA-AY05(6-12)-121912	12/19/2012	AY05	-	Grab	6-12	X	X	X	X	X	-	X	X
PA-AY07(12-24)-121912	12/19/2012	AY07	-	Grab	12-24	X	X	X	X	-	-	X	X
PA-AY09(12-24)-121912	12/19/2012	AY09	-	Grab	12-24	X	X	X	X	-	-	X	X
PA-AY12(6-12)-121912	12/19/2012	AY12	-	Grab	6-12	X	X	X	X	-	-	X	X
PA-AY13(12-24)-121912	12/19/2012	AY13	-	Grab	12-24	X	X	X	X	-	-	X	X
PA-AY16(12-24)-121912	12/19/2012	AY16	-	Grab	12-24	X	X	X	X	-	-	X	X
PA-AY18(6-12)-121912	12/19/2012	AY18	-	Grab	6-12	X	X	X	X	-	-	X	X

### TABLE 3-1 SOIL SAMPLE SUMMARY PILSEN AREA SOIL SITE: RAILROAD/ALLEY PILSEN, CHICAGO, ILLINOIS

								Analyse	S			Analyses	
Commis ID	Date	Compling Location	Property	Sample	Depth (in	Total Metals	Fine- Grained Lead	Coarse- Grained Lead	Bioavailable Lead	TCLP Metals	TCLP Lead	Percent Moisture	pН
Sample ID  December 2012 Field Sampling	Collected  Event (City o	Sampling Location	ID	Type	bgs)	Metals	Leau	Leau	Leau	Metais	Leau	Mosture	PII
1 0		<u> </u>	<u> </u>					<u> </u>	<u> </u>	<u> </u>			
PA-AY19(12-24)-121912	12/19/2012	AY19	-	Grab	12-24	X	X	X	X	-	-	X	X
May Field Sampling Event (BNS	SF Railroad S	pur)											
PA-RR01,02(0-6)-050613	5/6/2013	RR-01 and RR-02	-	С	0-6	X	X	-	-	X	X	X	X
PA-RR01,02(6-24)-050613	5/6/2013	RR-01 and RR-02	-	С	6-24	X	X	-	-	X	X	X	X
PA-RR01,02(6-24)-050613D	5/6/2013	RR-01 and RR-02	-	С	6-24	X	X	-	-	X	X	X	X
PA-RR04,06(0-6)-050613	5/6/2013	RR-04 and RR-06	-	С	0-6	X	X	-	X	X	X	X	X
PA-RR04,06(6-24)-050613	5/6/2013	RR-04 and RR-07	-	С	6-24	X	X	-	-	X	X	X	X
PA-RR07,08(0-6)-050613	5/6/2013	RR-07 and RR-08	-	С	0-6	X	X	-	-	X	X	X	X
PA-RR07,08(6-24)-050613	5/6/2013	RR-07 and RR-08	-	С	6-24	X	X	-	-	X	X	X	X
PA-RR10,12(0-6)-050613	5/6/2013	RR-10 and RR-12	-	С	0-6	X	X	-	-	X	X	X	X
PA-RR10,12(6-24)-050613	5/6/2013	RR-10 and RR-12	-	С	6-24	X	X	-	-	X	X	X	X
PA-RR11,13(0-6)-050613	5/6/2013	RR-11 and RR-13	-	С	0-6	X	X	-	-	X	X	X	X
PA-RR11,13(6-24)-050613	5/6/2013	RR-11 and RR-13	-	С	6-24	X	X	-	-	X	X	X	X
PA-RR14,15(0-6)-050613	5/6/2013	RR-16	-	С	0-6	X	X	-	-	X	X	X	X
PA-RR14,15(6-24)-050613	5/6/2013	RR-16	-	С	6-24	X	X	-	_	X	X	X	X

### TABLE 3-1 SOIL SAMPLE SUMMARY PILSEN AREA SOIL SITE: RAILROAD/ALLEY PILSEN, CHICAGO, ILLINOIS

						Analyses						Analyses	
Sample ID	Date Collected	Sampling Location	Property ID	Sample Type	Depth (in bgs)	Total Metals	Fine- Grained Lead	Coarse- Grained Lead	Bioavailable Lead	TCLP Metals	TCLP Lead	Percent Moisture	pН
August Field Sampling Event (	Little Italy Ref	ference Area)											
PA-489-01(6-18)-081213	8/12/2013	Front yard	489	С	6-18	X	X	-	-	1	ı	1	-
PA-490-01(0-6)-081213	8/12/2013	Front yard	490	C	0-6	X	X	-	-	-	-	-	-
PA-491-01(0-6)-081213	8/12/2013	Front yard	491	C	0-6	X	X	-	-	-	-	-	-
PA-491-01(6-18)-081213	8/12/2013	Front yard	491	C	6-18	X	X	-	-	-	-	-	-
PA-491-01(6-18)-081213D	8/12/2013	Front yard	491	С	6-18	X	X	-	-	-	-	-	_
PA-492-01(0-6)-081313	8/13/2013	Front yard	492	С	0-6	X	X	-	-	-	-	-	-
PA-493-01(0-6)-081313	8/13/2013	Front yard	493	С	0-6	X	X	-	-	-	-	-	-
PA-494-01(0-6)-081313	8/13/2013	Area	494	С	0-6	X	X	-	-	-	-	-	-
PA-500-01(0-6)-081413	8/14/2013	Backyard	500	С	0-6	X	X	-	-	-	-	-	
PA-500-01(6-24)-081413	8/14/2013	Backyard	500	С	6-24	X	X	-	-	-	-	-	-
PA-501-01(0-6)-081413	8/14/2013	Front yard	501	С	0-6	X	X	-	-	-	-	-	-
PA-503-01(0-6)-081413	8/14/2013	Front yard	503	С	0-6	X	X	-	-	-	-	-	_
PA-503-01(6-24)-081413	8/14/2013	Front yard	503	С	6-24	X	X	-	-	ı	-	1	-
PA-511-01(0-6)-081613	8/16/2013	Front yard	511	C	0-6	X	X	-	-	-	-	-	-
PA-512-01(0-6)-081613	8/16/2013	Front yard	512	С	0-6	X	X	-	-	-	-	-	-
PA-513-01(0-6)-081613	8/16/2013	Front yard	513	С	0-6	X	X	-	-	-	-	-	-
PA-513-01(0-6)-081613D	8/16/2013	Front yard	513	С	0-6	X	X	-	-	ı	-	-	

Notes: C - composite sample
- Not applicable ID - Identification
% - Percent in - Inches

bgs - Below ground surface TCLP - Toxicity characteristic leaching procedure

#### **TABLE 4-1** CITY OF CHICAGO ALLEY SOIL SAMPLING RESULTS PILSEN AREA SOIL SITE: RAILROAD/ALLEY CHICAGO, COOK COUNTY, ILLINOIS

				DA AC01(0.6)	PA-AC01(0-6)-	DA AC02(0.6)	PA-AC02(0-6)-	DA AC03(0.6)	DA ACO4(0.6)	DA AC05(0.6)	PA-AC06(0-6)-	DA AC07(0.6)	DA AC08(0.6)	DA AC00(0.6)	DA AC10(0.6)	PA-AY02(6-12)-
			Field Sample ID	121912	121912D	121912	121912D	121912	121912	121912	121912	121912	121912	121912	121912	121912
			Location ID	AC01	AC01	AC02	AC02	AC03	AC04	AC05	AC06	AC07	AC08	AC09	AC10	AY02
			Sample Date	12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012
			Depth Interval (in bgs)	0- 6	0- 6	0- 6	0- 6	0- 6	0- 6	0- 6	0- 6	0- 6	0- 6	0- 6	0- 6	6- 12
	1		Depth Interval (in bgs)	0- 0	0- 0	0- 0	0- 0	0- 0	0- 0	0-0	0-0	0- 0	0- 0	0- 0	0- 0	0-12
	EDA DMI	40 CFR 261,														l
	for Res.	Subpart C,														l
D		261.24 (b)	TT.:: *4 ::													l
Parameter Translation	3011, HQ 3	201.24 (b)	Units													
Total Metals	1 01						2.77	***		1 40	100 7			40.77	40.77	
Antimony	94	-	mg/kg	25 U	24 U	22 U	26 U	290 J	78 J	29	130 J	24 U	21 U	19 U	19 U	20 U
Arsenic	39	-	mg/kg	26	41	41	41	44 J	28	14	10	6.8	5.5	3.4	1.9 U	40
Barium	46000	-	mg/kg	530	540	500	400	1600	980	540	320	400	140	68	32	680
Cadmium	210	-	mg/kg	10	13	18	12	42	40	25	18	9.3	4.5	2.1	0.96 U	13
Chromium		-	mg/kg	1600	2100	1700	3400	260	150	110	53	24	17	11	7	50
Copper	9400	-	mg/kg	870	1000	1100	1600	8400	5400	5700	1900	2100	660	580	230	660
Lead	400	-	mg/kg	2700	2600	1900	2000	5600	5000	3900	3000	940	570	340	63	2500
Selenium	1200	-	mg/kg	2.5 U	3.7	3.4	2.6 U	3.5 J	3.7	3.4	2.5	2.4 U	2.1 U	1.9 U	1.9 U	2.9
Silver	1200	-	mg/kg	2.5 U	2.4 U	3.1	3	41	19	5.6	2.8	2.4 U	2.1 U	1.9 U	1.9 U	9.6
Tin	140000	-	mg/kg	120 J	130 J	150 J	210 J	1100 J	600	480 J	1600 J	130 J	65 J	37 J	14 J	88 J
Zinc	70000	-	mg/kg	4800	4100	4400	4600	8100	14000	13000	5300	2600	1700	750	180	3000
Mercury	30	-	mg/kg	1.7	1.9	0.77	0.7	3.6	1.3	0.55	0.35	0.37	0.27	0.076	0.044	2.9
TCLP Metals	_										_	_	_			
Arsenic, TCLP	-	5	mg/L	-	-	-	-	0.01 U	0.01 U	-	-	-	-	-	-	-
Barium, TCLP	-	100	mg/L	-	-	-	-	2.3	1.7	-	-	-	-	-	-	-
Cadmium, TCLP	-	1	mg/L	-	-	-	-	0.35	0.4	-	-	-	-	-	-	-
Chromium, TCLP	-	5	mg/L	-	-	-	-	0.01 U	0.01 U	-	-	-	-	-	-	-
Lead, TCLP	-	5	mg/L	-	-	-	-	12	12	-	-	-	-	-	-	-
Selenium, TCLP	-	1	mg/L	-	-	-	-	0.01 U	0.01 U	-	-	-	-	-	-	-
Silver, TCLP	-	5	mg/L	-	-	-	-	0.01 U	0.01 U	-	-	-	-	-	-	-
Mercury, TCLP	-	0.2	mg/L	-	-	-	-	0.0002 U	0.0002 U	-	-	-	-	-	-	-
Miscellaneous Analyses																
Lead, Coarse-Grained	-	-	mg/kg	1600	1400	1600	3900	17000	3600	2600	1400	390	300	280	98	4900
Lead, Fine-Grained	400	-	mg/kg	2000	2400	1900	2000	6600	5300	3600	2100	3200	1000	1100	180	3000
Lead, Bioavailable	-	-	%	41.3	50.2	59.6	58	55.1	50.9	64.5	86.1	47.5	97.2	70.8	99.5	42.4
pН	-	-	SU	8.2	8	7.8	7.7	7.8	7.8	7.6	7.7	8.1	8.4	9.9	9.2	8

## Notes:

Shaded values indicate concentration exceeds the EPA RML for Residential Soil, Hazard

Shaded values indicate concentration exceeds 40 CFR Part 261, Subpart C, 261.24 (b)

- = Not applicable or not analyzed J = Result is estimated % = Percentmg/kg = milligram per kilogram mg/L = milligram per liter

bgs = Below ground surface CFR = Code of Federal Regulations Res. = Residential

HQ = Hazard Quotient SU = Standard Unit

ID = IdentificationU = Constituent not detected.

in = Inches

# TABLE 4-1 CITY OF CHICAGO ALLEY SOIL SAMPLING RESULTS PILSEN AREA SOIL SITE: RAILROAD/ALLEY CHICAGO, COOK COUNTY, ILLINOIS

			T	PA-AY03HS(0-6)-	ΡΔ-ΔΥΩ4(6-12)-	ΡΔ-ΔΥ05(6-12)-	ΡΔ-ΔΥ07(12-24)-	ΡΔ-ΔΥΩ9(12-24)-	ΙΡΔ-ΔΥ12(6-12)-	ΡΔ-ΔΥ13(12-24)-	ΡΔ-ΔΥ16(12-24)-	ΡΔ-ΔΥ18(6-12)-	ΡΔ-ΔΥ19(12-24).
			Field Sample ID	121912	121912	121912	121912	121912	121912	121912	121912	121912	121912
			Location ID	AY03HS	AY04	AY05	AY07	AY09	AY12	AY13	AY16	AY18	AY19
			Sample Date		12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012	12/19/2012
			Depth Interval (in bgs)	0- 6	6- 12	6- 12	12- 24	12- 24	6- 12	12- 24	12- 24	6- 12	12-14
		I	Depth filter var (in bgs)	0- 0	0- 12	0-12	12- 24	12- 24	0-12	12- 24	12- 24	0-12	12- 24
	EDA DMI	40 CFR 261,											
		· · · · · · · · · · · · · · · · · · ·											
	for Res.	Subpart C,											
Parameter	Soil, HQ 3	261.24 (b)	Units										
Total Metals		_							_			_	
Antimony	94	-	mg/kg	13 J	440 J	440 J	1200	640 J	26 U	110 J	25 U	54 J	24 U
Arsenic	39	-	mg/kg	51	86	73 J	93	39	15	33	16	18	14
Barium	46000	-	mg/kg	630	1000	2700	4300	2400	420	1200	320	510	300
Cadmium	210	-	mg/kg	17	22	36	72	48	18	7.2	3.2	40	15
Chromium		-	mg/kg	380	510	94 J	150	110	35	37	17	72	30
Copper	9400	-	mg/kg	1500	4000	22000	12000	8900	2000	1900	450	33000	20000
Lead	400	-	mg/kg	2600	8700	8800	16000	15000	1700	3200	2100	3400	1600
Selenium	1200	-	mg/kg	4.6	4	5	4.7	3.2	2.6 U	2.3 U	2.5 U	5.5	2.9
Silver	1200	-	mg/kg	3.1	29	86	23	38	2.6	2.3 U	2.5 U	7.3	5.2
Tin	140000	-	mg/kg	190	2200 J	1800 J	3200	8200 J	420 J	760 J	57 J	1000 J	710 J
Zinc	70000	-	mg/kg	4800	6000	7300	11000	7900	3800	2600	980	14000	4500
Mercury	30	-	mg/kg	2.9	1.5	2.7	1.7	2.6	0.94	0.72	9.2	1.2	0.056
TCLP Metals													
Arsenic, TCLP	-	5	mg/L	0.01 U	-	0.01 U	-	-	-	-	-	-	-
Barium, TCLP	-	100	mg/L	1.8	-	2.5	-	-	-	-	-	-	-
Cadmium, TCLP	-	1	mg/L	0.083	-	0.24	-	-	-	-	-	-	-
Chromium, TCLP	-	5	mg/L	0.01 U	-	0.01 U	-	-	-	-	-	-	-
Lead, TCLP	-	5	mg/L	1.1	-	9.6	-	-	-	-	-	-	-
Selenium, TCLP	-	1	mg/L	0.01 U	-	0.01 U	-	-	-	-	-	-	-
Silver, TCLP	-	5	mg/L	0.01 U	-	0.01 U	-	-	-	-	-	-	-
Mercury, TCLP	-	0.2	mg/L	0.0002 U	-	0.0002 U	-	-	-	-	-	-	-
Miscellaneous Analyses													
Lead, Coarse-Grained	-	-	mg/kg	1400	17000	26000	29000	5800	1400	5400	2000	4000	1400
Lead, Fine-Grained	400	-	mg/kg	2300	7500	8400	9300	6600	2000	4000	2500	4400	2100
Lead, Bioavailable	-	-	%	46.9	30.2	42.4	49.2	80	75.4	65.1	84.8	73.8	63.9
pН	-	-	SU	7.8	7.7	7.6	7.8	7.4	7.7	8	8	7.5	7.8

#### Notes:

Shaded values indicate concentration exceeds the EPA RML for Residential Soil, Hazard

Shaded values indicate concentration exceeds 40 CFR Part 261, Subpart C, 261.24 (b)

in = Inches

#### **TABLE 4-2** BNSF RAILROAD SPUR SOIL SAMPLING RESULTS PILSEN AREA SOIL SITE: RAILROAD/ALLEY CHICAGO, COOK COUNTY, ILLINOIS

			Field Sample II	PA-RR01,02(0-6)-	PA-RR01,02	PA-RR01,02	PA-RR04,06	PA-RR04,06	PA-RR07,08	PA-RR07,08	PA-RR10,12	PA-RR10,12	PA-RR11,13
			rielu Sample II	050613	(6-24)-050613	(6-24)-050613D	(0-6)-050613	(6-24)-050613	(0-6)-050613	(6-24)-050613	(0-6)-050613	(6-24)-050613	(0-6)-050613
			Location II	RR01,02	RR01,02	RR01,02	RR04,06	RR04,06	RR07,08	RR07,08	RR10,12	RR10,12	RR11,13
			Sample Date	e 5/6/2013	5/6/2013	5/6/2013	5/6/2013	5/6/2013	5/6/2013	5/6/2013	5/6/2013	5/6/2013	5/6/2013
			Depth Interval (ft bgs	0-6	6- 24	6- 24	0- 6	6- 24	0- 6	6- 24	0- 6	6- 24	0-6
	EPA RML	40 CFR 261,											
	for Res.	Subpart C,											
Parameter	Soil, HQ 3	261.24 (b)	Unit										
Total Metals													
Antimony	94	-	mg/kg	19 J	7.4 J	23 U	18 J	4.1 U	12 J	9 J	14 J	34 J	6.4 J
Cadmium	210	-	mg/kg	16	6.1	8.6	140	16	71	49	17	12	9.3
Chromium	-	-	mg/kg	64	34	35	56	27	45	43	53	35	220
Copper	9400	ı	mg/kg	9400	3700	2500	11000	1800	6500	3700	1000	980	650
Lead	400	ı	mg/kg	4000	1700	1500	11000	1700	6800	5500	1800	2400	940
Lead, Fine-Grained	400	ı	mg/kg	4100	2200	2200	23000	2600	7900	9500	2600	2300	900
Tin	140000	-	mg/kg	1300	560	600	980	240	540	450	150	170	70
Zinc	70000	-	mg/kg	26000	17000	14000	78000	9900	46000	24000	3800	2200	2200
Mercury	30	-	mg/kg	0.52	0.63	0.59	0.61	1.6	0.72	0.65	1.1	1.5	0.55
TCLP Metals													
Lead, TCLP		5	mg/L	0.87	0.98	5	12	0.24	3.6	13	0.52	0.68	0.13
Other Analyses													
Lead, Bioavailable	-	-	%	-	-	-	78.3	-	-	-	-	-	-

#### Notes:



Shaded values indicate concentration exceeds the EPA RML for Residential (HQ3)



Shaded values indicate concentration exceeds 40 CFR Part 261, Subpart C

- = Not applicable or not analyzed % = Percent

bgs = Below ground surface

CFR = code of federal regulations

ft = feet

ID = Identification

J = value is an estimated quantity

mg/kg = milligram per kilogram

mg/L = milligram per liter

RML - removal management level

#### **TABLE 4-2** BNSF RAILROAD SPUR SOIL SAMPLING RESULTS PILSEN AREA SOIL SITE: RAILROAD/ALLEY CHICAGO, COOK COUNTY, ILLINOIS

			Field Sample ID	PA-RR11,13	PA-RR14,15,16	PA-RR14,15,16
			Field Sample 1D	(6-24)-050613	(0-6)-050613	(6-24)-050613
			Location ID	RR11,13	RR14,15,16	RR14,15,16
			Sample Date	5/6/2013	5/6/2013	5/6/2013
			Depth Interval (ft bgs)	6- 24	0-6	6- 24
	EPA RML	40 CFR 261,				
	for Res.	Subpart C,				
Parameter	Soil, HQ 3	261.24 (b)	Unit			
Total Metals			•			
Antimony	94	-	mg/kg	8.8 J	4.7 J	5.2 J
Cadmium	210	-	mg/kg	8.6	9.5	11
Chromium	-	-	mg/kg	43	900	2000
Copper	9400	-	mg/kg	360	770	900
Lead	400	-	mg/kg	1000	1500	2200
Lead, Fine-Grained	400	-	mg/kg	980	3200	2200
Tin	140000	-	mg/kg	110	130	120
Zinc	70000	-	mg/kg	1100	5800	4700
Mercury	30	-	mg/kg	0.58	1.2	0.78
TCLP Metals						
Lead, TCLP		5	mg/L	0.022	0.75	0.35
Other Analyses						
Lead, Bioavailable	-	-	%	-	-	-

#### Notes:



Shaded values indicate concentration exceeds the EPA RML for Residential (HQ3)



Shaded values indicate concentration exceeds 40 CFR Part 261,

Subpart C

- = Not applicable or not analyzed

% = Percent

bgs = Below ground surface

CFR = code of federal regulations

ft = feet

ID = Identification

J = value is an estimated quantity

mg/kg = milligram per kilogram

mg/L = milligram per liter

RML - removal management level

# TABLE 4-3 LITTLE ITALY REFRENCE AREA SOIL SAMPLING RESULTS PILSEN SOIL SITE: RAILROAD/ALLEY CHICAGO, COOK COUNTY, ILLINOIS

		Field Sample ID	PA-489-01(0-6)-	PA-489-01(6-18)-	PA-490-01(0-6)-	PA-491-01(0-6)-	PA-491-01(6-18)-	PA-491-01(6-18)-	PA-492-01(0-6)-	PA-493-01(0-6)-	PA-494-01(0-6)-	PA-500-01(0-6)-
		-	081213	081213	081213	081213	081213	081213D	081313	081313	081313	081413
		Location ID	489	489	490	491	491	491	492	493	494	500
		Sample Date	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/12/2013	8/13/2013	8/13/2013	8/13/2013	8/14/2013
		Depth Interval (in bgs)	0-6	6-18	0-6	0-6	6-18	6-18	0-6	0-6	0-6	0-6
	EPA RML for Res.											
Parameter	Soil, HQ 3	Unit										
Total Metals												
Antimony	94	mg/kg	4.2 U	4.4 U	4.4 U	4.8 U	4.5 U	4.1 U	4.4 U	4.3 U	4.6 U	4.4 U
Cadmium	210	mg/kg	1.4	1.4	1.6	1.8	1.6	1.5	2.7	1.8	2	3.4
Chromium	-	mg/kg	17	18	19	21	36	17	24	16	33	26
Copper	9400	mg/kg	30	28	33	68	71	65	66	45	46	72
Lead	400	mg/kg	160	92	220	260	270	260	260	190	120	760
Lead, Fine-Grained	400	mg/kg	160	150	230	280	400	390	210	210	110	1300
Tin	140000	mg/kg	10 U	11 U	11 U	16	15	16	13	11 U	12 U	27
Zinc	70000	mg/kg	140	120	150	270	250	230	210	170	170	620
Mercury	30	mg/kg	0.14	0.13	0.29	0.42	0.6	0.66	0.33	0.39	0.17	0.88

#### **Notes:**

Shaded/Bolded values indicate concentration exceeds the EPA RML for Residential Soil, Hazard Quotient 3

- = Not applicable or not analyzed

bgs = Below ground surface

HQ = Hazard quotient

ID = Identification

in = Inches

mg/kg = milligram per kilogram

Res. = Residential

RML = Removal Action Levels

# TABLE 4-3 LITTLE ITALY REFRENCE AREA SOIL SAMPLING RESULTS PILSEN SOIL SITE: RAILROAD/ALLEY CHICAGO, COOK COUNTY, ILLINOIS

		E'all Camala ID	D4 500 01/6 04)	DA 501 01(0.6)	D4 511 01(0.6)	D. 512.01(0.6)	D. 512.01(0.6)	D. 512.01(0.6)
		Field Sample ID	PA-500-01(6-24)-	PA-501-01(0-6)-	PA-511-01(0-6)-	PA-512-01(0-6)-	PA-513-01(0-6)-	PA-513-01(0-6)-
			081413	081413	081613	081613	081613	081613D
		Location ID	500	501	511	512	513	513
		Sample Date	8/14/2013	8/14/2013	8/16/2013	8/16/2013	8/16/2013	8/16/2013
		Depth Interval (in bgs)	6-24	0-6	0-6	0-6	0-6	0-6
	EPA RML for Res.							
Parameter	Soil, HQ 3	Unit						
Total Metals								
Antimony	94	mg/kg	3.9 U	5.2 U	4.4 U	4.7 U	4.2 U	4.2 U
Cadmium	210	mg/kg	3.1	1.4	1.7	1.7	1.4	1.3
Chromium	-	mg/kg	22	22	21	19	31	23
Copper	9400	mg/kg	88	28	40	37	45	42
Lead	400	mg/kg	930	66	210	320	170	140
Lead, Fine-Grained	400	mg/kg	1400	66	370	520	230	210
Tin	140000	mg/kg	28	13 U	11 U	12 U	10 U	10 U
Zinc	70000	mg/kg	690	150	170	230	200	200
Mercury	30	mg/kg	1.7	0.081	0.2	0.27	0.2	0.28

#### **Notes:**

Shaded/Bolded values indicate concentration exceeds the EPA RML for

- = Not applicable or not analyzed

bgs = Below ground surface

HQ = Hazard quotient

ID = Identification

in = Inches

mg/kg = milligram per kilogram

Res. = Residential

RML = Removal Action Levels

# APPENDIX A PHOTOGRAPHIC DOCUMENTATION



Photo Number: 1 Date: 12/12/12

**Direction:** West **Photographer:** D. Sena

**Subject:** Eastern portion of the City of Chicago alley with the H. Kramer property to the north.



Site: Pilsen Area Soil Site: Railroad/Alley

Photo Number: 2 Date: 12/12/12

**Direction:** West **Photographer:** D. Sena

Subject: Western portion of the City of Chicago alley with the H. Kramer property to the north.

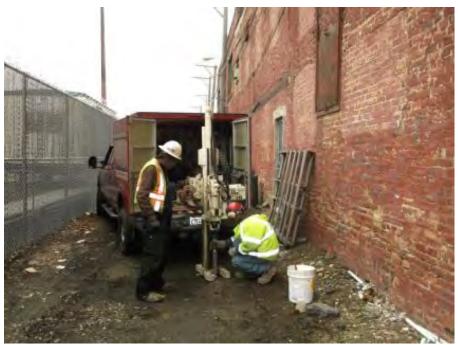


Photo Number: 3 Date: 12/19/12

**Direction:** East **Photographer:** D. Sena

Subject: Cabeno Environmental Field Services, LLC advancing Geoprobe in City of Chicago

alley.



Site: Pilsen Area Soil Site: Railroad/Alley

Photo Number: 4 Date: 12/19/12

**Direction:** Down **Photographer:** D. Sena

Subject: Soil boring advanced from location AY-05 from 0-48 inches below ground surface.



**Photo Number:** 5 **Date:** 5/6/13

**Direction:** South **Photographer:** D. Sena

Subject: EPA FIELDS advancing Geoprobe at RR-01.



Site: Pilsen Area Soil Site: Railroad/Alley

**Photo Number:** 6 **Date:** 5/6/13

**Direction:** East **Photographer:** D. Sena **Subject:** EPA FIELDS advancing Geoprobe at RR-04, adjacent to H. Kramer facility.



**Photo Number:** 7 **Date:** 5/6/13

**Direction:** North **Photographer:** D. Sena **Subject:** EPA FIELDS advancing Geoprobe at RR-14, with the H. Kramer facility in the

background.



Site: Pilsen Area Soil Site: Railroad/Alley

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**Photo Number:** 8 **Date:** 5/6/13

**Direction:** Down **Photographer:** D. Sena

Subject: Soil boring advanced from location RR-06 from 0-24 inches below ground surface.

2038-2A-BLKW

# APPENDIX B SOIL BORING LOGS

	٧		ton Solutions, Inc. 750 E Bunker Ct				AY-01	
		V	ernon Hills, IL 60061				(Page 1 of 1)	
	i (	Pilse	EPA Region V contract: EP-S5-06-04 n Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Caber : David : 4.0 ft	robe no Sena	Latitude: : 41.8528869045 Longitude: : -87.6605064821	
			Sample Comments Investigative Soil Sample Investigative Soil Sample and	Duplicate Sample				
Depth in Feet	nscs	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMARKS	
0-			SILT FILL - Grayish black, mediun rounded gravel, some wood chips plastic	n soft, dry, some , some pieces of			Composite soil sample PA-AC01(0-6)-121912 and PA-AC01(0-6)-121912D collected from 0 to 6 inches bgs	
1— 1— - - - - -	FL							
2— - - -	FL		SILT FILL - Brown black, medium angular gravel	firm, dry, some	_	95%		
3	FL		SILT FILL - Red, black, orange, n sand, trace fine-grained angular g	nedium soft, some ravel, trace slag				
5 —			End of boring at 4.0 ft bgs.					

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		٧	Ves	ston Solutions, Inc. 750 E Bunker Ct				AY-02	
			١	Vernon Hills, IL 60061				(Page 1 of 1)	
		[	Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley eago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Cabe : David : 4.0 ft	robe no Sena	Latitude : 41.85284859 Longitude: : -87.66040217	
				Sample Comments  Investigative Soil Sample  Investigative Soil Sample and					
	epth in eet	nscs	GRAPHIC	DESCRIPTION	DN	Sample	Recovery (percent)	REMARKS	
	0-			CLAYEY SILT FILL - Dark brown, sand, some fine-grained angular g graded, trace glass and brick piec	ravel, well			Composite soil sample PA-AC01(0-6)-121912 & PA-AC01(0-6)-121912D collected from 0 to 6 inches bgs	
	- - - 1—							Grab soil sample PA-AY02(6-12)-121912 collected from 6 to 12 inches bgs	
	· -								
	2-	FL					75%		
	- - -			As above					
.Y-02.bor	3-								
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Mendoza\R	4-			End of boring at 4.0 ft bgs.					_
ïles∖Pilsen SA	- - -		End of boring at 4.0 ft bgs.						
START3\Site F	- - - 5-								
:\EPA\EPA R5	- - -								
02-21-2014 K	6-								

	١	Ves	ston Solutions, Inc. 750 E Bunker Ct				AY-03	
		١	/ernon Hills, IL 60061				(Page 1 of 1)	
		Pilse	EPA Region V Contract: EP-S5-06-04 In Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Cabe : David	robe no Sena	Latitude : 41.85287639 Longitude : -87.66032823	
			Sample Comments  Investigative Soil Sample  Investigative Soil Sample and		14.011			
Depth in Feet	S	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMARKS	
0-	FL		SAND FILL - Dark brown, loose, n some plastic and slag pieces	noist, some clay,			Composite soil sample PA-AC020-6)-121912 & PA-AC02(0-6)-121912D collected from 0 to 6 inches bgs	
1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	FL		SANDY SILT FILL - Black, mediur fine-grained angular gravel, trace	n soft, moist, some slag		90%		
02-21-2014 K:\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\AY-03.bor C		End of boring at 4.0 ft bgs.			1			

	٧		ston Solutions, Inc. 750 E Bunker Ct				AY-04
			/ernon Hills, IL 60061	Date	: 12/19	/2012	(Page 1 of 1)  Latitude : 41.85286342
	1	Pilse	EPA Region V contract: EP-S5-06-04 n Soil Site: Railroad/Alley ago, Cook County, Illinois	Drill Rig Type Drilling Company	: Geop : Caber : David : 4.0 ft	robe no Sena	Latitude : 41.65266342 Longitude : -87.66022353
			Sample Comments  Investigative Soil Sample  Investigative Soil Sample and		1 4.0 11		
Depth in Feet	nscs	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMARKS
0		the complete complete complete complete complete complete comp	SANDY SILT FILL - Dark brown, n trace fine-grained subrounded gra				Comnposite soil sample PA-AC02(0-6)-121912 & PA-AC02(0-6)-121912D collected from 0 to 6 inches bgs
- - - 1—	FL	and the contribution of th				90%	Grab soil sample PA-AY04(6-12)-121912 collected from 6 to 12 inches bgs
- - - -							
2-		the control of the co	SILT FILL - Black, medium firm, m	oist, some sand			
- - - -			trace fine-grained angular gravel,	some brick pieces			
3-	FL						
- - - -							
4-			End of boring at 4.0 ft bgs.				
- - - - - - - -							
- - - -							
6-							

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	V		ston Solutions, Inc. 750 E Bunker Ct				AY-05
		١	/ernon Hills, IL 60061				(Page 1 of 1)
		Pilse	EPA Region V Contract: EP-S5-06-04 In Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Caber : David : 4.0 ft	robe no Sena	Latitude : 41.8528897 Longitude : -87.66015578
			Sample Comments Investigative Soil Sample Investigative Soil Sample and	Duplicate Sample			
Depth in Feet	တ္လ	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMARKS
0 <del>-</del> - - -			SILTY CLAY FILL - Dark brown, d fine-grained subrounded gravel, tr	ry, trace ace glass pieces			Composite soil sample PA-AC03(0-6)-121912 collected from 0 to 6 inches bgs
- - - - 1-	FL						Grab soil sample PA-AY05(6-12)-121912 collected from 6 to 12 inches bgs
- - -	FL	the complete	SILTY SAND FILL - Gray, medium coarse-grained angular gravel				
2- - - - -	-		SILT FILL - Black, medium firm, c trace cinders	lry, some sand,		90%	
3-	FL						
-							
4			End of boring at 4.0 ft bgs.				

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		١	Ve	ston Solutions, Inc. 750 E Bunker Ct				AY-06	
			'	Vernon Hills, IL 60061					(Page 1 of 1)
		Contract: EP-S5-06-04  Pilsen Soil Site: Railroad/Alley		Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Cabe : David : 4.0 ft	robe no I Sena	Latitude Longitude	: 41.85286302 : -87.66005877	
			O	Sample Comments Investigative Soil Sample Investigative Soil Sample and	Duplicate Sample				
	Depth in Feet	nscs	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMA	RKS
	0			SILT FILL - Black, medium firm, di trace medium-grained subangular graded, brick layer at 2 ft bgs	ry, some sand, gravel, poorly			Composite soil sample PA-AY04(0-inches bgs	6)-121912 collected from 0 to 6
	- - 1 – - -								
	- - - - - 2—	FL		As above			90%		
	- - - -								
upport\AY-06.bor	3- - -			As above					
. Mendoza\Report∖Su	- - - - 4								
Site Files\Pilsen SA -	- - - -			End of boring at 4.0 ft bgs.					
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02-21-2014 K:\EP,	- - - - 6								

	١	We	ston Solutions, Inc. 750 E Bunker Ct				AY-07	
			Vernon Hills, IL 60061					(Page 1 of 1)
		Pils	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley cago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Cabe : David	robe no I Sena	Latitude Longitude	: 41.85288437 : -87.65998557
		Sample Comments  Investigative Soil Sample  Investigative Soil Sample and D						
Depth in Feet	က္လ	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMA	RKS
0-	- - - - -		SANDY SILT FILL - Brown, medic fine-grained angular gravel, well g glass, wood chips, and brick piece	um firm, dry, some Iraded, some es			Composite soil sample PA-AC04(0-inches bgs	6)-121912 collected from 0 to 6
1-	- - - - - - - - - - - - - - - - - - -	-				90%	Grab soil sample PA-AY07(12-24)-1 inches bgs	121912 collected from 12 to 24
pport\AY-07.bor	- - - - - - - -		As above  SILTY SAND FILL - Light brown, I poorly graded, some slag	medium tight, moist,				
/endoza/Report/Sup	- FL - - -							
02-21-2014 K:EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\AY-07.bor			End of boring at 4.0 ft bgs.					

	,	We	eston Solutions, Inc. 750 E Bunker Ct				AY-08	
			Vernon Hills, IL 60061					(Page 1 of 1)
		Pils	EPA Region V Contract: EP-S5-06-04 sen Soil Site: Railroad/Alley		: 12/19 : Geop : Cabe : David	robe no Sena	Latitude Longitude	: 41.85287076 : -87.6598927
			Sample Comments  Investigative Soil Sample and I		: 4.0 ft			
Deptl in Feet	က္လ	GRAPHIC	DESCRIPTION	N	Sample	Recovery (percent)	REMA	RKS
O-1			GRAVELLY SILT FILL - Blackish b firm, dry, well graded, some sand, fine-grained and subangular  As above	rown, medium gravel is		60%	Composite soil sample PA-AY04(0-to 6 inches bgs	6)-121912 collected from 0
- Mendoza\Rep	- - -		End of boring at 4.0 ft bgs.					
02-21-2014 K:\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\AY-08.bor			and of boning at 4.0 It bys.					

		٧	Ves	ston Solutions, Inc. 750 E Bunker Ct				AY-09	
			\	Vernon Hills, IL 60061				(Page 1 of 1)	
		İ	Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Cabe : David	robe no I Sena	Latitude : 41.85288864 Longitude : -87.6598224	
				Sample Comments  Investigative Soil Sample  Investigative Soil Sample and	Duplicate Sample				
Dep in Fee	ı	nscs	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMARKS	
C	- - - - -			SILT FILL - Black and red, loose, medium-grained subrounded grav trace pieces of glass and brick	dry, some rel, well graded,			Composite soil sample PA-AC05(0-6)-121912 collected from inches bgs	0 to 6
2		FL					75%	Grab soil sample PA-AY09(12-24)-121912 collected from 12 inches bgs	to 24
alReport/Support/AY-09.bor	3-	FL		SILTY SAND AND GRAVEL FILL red, medium tight, moist, well grades.  SILT FILL - Black, soft, moist, son subangular gravel, well graded, so	ded ne medium-grained	-			
3A - Mendoz	1 1 -			End of boring at 4.0 ft bgs.					
2-21-2014 K:\EPA\EPA R5 (	5								

		٧	/es	ston Solutions, Inc. 750 E Bunker Ct				AY-10	
			١	Vernon Hills, IL 60061				(Page 1 of 1)	
		F	Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Cabe : David : 4.0 ft	robe no I Sena	Latitude : 41.85287145 Longitude : -87.65972522	
			O	Sample Comments  Investigative Soil Sample  Investigative Soil Sample and	Duplicate Sample				
Dep in Fee	th	NSCS	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMARKS	
0	-	FL		SILT AND GRAVEL FILL - Black a gravel is angular and medium-gra some slag and wood chips	and orange, dry, ined, well graded,			Composite soil sample PA-AC05(0-6)-121912 collected from 0 to inches bgs	6
// lendozalReport\Support\Av-10.bor		FL		SANDY SILT FILL - Black, dry, so angular gravel, poorly graded, tracand glass  As above with some orangish-gray	ce wood chips		75%		
02-21-2014 K:\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\AY-10.bor Operation SA - Mendoza\Report\AY-10.bor Operation SA - Mendoza\Report\AY-10.bo				End of boring at 4.0 ft bgs.					

		W	es	ston Solutions, Inc. 750 E Bunker Ct		AY-11						
			٧	/ernon Hills, IL 60061				(Page 1 of 1)				
			lse	EPA Region V Contract: EP-S5-06-04 In Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19/2012 : Geoprobe : Cabeno : David Sena : 4.0 ft bgs		Latitude : 41.8528959 Longitude : -87.65964595				
Dept	h	0	2	Sample Comments Investigative Soil Sample Investigative Soil Sample and	Duplicate Sample		ry t)					
in Fee	S		GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMARKS				
0.	- - - - Fl			SILT FILL - Black, dry, some med gravel, trace brick and glass	ium-grained angular			Composite soil sample PA-AC06(0-6)-121912 collected from 0 to 6 inches bgs				
Report/Support/AY-11.bor				SANDY SILT FILL - Black, mediur fine-grained subrounded gravel, tr slag and glass  As above  SANDY SILT FILL - Black and bromoist, poorly graded	ace cobble, trace		95%					
lendoza	]FL	_	in our plan out the country of	, , , , , , , , , , , , , , , , , , ,								
02-21-2014 K:\EPA\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\AY-11.bor   C   C   C   C   C   C   C   C   C			481.	End of boring at 4.0 ft bgs.				1				

		٧	Ves	ston Solutions, Inc. 750 E Bunker Ct	AY-12					
			\	Vernon Hills, IL 60061				(Page 1 of 1)		
			Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley eago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Cabe : David : 4.0 ft	robe no I Sena	Latitude : 41.85287987 Longitude : -87.6595544		
				Sample Comments  Investigative Soil Sample  Investigative Soil Sample and	Duplicate Sample					
	Depth in Feet	nscs	GRAPHIC	DESCRIPTI	ON	Sample	Recovery (percent)	REMARKS		
	0-			SANDY SILT FILL - Black, mediu trace fine-grained subangular gra trace brick	m firm, dry to moist, vel, poorly graded,			Composite soil sample PA-AC06(0-6)-121912 collected from 0 to 6 inches bgs		
	- - 1—							Grab soil sample PA-AY12(6-12)-121912 collected from 6 to 12 inches bgs		
		FL					75%			
	2— 2— - -			Same as above						
-12.bor	3-			SANDY SILT FILL - Black, some	brick and wood					
doza\Report\Support\AY	-	FL		chips, trace fine-grained subangu subangular cobble	lar gravel, trace					
A - Men	4-			End of boring at 4.0 ft bgs.						
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		٧	Ves	ston Solutions, Inc. 750 E Bunker Ct				AY-13	
			١	Vernon Hills, IL 60061				(Page 1 of 1)	
		j (	Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Cabe : David : 4.0 ft	robe no I Sena	Latitude : 41.8529209 Longitude : -87.65948668	
			Sample Comments Investigative Soil Sample Investigative Soil Sample and D		Duplicate Sample		,		
	epth in Feet	nscs	GRAPHIC	DESCRIPTION	NC	Sample	Recovery (percent)	REMARKS	
	0			SANDY SILT FILL - Black, mediu coarse-grained angular gravel, we	m loose, dry, some ell graded			Composite soil sample PA-AC07(0-6)-121912 collected fro inches bgs	om 0 to 6
	1	FL		Same as above			75%	Grab soil sample PA-AY13(12-24)-121912 collected from 1 inches bgs	12 to 24
bor	- - - -	FL		SILTY SAND FILL - Gray and bladdry, some gravel, poorly graded	ck, medium firm,	_			
endoza\Report\Support\AY-13.	3	FL		SANDY SILT FILL - Black and ora dry, trace wood chips	ange, medium soft,				
02-21-2014 K\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\AY-13.bor	4—		iriël.	End of boring at 4.0 ft bgs.		•			

	٧	•	ston Solutions, Inc. 750 E Bunker Ct				AY-14	
		\ 	ernon Hills, IL 60061					(Page 1 of 1)
		Pilse	EPA Region V Contract: EP-S5-06-04 In Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Caber : David : 4.0 ft	robe no Sena	Latitude Longitude	: 41.85288814 : -87.65938658
Depth in Feet	Investigative Soil Sample with			MS/MSD	Sample	Recovery (percent)	REMA	RKS
0-			ASPHALT - Black, bituminous		11 /			
- - -	SAND AND GRAVEL FILL - Black medium loose, poorly graded,			and gray, dry,			6)-121912 collected from 0 to 6	
2— 3— 3—	SANDY SILT FILL - Black and ora dry, trace slag  FL  SILT FILL - Black, medium firm, m trace glass and wood chips  - FL		dry, trace slag  SILT FILL - Black, medium firm, m			50%		
- - -								
- 4-								
5— 			End of boring at 4.0 ft bgs.					

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	١	Ves	ston Solutions, Inc. 750 E Bunker Ct				AY-15	
		١	/ernon Hills, IL 60061					(Page 1 of 1)
		Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley		: 12/19 : Geop : Caber : David	robe no Sena	Latitude Longitude	: 41.85290762 : -87.6593215
			Sample Comments  Investigative Soil Sample and	Total Depth  Duplicate Sample	: 4.0 ft			
Depth in Feet	က္လ	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMA	RKS
0-	FL		ASPHALT - Black, bituminous					
1-	SP		SANDY SILT FILL - Gray, brown, soft, dry, some subangular gravel,	and black, medium well graded			Composite soil sample PA-AC08(0 from 0 to 6 inches bgs	-6)-121912 collected
2-	FL		SANDY SILT FILL - Black, moist, medium-grained subrounded grav trace wood chips	trace el, poorly graded,				
MendozalReport\Support\AY-15.bor			As above					
02-21-2014 K:EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\AY-15.bor C	-		End of boring at 4.0 ft bgs.					

	Weston Solutions, Inc. 750 E Bunker Ct			AY-16					
		١	Vernon Hills, IL 60061					(Page 1 of 1)	
		Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley eago, Cook County, Illinois		: 12/19 : Geop : Cabe : David	robe no Sena	Latitude Longitude	: 41.85287782 : -87.65921605	
Depth			Sample Comments  Investigative Soil Sample	ments gative Soil Sample gative Soil Sample and Duplicate Sample					
in Feet	SS	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMARKS		
0-	FL		ASPHALT - Black, bituminous						
- -	FL		SANDY GRAVEL FILL - Grayish b loose, some silt, well graded	prown, medium			Composite soil sample PA-AC08(0-6)-121912 colle 0 to 6 inches bgs	l-6)-121912 collected from	
			SILT - Black, medium firm, dry, so fine-grained angular gravel	me brick, trace					
2-						75%	Grab soil sample PA-AY16(12-24)- to 24 inches bgs	-121912 collected from 12	
AY-16.bor - 2			As above						
ndoza/Report/Support/	- - - - - - -		As above - Some cinders and woo	od chips					
4- YS			End of boring at 4.0 ft bgs.						
02-21-2014 K:\EPA\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\AY-16.bor C									

	٧		ston Solutions, Inc. 750 E Bunker Ct /ernon Hills, IL 60061				AY-17	(Page 1 of 1)
		Pilse	EPA Region V contract: EP-S5-06-04 n Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Caber : David : 4.0 ft	robe no Sena	Latitude Longitude	: 41.85290684 : -87.65914465
			Sample Comments  Investigative Soil Sample  Investigative Soil Sample and					
Depth in Feet	nscs	DESCRIPT		ON	Sample	Recovery (percent)	REMA	RKS
0-	FL		ASPHALT - Black, bituminous  SILTY SAND AND GRAVEL FILL brown, medium tight, dry, gravel is and angular	- Gray and light coarse-grained			Composite soil sample PA-AC09(0-inches bgs	-6)-121912 collected from 0 to 6
1- - - - - - - 2-	FL		SILT and SAND FILL - Black, med trace sand and fine-grained angula graded, trace slag	lium firm, moist, ar gravel, poorly		-		
- - - - - - - -			End of boring at 2.0 ft bgs - Refus	al				
- - - - - - - -								
- - - - - - - - -								
- - - - - - -								

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	١	Ve:	ston Solutions, Inc. 750 E Bunker Ct				AY-18	
		'	Vernon Hills, IL 60061					(Page 1 of 1)
		Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley eago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Cabe : David : 4.0 ft	robe no Sena	Latitude Longitude	: 41.85287599 : -87.65905847
			Sample Comments  Investigative Soil Sample  Investigative Soil Sample and					
Depth in Feet	SS	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMARKS	
0-	- FL	ASPHALT - Black, bituminous  SANDY SILT FILL - Black, brown, dry, some fine-grained angular gra		and gray, soft, avel, well graded			Composite soil sample PA-AC09(0 inches bgs	0-6)-121912 collected from 0 to 6
1 – 2 – 2 – 3 – 3 – 3 – 3 – 3 – 3 – 3 – 3			SILT FILL - Black, medium firm, m some clay, trace slag  As above	oist, some sand,		60%	Grab soil sample PA-AY18(12-24) inches bgs	-121912 collected from 12 to 24
Wendoz	_		End of boring at 4.0 ft bgs					
02-21-2014 K:EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\AY-18.bor			End of boiling at 4.0 it bys					

		V	Ves	ston Solutions, Inc. 750 E Bunker Ct	AY-19					
			١	Vernon Hills, IL 60061				(Page 1 of	f 1)	
			Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Cabe : David : 4.0 ft	robe no I Sena	Latitude : 41.8529 Longitude : -87.6589		
			C	Sample Comments  Investigative Soil Sample  Investigative Soil Sample and	Duplicate Sample		<b>&gt;</b> 0			
Dep in Fee	oth i et	nscs	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMARKS		
0		FL		ASPHALT - Black, bituminous						
		FL		SILTY SAND AND GRAVEL FILL loose, dry, gravel is angular, well (	- Black and gray, graded			Composite soil sample PA-AC10(0-6)-121912 colle inches bgs	ected from 0 to 6	
2	2	FL	10-50-5	SILT FILL - Black, medium soft, di some glass, trace fine-grained sub	ry, some sand, prounded gravel		75%	Grab soil sample PA-AY19(12-24)-121912 collecter inches bgs	d from 12 to 24	
lendoza/Report/Support/AY-19.t		FL		SILT FILL - Olive-black, medium f clay, some wood chips	irm, moist, some					
02-21-2014 K:\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\AY-19.bor				End of boring at 4.0 ft bgs						

		V	Ves	ston Solutions, Inc. 750 E Bunker Ct		AY-20					
			١	Vernon Hills, IL 60061				(Page 1 of 1)			
		F (	Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 12/19 : Geop : Cabe : David : 4.0 ft	robe no I Sena	Latitude : 41.85289844 Longitude : -87.65889205			
			O	Sample Comments Investigative Soil Sample Investigative Soil Sample and	Duplicate Sample						
Dep in Fee	oth i et	nscs	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (percent)	REMARKS			
0		FL		ASPHALT - Black, bituminous		11 /					
	+	FL		SILTY SAND AND GRAVEL FILL loose, dry, gravel is medium-grain well graded	- Black and brown, ed and angular,			Composite soil sample PA-AC10(0-6)-121912 collected inches bgs	from 0 to 6		
	2-	FL		SILT FILL - Black, medium firm, d some wood chips	ry, some sand,		75%				
lendoza\Report\Support\AY-20.		FL		CLAY FILL - Olive-black, medium sand, some wood chips	firm, moist, some						
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	٧		ston Solutions, Inc. 750 E Bunker Ct				RR-01
			Vernon Hills, IL 60061				(Page 1 of 1)
		Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley eago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: David	robe FIELDS	Latitude : 41.85375185 Longitude : -87.66167312
			Sample Comments  Investigative Soil Sample  Investigative Soil Sample and	Duplicate Sample			
Depth in Inches	thes SON DESCRIPTION		ON	Sample	Recovery (%)	REMARKS	
0- - 2- 2- 4- - 6- - 8- - 10-	FL		SANDY SILT with GRAVEL FILL-well graded, moist, coarse angula subangular cobble  As above				Collected composite soil sample PA-RR01,02(0-6)-050613
02-21-2014 K:\EPA\EPA\EPA R5 START3\S\ife Files\Pi\sen SA - Mendoza\Report\Support\RR-01.bor  9	SILTY SAND and GRAVEL FILL - Orangish brown, well graded, medium angular gravel, trace subangular cobble, moist  FL  As above			75%	Collected composite soil sample PA-RR01,02(6-24)-050613 and PA-RR01,02(6-24)-050613D		

	١		ston Solutions, Inc. 750 E Bunker Ct				RR-02
			Vernon Hills, IL 60061				(Page 1 of 1)
		Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley eago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: David	robe FIELDS	Latitude : 41.85379877 Longitude : -87.66146166
			Sample Comments Investigative Soil Sample Investigative Soil Sample and	Duplicate Sample			
Depth in Inche	SS	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (%)	REMARKS
2- 4- 6-	FL		SANDY SILT with GRAVEL FILL - graded, moist, coarse angular gra	vel  Dark brown and			Collected composite soil sample PA-RR01,02(0-6)-050613
10-	FL		gray, moist, gravel is medium-grai subangular, trace subangular cobl	ned and ble, well graded			
02-21-2014 K:\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\RR-02.bor			SILTY SAND and GRAVEL FILL - gravel is medium-grained and ang well graded	Dark brown, moist, ular, trace slag,		90%	Collected composite soil sample PA-RR01,02(6-24)-050613 and PA-RR01,02(6-24)-050613D
2-21-2014 K:\EPA\EPA R5 START3\ 5							

	٧	Ves	ston Solutions, Inc. 750 E Bunker Ct				RR-03	
		١	/ernon Hills, IL 60061					(Page 1 of 1)
		Pilse	EPA Region V Contract: EP-S5-06-04 on Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: David	robe FIELDS	Latitude Longitude	: 41.85368266 : -87.66136832
Depth in		GRAPHIC	Sample Comments  Investigative Soil Sample  Investigative Soil Sample and		Sample	Recovery (%)	REMAI	RKS
Inches	nscs	GR	DESCRIPTION	NC	San	Rec (%)		
0- - - 2- - - - 4- -	FL		SILTY SAND and CLAY FILL - Bromoist, poorly graded, trace medius gravel.					
6- - - - 8- - - - 10- - -	FL		SAND FILL - Brownish black, mois trace angular cobble	st, poorly graded,				
12—			SILTY SAND and GRAVEL FILL - moist, gravel is coarse-grained an	Brown and black, d angular		90%		
14— 16— 18— 20— 22— 24— 24—	FL							
22-								
24-			End of boring at 24 inches bgs.		•			
26-								

	V	Ves	ston Solutions, Inc. 750 E Bunker Ct	RR-04					
		١	/ernon Hills, IL 60061				(Page 1 of 1)		
	1	Pilse	EPA Region V Contract: EP-S5-06-04 on Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: Davi		Latitude : 41.85358088 Longitude : -87.66102496		
Depth in Inches	Sample Comments  Investigative Soil Sample  Investigative Soil Sample and Duplicate			Sample	Recovery (%)	REMARKS			
0 — 2 — 4 — 6 — 6 — 6 — 6 — 6 — 6 — 6 — 6 — 6	FL.		SILYT SAND FILL - Brownish black graded, some medium-grained an subangular cobble, well graded  As above  As above with some cobble, moist	gular gravel, trace		75%	Composite soil sample PA-RR04,06(0-6)-050613 collected  Composite soil sample PA-RR04,06(6-24)-050613 collected		
24-		<u>Invesió</u>	End of boring at 24 inches bgs.		П	ļ	1		
26-									

		W	'es	ston Solutions, Inc. 750 E Bunker Ct				RR-05	
			٧	/ernon Hills, IL 60061					(Page 1 of 1)
		Pi C	ilse	EPA Region V Contract: EP-S5-06-04 In Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: David	robe FIELDS	Latitude Longitude	: 41.8535065 : -87.66102961
				Sample Comments  Investigative Soil Sample  Investigative Soil Sample and		. 24 1110	lies bys		
Dept in Inche	uscs USCS		GRAPHIC	DESCRIPTION	ON	Sample	Recovery (%)	REMA	ARKS
2	-			SILT FILL - Light brown and black some clay, trace medium-grained	, dry, some sand, gravel				
4-	- - - - -								
6-									
10-									
12	- - - FI	L		As above with increasing amount depth	of gravel with		100%		
or\Support\RR-05	- - - - -								
Mendoza\Repo	- - - -								
Files/Pilsen SA									
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K:\EPA\EPA R									
26-21-2014	End of boring at 24 inches bgs.								

Weston Solutions, Inc. 750 E Bunker Ct Vernon Hills, IL 60061				RR-07
EPA Region V Contract: EP-S5-06-04  Pilsen Soil Site: Railroad/Alley Chicago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: David	robe FIELDS	(Page 1 of 1)  Latitude : 41.85337526 Longitude : -87.66068324
Sample Comments  Investigative Soil Sample  Investigative Soil Sample and  Depth in Inches Soil Sample and Inches Soil Sample Soil Sample and Inches Soil Sample and Inches Soil Sample Investigative Soil Sample and Inches Soil Sample Investigative	I Duplicate Sample	Sample	Recovery (%)	REMARKS
SILTY SAND FILL - Grayish black, dry, so angular gravel, well graded  SILTY SAND FILL - Grayish black coarse-grained angular gravel, well graded  As above with some clay, moist  14— FL 16— 18— 20— 22— 24— End of boring at 24 inches bgs.	ome medium-grained		80%	Composite soil sample PA-RR07,08(0-6)-050613 collected  Composite soil sample PA-RR07,08(6-24)-050613 collected

	Weston Solutions, Inc. 750 E Bunker Ct Vernon Hills, IL 60061						RR-07	
		١	/ernon Hills, IL 60061				(I	Page 1 of 1)
	[	Pilse	EPA Region V Intract: EP-S5-06-04  Soil Site: Railroad/Alley go, Cook County, Illinois  Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth		: David	orobe FIELDS	Latitude Longitude	: 41.85337526 : -87.66068324
Depth in	CS.	GRAPHIC	Sample Comments  Investigative Soil Sample  Investigative Soil Sample and		Sample	Recovery (%)	REMAR	(S
Inches	nscs	GR	DESCRIPTION	ON	Sar	Rec (%)		
0- - 2- - - - - - - - - - - - - - - - -	FL		SILT FILL - Grayish black, dry, so angular gravel, well graded				Composite soil sample PA-RR07,08(0-0) inches bgs	6)-050613 collected from 0-6
02-21-2014 K.\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\RR-07.bor  10 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	FL		SILTY SAND FILL - Grayish black coarse-grained angular gravel, we have a some clay, moist  As above with some clay, moist  End of boring at 24 inches bgs.	, dry, some ell graded		80%	Composite soil sample PA-RR07,08(6-: 6-24 inches bgs	24)-050613 collected from
26 -	-		g <b></b>					

	٧		ston Solutions, Inc. 750 E Bunker Ct /ernon Hills, IL 60061				RR-08	e 1 of 1)
		C	EPA Region V Contract: EP-S5-06-04  In Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: David	robe FIELDS	Latitude : 41	.85339068 7.66058543
Depth in Inches	nscs	GRAPHIC	Sample Comments Investigative Soil Sample Investigative Soil Sample and DESCRIPTION		Sample	Recovery (%)	REMARKS	
0-  2-  4-  6-	FL		SANDY SILT FILL - Grayish black fine-grained subangular gravel, po	, dry, some orly graded			Composite soil sample PA-RR07,08(0-6)-050 to 6 inches bgs	613 collected from 0
8- 8- - - 10-							Composite soil sample PA-RR07,08(6-24)-05 from 6 to 24 inches bgs (only 6-12 inch aliquo composited into sample)	
12 —			End of boring at 12 inches bgs - R	efusal, concrete				
22— 								

02-21-2014 K:\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\RR-08.bor

	٧		ston Solutions, Inc. 750 E Bunker Ct /ernon Hills, IL 60061				RR-09 (Page 1 of 1)
		Pilse	EPA Region V Contract: EP-S5-06-04  n Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: 5/6/20 : Geop : EPA F : David	robe FIELDS	Latitude : 41.85328826 Longitude : -87.66058907
Depth in Inches	SS	GRAPHIC	Sample Comments  Investigative Soil Sample  Investigative Soil Sample and	Duplicate Sample	Sample	Recovery (%)	REMARKS
0-  2-   4-   6-	FL		SANDY SILT FILL - Brown, dry to fine-grained angular gravel, well g	moist, some raded		-:	
8- 8- - - - 10- - -							
12- - - 14- - - - 16-							
18— 							
22—   24—    							

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	١		ston Solutions, Inc. 750 E Bunker Ct				RR-10	
			Vernon Hills, IL 60061				(Page 1 of 1)	
		EPA Region V Contract: EP-S5-06-04  Pillsen Soil Site: Railroad/Alley Chicago, Cook County, Illinois  Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth		: Davi		Latitude : 41.85319629 Longitude : -87.66074237		
			Sample Comments  Investigative Soil Sample  Investigative Soil Sample and					
Depth in Inches	လ္ပ	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (%)	REMARKS	
02-21-2014 K:\EPA\EPA\EPA\EPA\EPA\EPA\EPA\EPA\EPA\EPA			SILTY SAND and GRAVEL FILL - coarse-graubed subrounded grave.  As above, gravel is fine-grained at SILTY SAND FILL - Grayish black dry, some fine-grained angular gragraded.	el, well graded  nd subangular  a and light brown,		90%	Composite soil sample PA-RR10,12(0-6)-050613 collected from 0 inches bgs  Composite soil sample PA-RR10,12(6-24)-050613 collected from 6-24 inches bgs	
24- 26- 26- 26- 26- 26- 26- 26- 26- 26- 26		partol.	End of boring at 24 inches bgs.		11 1	11	1	

		٧	/es	ston Solutions, Inc. 750 E Bunker Ct					RR-11
			١	/ernon Hills, IL 60061					(Page 1 of 1)
			ilse	EPA Region V Contract: EP-S5-06-04 In Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: Dav	oprol A FIE vid S	be ELDS	Latitude : 41.85307914 Longitude : -87.66059136
				Sample Comments  Investigative Soil Sample  Investigative Soil Sample and					
Deptl in Inche	s U	2220	GRAPHIC	DESCRIPTION	ON	Sample	-	Recovery (%)	REMARKS
2- 4- 6-	- - - - - - - - - - - - - - - - - - -	FL.	a a a a a a a a a a a a a a a a a a a	SANDY SILT FILL - Brown, dry, s subangular gravel, poorly graded  As above but brownish gray	ome fine-grained				Composite soil sample PA-RR11,13(0-6)-050613 collected from 0-6 inches bgs
10-								90%	
ndoza/Report/Support/RR-11.bor				SILTY SAND and GRAVEL - Brown fine-grained angular, poorly grade	Mish diack, moist,				Composite soil sample PA-RR11,13(6-24)-050613 collected from 6-24 inches bgs
02-21-2014 K:\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\RR-11.bor	- - F   	L		As above					
24 K:\EPA\EPA R5 S	-			End of boring at 24 inches bgs.					
26-	1								

	\	Ne	ston Solutions, Inc. 750 E Bunker Ct				RR-12
			Vernon Hills, IL 60061				(Page 1 of 1)
		Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley eago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: Davi	probe FIELDS	
Depth		HIC	Sample Comments  Investigative Soil Sample  Investigative Soil Sample and				
in Inche	nscs	GRAPHIC	DESCRIPTION	NC	Sample	Recovery (%)	REMARKS
0- 2- 4- 6-	FL		SILTY SAND and GRAVEL FILL dry to moist, fine-grained angular sub-angular cobble, well graded  As above with trace cinders	· Brownish black, gravel, trace			Composite soil sample PA-RR10,12(0-6)-050613 collected from 0-6 inches bgs
10-			CIL TV ODAVEL EILL Draweigh			100%	6
02-21-2014 K:\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\RR-12.bor			SILTY GRAVEL FILL - Brownish to red, moist, trace sand, medium-gr gravel, well graded	ained subangular			Composite soil sample PA-RR10,12(6-24)-050613 collected from 6-24 inches bgs
73/Site Files/Pilsen SA - Mer 05 - 81 - 81 - 91 - 91 - 91 - 91 - 91 - 91	- - - - - - - - - - - - - - - - - - -		As above				
VEPA/EPA R5 STAR1	- - - - - - -						
1-2014 K:\E		• 1 - 1 - 1	End of boring at 24 inches bgs.			• •	
26-							

	١		ston Solutions, Inc. 750 E Bunker Ct				RR-13	
			Vernon Hills, IL 60061				(Page 1 of 1)	
		Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley cago, Cook County, Illinois	EP-S5-06-04  Drill Rig Type Drilling Company te: Railroad/Alley  Weston Geoscientist		013 probe FIELDS d Sena ches bgs	Latitude : 41.85292473 Longitude : -87.6605555	
			Sample Comments  Investigative Soil Sample  Investigative Soil Sample and	Duplicate Sample				
Depth in Inches	က္လ	GRAPHIC	DESCRIPTION	ON	Sample	Recovery (%)	REMARKS	
02-21-2014 K:EPAIEPA R5 START3/Site Files/Pilsen SA - Mendoza/Report/Suport/RR-13.bor - 9			SILTY SAND and GRAVEL FILL moist, fine-grained angular gravel.  As above with trace brick pieces  SILTY SAND and GRAVEL FILL coarse-grained subangular gravel  As above	Black, moist,		100%	Composite soil sample PA-RR11,13(0-6)-050613 collected from 0-6 inches bgs  Composite soil sample PA-RR11,13(6-24)-050613 collected from 6-24 inches bgs	
24 - 26   26 - 26   26 - 26   26 - 26   26 - 26   26			End of boring at 24 inches bgs.					

		W		ston Solutions, Inc. 750 E Bunker Ct				RR-14
		Vernon Hills, IL 60061  EPA Region V Contract: EP-S5-06-04  Pilsen Soil Site: Railroad/Alley Chicago, Cook County, Illinois  Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth		: 5/6/2013 : Geoprobe : EPA FIELDS : David Sena : 24 inches bgs		(Page 1 of 1)  Latitude : 41.85284411 Longitude : -87.66066196		
Deptl	١ ((			Sample Comments  Investigative Soil Sample  Investigative Soil Sample and				
in Inche	s C		GRAPHIC	DESCRIPTION	NC	Sample	Recovery (%)	REMARKS
0- 2- 4- 6- 8-			although on the other and control and cont	SILTY SAND FILL - Grayish black medium-grained subangular grave.  As above with trace brick pieces  SILTY SAND and GRAVEL FILL -	el, well graded		100%	Composite soil sample PA-RR14,15,16(0-6)-050613 collected from 0-6 inches bgs
02-21-2014 K:\EPA\EPA\EPA\RF S\TART3\Site Files\Pilsen SA - Mendoza\Report\Sup		L		coarse-grained subangular gravel	, poorly graded			Composite soil sample PA-RR14,15,16(6-24)-050613 collected from 6-24 inches bgs
26-21-2014	- - -			End of boring at 24 inches bgs.				

		V	Ves	ston Solutions, Inc. 750 E Bunker Ct					RR-15
			١	/ernon Hills, IL 60061					(Page 1 of 1)
		F (	Pilse	EPA Region V Contract: EP-S5-06-04 en Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: Dav	nd A eston vid S	luger n Solutio	Latitude : 41.8527559 Longitude : -87.66062628 ns, Inc.
				Sample Comments  Investigative Soil Sample  Investigative Soil Sample and	Duplicate Sample				
De ii Incl		nscs	GRAPHIC	DESCRIPTION	ON	Sample		Recovery (%)	REMARKS
	0	Ī		SANDY SILT FILL - Brownish black fine-grained subangular gravel, po	ck, dry, some corly graded				Composite soil sample PA-RR14,15,16(0-6)-050613 collected from 0-6 inches bgs
	8	FL		As above				100%	
	- - 4 - -		the equiversigning against aga	SILTY SAND FILL - Blackish brow little medium-grained angular grav	vn, dry to moist, vel, poorly graded				Composite soil sample PA-RR14,15,16(6-24)-050613 collected from 6-24 inches bgs
02-21-2014 K:\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Support\RR-15.bor	0-	FL	des agricos ag	As above					
02-21-2014 K:\EPA\EPA			ang dawa ng pawa ng pawa ng pawa ng pawa	End of boring at 24 inches bgs					

	٧		ston Solutions, Inc. 750 E Bunker Ct /ernon Hills, IL 60061				RR-10	6	(Page 1 of 1)
		C	EPA Region V Contract: EP-S5-06-04  n Soil Site: Railroad/Alley ago, Cook County, Illinois	Date Drill Rig Type Drilling Company Weston Geoscientist Total Depth	: Wes : Davi	d Auger	tions, Inc.	Latitude Longitude	: 41.85264936 : -87.66057892
		O	Sample Comments Investigative Soil Sample Investigative Soil Sample and						
Depth in Inches	က္လ	GRAPHIC	DESCRIPTION	ON	Sample	Recovery		REMA	ARKS
0- - 2- - - - - - - - - - - - - - - - -	FL		SANDY SILT and GRAVEL FILL - gravel is fine-grained and angular,	Grayish black, dry, poorly graded		1009	0-6 inches bgs	imple PA-RR14,	15,16(0-6)-050613 collected from
8- 8- - - - - 10-	FL	The second second section is a second section of the	SILTY SAND FILL - Reddish brow moist, some medium-grained angu graded	n and black, dry to ılar gravel, well		1007	Composite soil sa		15,16(6-24)-050613 collected nch bgs aliquot from RR-16)
12- - -			End of boring at 12 inches bgs - R	efusal, concrete					
14- - - - - 16-									
18-	-								
20-									
22 - - - - - - - - -	-								

02-21-2014 K:\EPA\EPA R5 START3\Site Files\Pilsen SA - Mendoza\Report\Suppor\\RR-16.bor

# APPENDIX C LABORATORY ANALYTICAL REPORTS AND DATA VALIDATION REPORTS

#### PILSEN AREA SOIL SITE CHICAGO, ILLINOIS DATA VALIDATION REPORT

**Date:** January 14, 2013

Laboratory: STAT Analysis Corporation (STAT), Chicago, Illinois

**Laboratory Project #:** 12120653

Data Validation Performed By: Lisa Graczyk, Weston Solutions, Inc. (WESTON®) Superfund

Technical Assessment and Response Team (START) **WESTON Work Order** #: 20405.012.001.2038.00

This data validation report has been prepared by WESTON START under the START III Region V contract. This report documents the data validation for 23 soil samples collected for the Pilsen Area Soil Site that were analyzed for the following parameters and U.S. Environmental Protection Agency (U.S. EPA) methods:

- Total Metals by SW-846 Methods 6020 and 7471A
- Coarse and Fine Grained Lead by SW-846 Method 6020
- Lead Bioaccessibility Assay by Method 9200 and SW-846 Method 6020
- Toxicity Characteristic Leaching Procedure (TCLP) Metals by SW-846 Methods 1311, 6020, and 7470A
- pH by SW-846 Method 9045C
- Percent Moisture by ASTM D2974

A level II data package was requested from STAT. The data validation was conducted in general accordance with the U.S. EPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2010. The Attachment contains the results summary sheets with the hand-written qualifiers applied during data validation.

#### TOTAL METALS BY U.S. EPA SW-846 METHODS 6020 AND 7471A

#### 1. <u>Samples</u>

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

			Date	
Samples	Lab ID	Matrix	Collected	Date Analyzed
PA-AC05(0-6)-121912	12120653-001	Soil	12/19/2012	12/28/2012 - 1/2/2013
PA-AC06(0-6)-121912	12120653-002	Soil	12/19/2012	12/28/2012 - 12/31/2012
PA-AY09(12-24)-121912	12120653-003	Soil	12/19/2012	12/29/2012 - 1/8/2013
PA-AY12(6-12)-121912	12120653-004	Soil	12/19/2012	12/29/2012 - 1/8/2013
PA-AY13(12-24)-121912	12120653-005	Soil	12/19/2012	12/29/2012 - 1/2/2013
PA-AC07(0-6)-121912	12120653-006	Soil	12/19/2012	12/28/2012 - 12/31/2012
PA-AC08(0-6)-121912	12120653-007	Soil	12/19/2012	12/28/2012 - 12/31/2012

Data Validation Report Pilsen Area Soil Site STAT Analysis Corporation

Laboratory Project #: 12120653

			Date	
Samples	Lab ID	Matrix	Collected	Date Analyzed
PA-AC09(0-6)-121912	12120653-008	Soil	12/19/2012	12/28/2012 - 12/31/2012
PA-AC10(0-6)-121912	12120653-009	Soil	12/19/2012	12/28/2012 - 12/31/2012
PA-AC01(0-6)-121912	12120653-010	Soil	12/19/2012	12/29/2012 - 1/2/2013
PA-AC01(0-6)-121912D	12120653-011	Soil	12/19/2012	12/29/2012 - 1/2/2013
PA-AC02(0-6)-121912	12120653-012	Soil	12/19/2012	12/29/2012 - 1/2/2013
PA-AC02(0-6)-121912D	12120653-013	Soil	12/19/2012	12/29/2012 - 1/2/2013
PA-AY02(6-12)-121912	12120653-014	Soil	12/19/2012	12/29/2012 - 1/2/2013
PA-AY04(6-12)-121912	12120653-015	Soil	12/19/2012	12/29/2012 - 1/2/2013
PA-AY16(12-24)-121912	12120653-016	Soil	12/19/2012	12/29/2012 - 1/2/2013
PA-AY18(6-12)-121912	12120653-017	Soil	12/19/2012	12/29/2012 - 1/2/2013
PA-AY19(12-24)-121912	12120653-018	Soil	12/19/2012	12/29/2012 - 1/2/2013
PA-AY05(6-12)-121912	12120653-019	Soil	12/19/2012	12/29/2012 - 1/8/2013
PA-AY07(12-24)-121912	12120653-020	Soil	12/19/2012	12/29/2012 - 1/2/2013
PA-AC03(0-6)-121912	12120653-021	Soil	12/19/2012	12/29/2012 – 1/8/2013
PA-AC04(0-6)-121912	12120653-022	Soil	12/19/2012	12/28/2012 - 12/31/2012
PA-AC03HS(0-6)-121912	12120653-023	Soil	12/19/2012	12/28/2012 - 12/31/2012

#### 2. <u>Holding Times</u>

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

#### 3. Blank Results

Method blanks were analyzed with the metals analyses. There was some minor contamination below the reporting limits and one detection above the reporting limit in the blanks. However, the sample results were much greater than the blank concentrations and no qualifications were required.

#### 4. <u>Laboratory Control Sample (LCS) Results</u>

The LCS recoveries were within the quality control (QC) limits except for as follows. Tin and antimony were detected high in one or more of the LCSs analyzed. Detected tin and antimony results in the samples that correspond with the LCSs outside QC limits were flagged "J" as estimated.

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

STAT analyzed site specific MS/MSD samples. The percent recoveries and relative percent differences (RPD) were within QC limits except for as follows.

In some instances, the recoveries were poor due to the spike amount being much lower than the sample concentrations. No qualifications are required in these instances.

In the spike of sample PA-AY05(6-12)-121912, the following compounds were detected high: arsenic and chromium. In sample PA-AY05(6-12)-121912, detected results for arsenic and chromium were flagged "J" as estimated due to potential matrix interference.

In the spike of sample PA-AC03(0-6)-121912, the following compounds were detected high: arsenic and silver. In sample PA-AC03(0-6)-121912, detected results for arsenic and selenium were flagged "J" as estimated due to potential matrix interference.

#### 6. Field Duplicate Results

There are two field duplicates identified with a "D" suffix in the sample identification. RPDs were calculated for detected metals. The RPDs ranged from 0 to 67 percent. Only one RPD was above a standard QC limit of 50 for chromium in sample PA-AC02(0-6)-121912D. In general, field duplicate results were acceptable and there was little heterogeneity associated with metals, other than chromium.

#### 7. Overall Assessment

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

## COARSE AND FINE GRAINED LEAD BY U.S. EPA SW-846 METHOD 6020 AND LEAD BIOACCESSIBILITY ASSAY BY METHODS 9200 AND 6020

#### 1. <u>Samples</u>

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

			Date	
Samples	Lab ID	Matrix	Collected	Date Analyzed
PA-AC05(0-6)-121912	12120653-001	Soil	12/19/2012	1/4/2013 - 1/8/2013
PA-AC06(0-6)-121912	12120653-002	Soil	12/19/2012	1/3/2013 – 1/4/2013
PA-AY09(12-24)-121912	12120653-003	Soil	12/19/2012	1/3/2013 - 1/7/2013
PA-AY12(6-12)-121912	12120653-004	Soil	12/19/2012	1/3/2013 – 1/4/2013
PA-AY13(12-24)-121912	12120653-005	Soil	12/19/2012	1/3/2013 – 1/4/2013
PA-AC07(0-6)-121912	12120653-006	Soil	12/19/2012	1/3/2013 – 1/4/2013
PA-AC08(0-6)-121912	12120653-007	Soil	12/19/2012	1/3/2013 – 1/4/2013
PA-AC09(0-6)-121912	12120653-008	Soil	12/19/2012	1/3/2013 - 1/4/2013
PA-AC10(0-6)-121912	12120653-009	Soil	12/19/2012	1/4/2013 – 1/7/2013
PA-AC01(0-6)-121912	12120653-010	Soil	12/19/2012	1/4/2013
PA-AC01(0-6)-121912D	12120653-011	Soil	12/19/2012	1/4/2013 – 1/7/2013
PA-AC02(0-6)-121912	12120653-012	Soil	12/19/2012	1/4/2013 - 1/7/2013
PA-AC02(0-6)-121912D	12120653-013	Soil	12/19/2012	1/4/2013 – 1/7/2013
PA-AY02(6-12)-121912	12120653-014	Soil	12/19/2012	1/3/2013 - 1/4/2013
PA-AY04(6-12)-121912	12120653-015	Soil	12/19/2012	1/3/2013 - 1/4/2013
PA-AY16(12-24)-121912	12120653-016	Soil	12/19/2012	1/3/2013 – 1/4/2013
PA-AY18(6-12)-121912	12120653-017	Soil	12/19/2012	1/3/2013 - 1/4/2013
PA-AY19(12-24)-121912	12120653-018	Soil	12/19/2012	1/3/2013 – 1/4/2013
PA-AY05(6-12)-121912	12120653-019	Soil	12/19/2012	1/3/2013 – 1/4/2013
PA-AY07(12-24)-121912	12120653-020	Soil	12/19/2012	1/3/2013
PA-AC03(0-6)-121912	12120653-021	Soil	12/19/2012	1/3/2013
PA-AC04(0-6)-121912	12120653-022	Soil	12/19/2012	1/3/2013
PA-AC03HS(0-6)-121912	12120653-023	Soil	12/19/2012	1/3/2013

#### 2. <u>Holding Times</u>

The samples were analyzed within the required holding time limit of 180 days from sample collection to analysis.

#### 3. Blank Results

Method blanks were analyzed with the metals analyses. The blanks were free of lead contamination above the reporting limits. There were some detections of lead below the reporting limits; however, the sample results were much greater and no qualifications were required.

#### 4. <u>LCS Results</u>

The LCS recoveries were within the QC limits.

#### 5. MS and MSD Results

EA Group analyzed site specific MS/MSDs; however, the recoveries were poor due to the spike amount being much lower than the sample concentrations. No qualifications are required in these instances.

#### 6. Field Duplicate Results

There are two field duplicates identified with a "D" suffix in the sample identification. RPDs were calculated for detected metals. The RPDs ranged from 0 to 84 percent. Only one RPD was above a standard QC limit of 50 for coarse lead in sample PA-AC02(0-6)-121912D. In general, field duplicate results were acceptable and there was little heterogeneity associated with metals, other than coarse lead in sample PA-AC02(0-6)-121912 and its duplicate.

#### 7. Overall Assessment

The lead data are acceptable for use as qualified based on the information received.

Laboratory Project #: 12120653

#### **TCLP METALS BY U.S. EPA SW-846 METHODS 1311, 6020, AND 7470A**

#### 1. Samples

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

			Date	
Samples	Lab ID	Matrix	Collected	Date Analyzed
PA-AY05(6-12)-121912	12120653-019	Soil	12/19/2012	12/31/2012 - 1/2/2013
PA-AC03(0-6)-121912	12120653-021	Soil	12/19/2012	12/31/2012 - 1/2/2013
PA-AC04(0-6)-121912	12120653-022	Soil	12/19/2012	12/31/2012 - 1/2/2013
PA-AC03HS(0-6)-121912	12120653-023	Soil	12/19/2012	12/31/2012 - 1/2/2013

#### 2. <u>Holding Times</u>

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

#### 3. Blank Results

Method blanks were analyzed with the metals analyses. The blanks were free of lead contamination above the reporting limits. Some metals were detected below the reporting limit; however, the sample results were much greater or non-detect and no qualifications were applied.

#### 4. LCS Results

The LCS recoveries were within the QC limits.

#### 5. MS and MSD Results

STAT analyzed a site specific MS and MSD. The percent recoveries and RPDs were within QC limits except for as follows. Lead had poor recovery; however, the recoveries were poor due to the spike amount being much lower than the sample concentrations. No qualifications are required in this instance.

#### 6. Overall Assessment

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

# GENERAL CHEMISTRY PARAMETERS (pH by SW-846 Method 9045D and Percent Moisture by ASTM D2974)

#### 1. <u>Samples</u>

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

			Date	
Samples	Lab ID	Matrix	Collected	Date Analyzed
PA-AC05(0-6)-121912	12120653-001	Soil	12/19/2012	12/28/2012 - 12/29/2012
PA-AC06(0-6)-121912	12120653-002	Soil	12/19/2012	12/28/2012 – 12/29/2012
PA-AY09(12-24)-121912	12120653-003	Soil	12/19/2012	12/28/2012 – 12/29/2012
PA-AY12(6-12)-121912	12120653-004	Soil	12/19/2012	12/28/2012 - 12/29/2012
PA-AY13(12-24)-121912	12120653-005	Soil	12/19/2012	12/28/2012 – 12/29/2012
PA-AC07(0-6)-121912	12120653-006	Soil	12/19/2012	12/28/2012 – 12/29/2012
PA-AC08(0-6)-121912	12120653-007	Soil	12/19/2012	12/28/2012 – 12/29/2012
PA-AC09(0-6)-121912	12120653-008	Soil	12/19/2012	12/28/2012 - 12/29/2012
PA-AC10(0-6)-121912	12120653-009	Soil	12/19/2012	12/28/2012 - 12/29/2012
PA-AC01(0-6)-121912	12120653-010	Soil	12/19/2012	12/28/2012 – 12/29/2012
PA-AC01(0-6)-121912D	12120653-011	Soil	12/19/2012	12/28/2012 - 12/29/2012
PA-AC02(0-6)-121912	12120653-012	Soil	12/19/2012	12/28/2012 – 12/29/2012
PA-AC02(0-6)-121912D	12120653-013	Soil	12/19/2012	12/28/2012 - 12/29/2012
PA-AY02(6-12)-121912	12120653-014	Soil	12/19/2012	12/28/2012 – 12/29/2012
PA-AY04(6-12)-121912	12120653-015	Soil	12/19/2012	12/28/2012 - 12/29/2012
PA-AY16(12-24)-121912	12120653-016	Soil	12/19/2012	12/28/2012 – 12/29/2012
PA-AY18(6-12)-121912	12120653-017	Soil	12/19/2012	12/28/2012 – 12/29/2012
PA-AY19(12-24)-121912	12120653-018	Soil	12/19/2012	12/28/2012 – 12/29/2012
PA-AY05(6-12)-121912	12120653-019	Soil	12/19/2012	12/28/2012 – 12/29/2012
PA-AY07(12-24)-121912	12120653-020	Soil	12/19/2012	12/28/2012 – 12/29/2012
PA-AC03(0-6)-121912	12120653-021	Soil	12/19/2012	12/28/2012 - 12/29/2012
PA-AC04(0-6)-121912	12120653-022	Soil	12/19/2012	12/28/2012 - 12/29/2012
PA-AC03HS(0-6)-121912	12120653-023	Soil	12/19/2012	12/28/2012 - 12/29/2012

#### 2. <u>Holding Times</u>

The holding times were acceptable.

#### 3. Blank Results

Method blanks were analyzed with the moisture analyses. The blanks were free of target analyte contamination above the reporting limits.

#### 4. LCS Results

An LCS was analyzed with the moisture analyses. The LCS recovery was within the laboratory-established QC limits.

#### 5. <u>Laboratory Duplicate Results</u>

Laboratory duplicates were analyzed with the moisture and pH analyses. The RPDs were within the QC limits.

#### 6. Field Duplicate Results

The RPDs for field duplicate result was less than a standard QC limit of 50 percent which is acceptable.

#### 7. Overall Assessment

The general chemistry parameters are acceptable for use based on the information received.

#### **ATTACHMENT**

# STAT ANALYSIS CORPORATION RESULTS SUMMARY WITH QUALIFIERS

## STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

12120653-001A

Client Sample ID: PA-AC05(0-6)-121912

Lab Order:

12120653

Tag Number:

Project: Lab ID: 20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:10:00 PM

Matrix: Soil

Analyses	Result	RL (	Qualifie	Units	DF	Date Analyzed
Mercury	SW7471A		Prer		Date: 12/28/	2012 Analyst: LB
Mercury	0.55	0.022		mg/Kg-dry	1	1/2/2013
Metals by ICP/MS	SW6020	) (SW305	(OB)	Prep	Date: 12/28/	2012 Analyst: JG
Antimony	29 J	24		mg/Kg-dry	100	12/31/2012
Arsenic	14	2.4		mg/Kg-dry	20	12/28/2012
Barium	540	2.4		mg/Kg-dry	20	12/28/2012
Cadmium	25	1.2	1	mg/Kg-dry	20	12/28/2012
Chromium	110	2.4	1	mg/Kg-dry	20	12/28/2012
Copper	5700	60		mg/Kg-dry	200	12/29/2012
Lead	3900	4.8		mg/Kg-dry	20	12/28/2012
Selenium	3.4	2.4		mg/Kg-dry	20	12/28/2012
Silver	5.6	2.4		mg/Kg-dry	20	12/28/2012
Tin	480 ナ	24		ng/Kg-dry	20	12/28/2012
Zinc	13000	120		ng/Kg-dry	200	12/29/2012
oH (25 °C)	SW9045	С		Prep	Date: 12/28/2	2012 Analyst: RW
pH	7.6			pH Units	1	12/28/2012
Percent Moisture	D2974			Prep	Date: 12/28/2	2012 Analyst: RW
Percent Moisture	16.0	0.2		wt%	1	12/29/2012

2H 1/14/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

### STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC05(0-6)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:10:00 PM

Lah ID:

12120653-001B

Matrix: Soil

12120033-001B	Watia, Dui					
Analyses	Result	RL Quali	ifier Units	DF	Date Analyzed	
Bioaccessibility Asay Metals by ICP/MS	<b>EPA 920</b>	00/ <b>6020 (SW30</b>	05A) Prep	Date: 1/2/2013	Analyst: <b>JG</b>	
Lead	26	0.025 *	mg/L	5	1/8/2013	
Metals by ICP/MS	<b>SW6020</b>	(SW3050B)	Prep	Date: 1/3/2013	Analyst: <b>JG</b>	
Lead	3600	18	mg/Kg-dry		1/8/2013	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

## STAT Analysis Corporation

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC05(0-6)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:10:00 PM

Lab ID:

12120653-001C

Matrix: Soil

	AVEGGIAGE DOLL					
Analyses	Result	RL Qualifi	ier Units	DF	Date Analyzed	
Metals by ICP/MS Lead	<b>SW6020</b> 2600	(SW3050B) 21	Prep mg/Kg-dry	Date: <b>1/3/2013</b> 100	Analyst: <b>JG</b> 1/4/2013	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

12120653-002A

Client Sample ID: PA-AC06(0-6)-121912

Lab Order:

12120653

Tag Number:

Project:

Lab ID:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:15:00 PM

Matrix: Soil

Analyses	Result	RL Q	ualifier Units	DF	Date Analyzed
Mercury	SW7471	IA	Prep	Date: 12/28/2012	2 Analyst: LB
Mercury	0.35	0.021	mg/Kg-dry	1	12/28/2012
Metals by ICP/MS	SW6020	) (SW3050	B) Prep	Date: 12/28/2012	? Analyst: JG
Antimony	130 J	19	mg/Kg-dry	100	12/31/2012
Arsenic	10	1.9	mg/Kg-dry	20	12/28/2012
Barium	320	1.9	mg/Kg-dry	20	12/28/2012
Cadmium	18	0.96	mg/Kg-dry	20	12/28/2012
Chromium	53	1.9	mg/Kg-dry	20	12/28/2012
Copper	1900	48	mg/Kg-dry	200	12/29/2012
Lead	3000	3.8	mg/Kg-dry	20	12/28/2012
Selenium	2.5	1.9	mg/Kg-dry	20	12/28/2012
Silver	2.8	1.9	mg/Kg-dry	20	12/28/2012
Tin	1600 ブ	19	mg/Kg-dry	20	12/28/2012
Zinc	5300	96	mg/Kg-dry	200	12/29/2012
oH (25 °C)	SW9045	iC	Prep	Date: <b>12/28/2012</b>	! Analyst: RW
pH	7.7		pH Units	1	12/28/2012
Percent Moisture	D2974		Prep l	Date: 12/28/2012	Analyst: RW
Percent Moisture	11.7	0.2	* wt%	1	12/29/2012



Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC06(0-6)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:15:00 PM

Lab ID:

12120653-002B

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Bloaccessibility Asay Metals by ICP/MS Lead	<b>EPA 92</b> 18	0.025	(SW3005A)	Prep mg/L	Date: 1/2/2013 5	Analyst: <b>JG</b> 1/4/2013
Metals by ICP/MS Lead	<b>SW602</b> 2100	0 (SW30 4.8	•	Prep ng/Kg-dry	Date: 1/3/2013 100	Analyst: <b>JG</b> 1/3/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC06(0-6)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:15:00 PM

DF

Lab ID:

12120653-002C

Matrix: Soil

Analyses

Result

SW6020 (SW3050B)

RL Qualifier Units

Prep Date: 1/3/2013

Analyst: **JG** 

Metals by ICP/MS Lead

1400

mg/Kg-dry

1/4/2013

**Date Analyzed** 

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

12120653-003A

Client Sample ID: PA-AY09(12-24)-121912

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Lab Order:

12120653

Tag Number:

Project:

Lab ID:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:30:00 PM

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Mercury	SW7471A			Prep	Date: 12/28/	2012 Analyst: LB
Mercury	2.6	0.2	m	ng/Kg-dry	10	1/2/2013
Metals by ICP/MS	SW6020 (	SW305	50B)	Prep	Date: 12/28/	2012 Analyst: JG
Antimony	640 J	26	'n	ıg/Kg-dry	100	12/31/2012
Arsenic	39	2.6	n	ng/Kg-dry	20	12/29/2012
Barium	2400	2.6	m	ng/Kg-dry	20	12/29/2012
Cadmium	48	1.3	m	g/Kg-dry	20	12/29/2012
Chromium	110	26	m	ıg/Kg-dry	200	12/29/2012
Copper	8900	64	m	g/Kg-dry	200	12/29/2012
Lead	15000	52	m	g/Kg-dry	200	12/29/2012
Selenium	3.2	2.6	m	g/Kg-dry	20	12/29/2012
Silver	38	2.6	m	g/Kg-dry	20	12/29/2012
Tin	8200 🔾	64	* m	g/Kg-dry	100	1/8/2013
Zinc	7900	130	m	g/Kg-dry	200	12/29/2012
oH (25 °C)	SW9045C			Prep	Date: 12/28/2	2012 Analyst: RW
рH	7.4		p	H Units	1	12/28/2012
Percent Moisture	D2974			Prep	Date: 12/28/2	2012 Analyst: RW
Percent Moisture	20.8	0.2	*	wt%	1	12/29/2012



Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY09(12-24)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:30:00 PM

Lah ID:

12120653-003B

Matrix: Soil

12120033-003D			_	TAT SECT. (	X: SUII	
Analyses	Result	ŔĹ	Qualifier	Units	DF	Date Analyzed
Bioaccessibility Asay Metals by ICP/MS Lead	<b>EPA 9200</b> 56	<b>0/6020</b> 0.5	(SW3005A)	Prep mg/L	Date: 1/2/2013 100	Analyst: <b>JG</b> 1/7/2013
Metals by ICP/MS Lead	<b>\$W6020</b> 6600	( <b>SW3</b> ( 5.3		Prep mg/Kg-dry	Date: 1/3/2013 100	Analyst: <b>JG</b> 1/3/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY09(12-24)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:30:00 PM

Lab ID:

12120653-003C

Matrix: Soil

Analyses Result RL Qualifier Units **Date Analyzed** Metals by ICP/MS SW6020 (SW3050B) Prep Date: 1/3/2013 Analyst: JG Lead 5800 22 mg/Kg-dry 1/4/2013 100

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY12(6-12)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:35:00 PM

Lab ID:

12120653-004A

Matrix: Soil

12120033-004A	·	Wattix; Soft						
Analyses	Result	RL Quali	fier Units	DF	Date Analyzed			
Mercury	SW7471/	A	Prep	Date: 12/28	3/2012 Analyst: LB			
Mercury	0.94	0.11	mg/Kg-dry	5	1/2/2013			
Metals by ICP/MS	SW6020	(SW3050B)	Prep	Date: 12/28	3/2012 Analyst: JG			
Antimony	ND	26	mg/Kg-dry	100	12/31/2012			
Arsenic	15	2.6	mg/Kg-dry	20	12/29/2012			
Barium	420	2.6	mg/Kg-dry	20	12/29/2012			
Cadmium	18	1.3	mg/Kg-dry	20	12/29/2012			
Chromium	·35	2.6	mg/Kg-dry	20	12/29/2012			
Copper	2000	6.5	mg/Kg-dry	20	12/29/2012			
Lead	1700	5.2	mg/Kg-dry	20	12/29/2012			
Selenium	ND	2.6	mg/Kg-dry	20	12/29/2012			
Silver	2.6	2.6	mg/Kg-dry	20	12/29/2012			
Tin	420 J	65 *	mg/Kg-dry	100	1/8/2013			
Zinc	3800	130	mg/Kg-dry	200	12/29/2012			
pH (25 °C)	SW90456		Prep	Date: <b>12/28</b>	/2012 Analyst: RW			
рН	7.7		pH Units	1	12/28/2012			
Percent Moisture	D2974		Prep	Date: <b>12/28</b>	/2012 Analyst: RW			
Percent Moisture	14.6	0.2 *	wt%	1	12/29/2012			



Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY12(6-12)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:35:00 PM

Lab ID:

12120653-004B

Matrix: Soil

				<u>.                                      </u>
Analyses	Result	RL Qualifie	er Units DF	Date Analyzed
Bioaccessibility Asay Metals by ICP/MS	<b>EPA 920</b>	0/ <b>6020 (SW3005</b> /	A) Prep Date: 1/2/2013	Analyst: <b>JG</b>
Lead	16	0.025 *	mg/L 5	1/4/2013
Metals by ICP/MS	<b>SW6020</b>	(SW3050B)	Prep Date: <b>1/3/2013</b>	Analyst: <b>JG</b>
Lead	2000	5.1	mg/Kg-dry 100	1/3/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY12(6-12)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:35:00 PM

Lab ID:

12120653-004C

Matrix: Soil

Analyses

Result

RL Qualifier Units

Prep Date: 1/3/2013

Analyst: JG

Metals by ICP/MS Lead

SW6020 (SW3050B) 1400

21

mg/Kg-dry

100

1/4/2013

**Date Analyzed** 

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

12120653-005A

Client Sample ID: PA-AY13(12-24)-121912

Lab Order:

12120653

Tag Number:

Duningt

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Project: Lab ID: 20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:55:00 PM

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Mercury	SW7471	A		Prep	Date: 12/28/20	12 Analyst: LB
Mercury	0.72	0.048	n	ng/Kg-dry	2	1/2/2013
Metals by ICP/MS	SW6020	(SW30	050B)	Prep	Date: 12/28/201	12 Analyst: JG
Antimony	110 ブ	23	•	ng/Kg-dry	100	12/31/2012
Arsenic	33	2.3	rr	ng/Kg-dry	20	12/29/2012
Barium	1200	2.3	m	ig/Kg-dry	20	12/29/2012
Cadmium	7.2	1.1	m	ng/Kg-dry	20	12/29/2012
Chromium	37	2.3	m	ng/Kg-dry	20	12/29/2012
Copper	1900	5.6	m	ng/Kg-dry	20	12/29/2012
Lead	3200	4.5	m	ng/Kg-dry	20	12/29/2012
Selenium	ND	2.3	m	g/Kg-dry	20	12/29/2012
Silver	ND	2.3	m	g/Kg-dry	20	12/29/2012
Tin	760 J	23	m	ıg/Kg-dry	20	12/29/2012
Zinc	2600	110	m	g/Kg-dry	200	12/29/2012
pH (25 °C)	SW9045	C		Prep	Date: 12/28/201	l2 Analyst: RW
pН	8.0		þ	H Units	1	12/28/2012
Percent Moisture	D2974			Prep	Date: 12/28/201	12 Analyst: RW
Percent Moisture	17.2	0.2		wt%	1	12/29/2012

2D 1/14/13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY13(12-24)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:55:00 PM

I ah ID:

12120653-005B

Lab ID: 12120053-005B			Matrix: Soil	
Analyses	Result	RL Qualifier	Units DF	Date Analyzed
Bioaccessibility Asay Metals by ICP/MS	<b>EPA 920</b>	<b>0/6020 (SW3005A</b> 0.025 *	) Prep Date: 1/2/2013	Analyst: <b>JG</b>
Lead	27		mg/L 5	1/4/2013
Metals by ICP/MS	<b>SW6020</b>	(SW3050B)	Prep Date: <b>1/3/2013</b>	Analyst: <b>JG</b>
Lead	4000	5.4	mg/Kg-dry 100	1/3/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY13(12-24)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:55:00 PM

Lab ID:

12120653-005C

Matrix: Soil

Analyses

Result

RL Qualifier Units

Prep Date: 1/3/2013

Analyst: JG

Metals by ICP/MS Lead

SW6020 (SW3050B) 5400

22

mg/Kg-dry 100

1/4/2013

**Date Analyzed** 

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

**Client Sample ID:** PA-AC07(0-6)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:20:00 PM Matrix: Soil

Lab ID:	12120653-006A

Analyses	Result	RL Q	Qualifier	Units	DF	Date Analyzed
Mercury	SW7471/	A		Prep	Date: 12/28/2012	2 Analyst: LB
Mercury	0.37	0.021	n	ng/Kg-dry	1	12/28/2012
Metals by ICP/MS	SW6020	(SW3050	0B)	Prep	Date: 12/28/2012	2 Analyst: JG
Antimony	ND	24	. п	ng/Kg-dry	100	12/31/2012
Arsenic	6.8	2.4	п	ng/Kg-dry	20	12/29/2012
Barium	400	2.4	ก	ng/Kg-dry	20	12/29/2012
Cadmium	9.3	1.2	n	ng/Kg-dry	20	12/29/2012
Chromium	24	2.4	n	ng/Kg-dry	20	12/29/2012
Copper	2100	60	п	ng/Kg-dry	200	12/29/2012
Lead	940	4.8	n	ng/Kg-dry	20	12/29/2012
Selenium	ND	2.4	n	ng/Kg-dry	20	12/29/2012
Silver	ND	2.4	n	ng/Kg-dry	20	12/29/2012
Tin	130 ブ	24	* m	ng/Kg-dry	20	12/29/2012
Zinc	2600	120	n	ng/Kg-dry	200	12/29/2012
pH (25 °C)	SW90450	C		Prep	Date: 12/28/2012	? Analyst: RW
рН	8.1		F	oH Units	1	12/28/2012
Percent Moisture	D2974			Prep	Date: 12/28/2012	! Analyst: RW
Percent Moisture	11.2	0.2		wt%	1	12/29/2012



Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC07(0-6)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:20:00 PM

Lab ID:

12120653-006B

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Bioaccessibility Asay Metals by ICP/MS	<b>EPA 92</b>	<b>200/6020</b>	(SW3005A)	Prep	Date: 1/2/2013	Analyst: <b>JG</b>
Lead	16	0.025		mg/L	5	1/4/2013
Metals by ICP/MS	<b>SW602</b>	0 (SW3)		Prep	Date: <b>1/3/2013</b>	Analyst: <b>JG</b>
Lead	3200	5		ng/Kg-dry	100	1/3/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC07(0-6)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 12:20:00 PM

Lab ID:

12120653-006C

Matrix: Soil

Analyses	Result	RL Qual	ifier Units	DF	Date Analyzed
Metals by ICP/MS	SW6020	(SW3050B)	Prep	Date: 1/3/201	3 Analyst: <b>JG</b>
Lead	390	18	mg/Kg-dry	100	1/4/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC08(0-6)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 2:35:00 PM

Lab ID:

12120653-007A

Matrix: Soil

Analyses	Result	RL	Qualifier U	nits	DF	D	ate Analyzed
Mercury	SW7471#	A		Prep	Date:	12/28/2012	Analyst: LB
Mercury	0.27	0.019	mg/K	g-dry	1		12/28/2012
Metals by ICP/MS	SW6020	(SW30	50B)	Prep	Date:	12/28/2012	Analyst: JG
Antimony	ND	21	mg/K	g-dry	100		12/31/2012
Arsenic	5.5	2.1	mg/K	g-dry	20		12/29/2012
Barium	140	2.1	mg/K	g-dry	20		12/29/2012
Cadmium	4.5	1	mg/K	g-dry	20		12/29/2012
Chromium	17	2.1	mg/K	g-dry	20		12/29/2012
Copper	660	5.1	mg/K	g-dry	20		12/29/2012
Lead	570	4.1	mg/K	g-dry	20		12/29/2012
Selenium	ND	2.1	mg/K	g-dry	20		12/29/2012
Silver	ND	2.1	mg/K		20		12/29/2012
Tin	65 丁	21	* mg/Ks		20		12/29/2012
<b>Z</b> inc	1700	10	mg/Kg	g-dry	20		12/29/2012
pH (25 °C)	SW90450	•		Prep	Date:	12/28/2012	Analyst: RW
рH	8.4		pH L	Inits	1		12/28/2012
Percent Moisture	D2974			Prep	Date:	12/28/2012	Analyst: RW
Percent Moisture	10.0	0.2	* wt	%	1		12/29/2012



Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

**Client Sample ID:** PA-AC08(0-6)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 2:35:00 PM

Lab ID:

12120653-007B

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed		
Bioaccessibility Asay Metals by ICP/MS Lead	<b>EPA 92</b> 10	<b>00/6020</b> 0.025	(SW3005A)	Prep mg/L	Date: 1/2/2013 5	Analyst: <b>JG</b> 1/4/2013		
Metals by ICP/MS Lead	<b>SW602</b> 0	0 <b>(SW3</b> ) 4.6	,	Prep ng/Kg-dry	Date: <b>1/3/2013</b> 100	Analyst: <b>JG</b> 1/3/2013		

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC08(0-6)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 2:35:00 PM

Lab ID:

12120653-007C

Matrix: Soil

Analyses Result RL Qualifier Units Date Analyzed Metals by ICP/MS SW6020 (SW3050B) Prep Date: 1/3/2013 Analyst: JG Lead 20 mg/Kg-dry 100 1/4/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions .

Client Sample ID: PA-AC09(0-6)-121912

Lab Order:

12120653

Tag Number:

Project:

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Collection Date: 12/19/2012 2:45:00 PM

Lab ID:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen 12120653-008A

Matrix: Soil

12120055 00011	IVAME IAL SOII						
Analyses	Result	RL Qual	lifier Units	DF Date Analyzed			
Mercury	SW747	1A	Prep	Date: 12/28/2012	Analyst: LB		
Mercury	0.076	0.019	mg/Kg-dry	1	12/28/2012		
Metals by ICP/MS	SW602	0 (SW3050B)	Prep	Date: 12/28/2012	Analyst: JG		
Antimony	ND	19	mg/Kg-dry	100	12/31/2012		
Arsenic	3.4	1.9	mg/Kg-dry	20	12/29/2012		
Barium	68	1.9	mg/Kg-dry	20	12/29/2012		
Cadmium	2.1	0.95	mg/Kg-dry	20	12/29/2012		
Chromium	11	1.9	mg/Kg-dry	20	12/29/2012		
Copper	580	4.8	mg/Kg-dry	20	12/29/2012		
Lead	340	3.8	mg/Kg-dry	20	12/29/2012		
Selenium	ND	1.9	mg/Kg-dry	20	12/29/2012		
Silver	ND	1.9	mg/Kg-dry	20	12/29/2012		
Tin	37ブ	19	* mg/Kg-dry	20	12/29/2012		
Zinc	750	9.5	mg/Kg-dry	20	12/29/2012		
pH (25 °C)	SW904	5C	Prep	Date: 12/28/2012	Analyst: RW		
рH	9.9		pH Units	1	12/28/2012		
Percent Moisture	D2974		Prep	Date: 12/28/2012	Analyst: RW		
Percent Moisture	5.3	0.2	wt%	4	12/29/2012		



Qualifiers:

ND - Not Detected at the Reporting Limit

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S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

**Weston Solutions** 

Client Sample ID: PA-AC09(0-6)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 2:45:00 PM

Lab ID:

12120653-008B

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Bioaccessibility Asay Metals by ICP/MS Lead	<b>EPA 92</b> 7.8	<b>00/6020</b> 0.025	(SW3005A)	Prep mg/L	Date: 1/2/2013	Analyst: <b>JG</b> 1/4/2013
Metals by ICP/MS Lead	<b>SW602</b> 1100	0 (SW3) 5	•	Prep ng/Kg-dry	Date: 1/3/2013	Analyst: <b>JG</b> 1/3/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC09(0-6)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 2:45:00 PM

Lab ID:

Analyses

12120653-008C

Matrix: Soil

Metals by ICP/MS

SW6020 (SW3050B)

Prep Date: 1/3/2013

DF

Analyst: JG

Lead

Result

mg/Kg-dry 100

RL Qualifier Units

1/4/2013

**Date Analyzed** 

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC10(0-6)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 3:55:00 PM

Lab ID:

12120653-009A

Matrix: Soil

Analyses	Result	RL	Qualifier Units	DF	Date Analyzed
Mercury	SW7471A	A	Prep	Date: 12/2	28/2012 Analyst: LB
Mercury	0.044	0.021	mg/Kg-dry	1	12/28/2012
Metals by ICP/MS	SW6020	(SW30	<b>50B)</b> Prep	Date: 12/2	28/2012 Analyst: JG
Antimony	ND	19	mg/Kg-dry	100	12/31/2012
Arsenic	ND	1.9	mg/Kg-dry	20	12/29/2012
Barium	32	1.9	mg/Kg-dry	20	12/29/2012
Cadmium	ND	0.96	mg/Kg-dry	20	12/29/2012
Chromium	7	1.9	mg/Kg-dry	20	12/29/2012
Copper	230	4.8	mg/Kg-dry	20	12/29/2012
Lead	63	0.96	mg/Kg-dry	20	12/29/2012
Selenium	ND	1.9	mg/Kg-dry	20	12/29/2012
Silver	ND _	1.9	mg/Kg-dry	20	12/29/2012
Tin	14 J	9.6	mg/Kg-dry	20	12/29/2012
Zinc	180	9.6	mg/Kg-dry	20	12/29/2012
pH (25 °C)	SW90450	С	Prep	Date: 12/2	28/2012 Analyst: RW
pH	9.2		pH Units	1	12/28/2012
Percent Moisture	D2974		Prep	Date: 12/2	28/2012 Analyst: RW
Percent Moisture	4.3	0.2	* wt%	1	12/29/2012

21/11/13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC10(0-6)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

Collection Date: 12/19/2012 3:55:00 PM

Lab ID:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen 12120653-009B

Matrix: Soil

12120035-007D	Wattia. Suit							
Analyses	Result	RL Quali	fier Units	DF	Date Analyzed			
Bioaccessibility Asay Metals by ICP/MS Lead	<b>EPA 920</b> 1.9	<b>0/6020 (SW30</b> 0 0.025 *	<b>05A)</b> Prepmg/L	Date: <b>1/2/2013</b> 5	Analyst: <b>JG</b> 1/7/2013			
Metals by ICP/MS Lead	<b>SW6020</b> 180	(SW3050B)	Prep mg/Kg-dry	Date: 1/3/2013	Analyst: <b>JG</b>			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC10(0-6)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 3:55:00 PM

Lab ID:

12120653-009C

Matrix: Soil

Analyses	Result	RL (	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS Lead	SW6020 98	(SW3050 20	,	Prep g/Kg-dry	Date: 1/3/2013	Analyst: <b>JG</b> 1/4/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC01(0-6)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:00:00 PM

Lab ID:

12120653-010A

Matrix: Soil

Analyses	Result	RL (	Qualifier Units	DF	Date Analyzed			
Mercury	SW7471	A	Prep	Date: 12/28/201	2 Analyst: LB			
Mercury	1.7	0.21	mg/Kg-dry	10	1/2/2013			
Metals by ICP/MS	SW6020	(SW305	OB) Prep	Date: 12/28/201	2 Analyst: JG			
Antimony	ND	25	mg/Kg-dry	100	12/31/2012			
Arsenic	26	2.5	mg/Kg-dry	20	12/29/2012			
Barium	530	2.5	mg/Kg-dry	20	12/29/2012			
Cadmium	10	1.2	mg/Kg-dry	20	12/29/2012			
Chromium	1600	2.5	mg/Kg-dry	20	12/29/2012			
Copper	870	6.2	mg/Kg-dry	20	12/29/2012			
Lead	2700	1.2	mg/Kg-dry	20	12/29/2012			
Selenium	ND	2.5	rng/Kg-dry	20	12/29/2012			
Silver	ND	2.5	mg/Kg-dry	20	12/29/2012			
Tin	120 J	12	* mg/Kg-dry	20	12/29/2012			
Zinc	4800	120	mg/Kg-dry	200	12/29/2012			
pH (25 °C)	SW9045	С	Prep	Date: 12/28/201	2 Analyst: RW			
Hq	8.2		pH Units	1	12/28/2012			
Percent Moisture	D2974		Prep	Date: 12/28/2012	2 Analyst: RW			
Percent Moisture	19.9	0.2	* wt%	1	12/29/2012			



Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC01(0-6)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Calleation

Collection Date: 12/19/2012 4:00:00 PM

Lab ID:

12120653-010B

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed		
Bioaccessibility Asay Metals by ICP/MS Lead	<b>EPA 92</b> 8.6	<b>200/6020</b> 0.025	(SW3005A)	Prep mg/L	Date: 1/3/2013 5	Analyst: <b>JG</b> 1/4/2013		
Metals by ICP/MS Lead	<b>SW602</b> 2000	20 (SW3) 25		Prep ng/Kg-dry	Date: 1/3/2013	Analyst: <b>JG</b> 1/4/2013		

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC01(0-6)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:00:00 PM

Lab ID:

12120653-010C

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Metals by ICP/MS Lead	<b>SW6020</b> 1600	( <b>SW3</b> (	,	Prep ng/Kg-dry	Date: <b>1/3/2013</b> 100	Analyst: <b>JG</b> 1/4/2013

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

<sup>\* -</sup> Non-accredited parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded



Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC01(0-6)-121912D

Lab Order:

12120653

Tag Number:

Duningto

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:05:00 PM

Project: Lab ID:

12120653-011A

Matrix: Soil

Analyses	Result	RL (	Qualifier Units	DF	Date Analyzed
Mercury	SW7471A		Prep	Date: 12/28/201	2 Analyst: LB
Mercury	1.9	0.2	mg/Kg-dry	10	1/2/2013
Metals by ICP/MS	SW6020	(SW305	(0B) Prep	Date: 12/28/201	2 Analyst: JG
Antimony	ND	24	mg/Kg-dry	100	12/31/2012
Arsenic	41	2.4	mg/Kg-dry	20	12/29/2012
Barium	540	2.4	mg/Kg-dry	20	12/29/2012
Cadmium	13	1.2	mg/Kg-dry	20	12/29/2012
Chromium	2100	24	mg/Kg-dry	200	12/29/2012
Copper	1000	5.9	mg/Kg-dry	20	12/29/2012
Lead	2600	1.2	mg/Kg-dry	20	12/29/2012
Selenium	3.7	2.4	mg/Kg-dry	20	12/29/2012
Silver	ND	2.4	mg/Kg-dry	20	12/29/2012
Tin	130 🍑	12	mg/Kg-dry	20	12/29/2012
Zinc	4100	120	mg/Kg-dry	200	12/29/2012
pH (25 °C)	SW9045C		Prep	Date: 12/28/201	2 Analyst: RW
pΗ	8.0		pH Units	1	12/28/2012
Percent Moisture	D2974		Prep	Date: 12/28/201	2 Analyst: RW
Percent Moisture	18.2	0.2	wt%	1	12/29/2012



Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC01(0-6)-121912D

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:05:00 PM

Lah ID•

12120653-011B

Matrix: Soil

Lab ID: 12120033-011B	WIAITIX: Soll								
Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed			
Bioaccessibility Asay Metals by ICP/MS Lead	<b>EPA 920</b> 13	0 <b>0/6020</b> 0.025	(SW3005A)	Prep mg/L	Date: <b>1/2/2013</b> 5	Analyst: <b>JG</b> 1/7/2013			
Metals by ICP/MS Lead	<b>SW6020</b> 2400	( <b>SW3</b> 0	,	Prep ng/Kg-dry	Date: <b>1/3/2013</b> 100	Analyst: <b>JG</b> 1/4/2013			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

RL Qualifier Units

Client Sample ID: PA-AC01(0-6)-121912D

Lab Order:

12120653

Tag Number: Course Grained

Project:

Analyses

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:05:00 PM

Lab ID:

12120653-011C

Matrix: Soil

Date Analyzed

Metals by ICP/MS

Result

Prep Date: 1/3/2013

DF

Analyst: JG

Lead

SW6020 (SW3050B) 1400 20

mg/Kg-dry 100 1/4/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC02(0-6)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:10:00 PM

Lab ID: 12120653-012A

Matrix: Soil

Analyses	Result	RL	Qualifi	er Units	DF	Date Analyzed
Mercury	SW7471	Α		Prep	Date: 12/28	3/2012 Analyst: LB
Mercury	0.77	0.041		mg/Kg-dry	2	1/2/2013
Metals by ICP/MS	SW6020	(SW3	)50B)	Prep	Date: 12/28	3/2012 Analyst: JG
Antimony	ND	22	•	mg/Kg-dry	100	12/31/2012
Arsenic	41	2.2		mg/Kg-dry	20	12/29/2012
Barium	500	2.2		mg/Kg-dry	20	12/29/2012
Cadmium	18	1.1		mg/Kg-dry	20	12/29/2012
Chromium	1700	2.2		mg/Kg-dry	20	12/29/2012
Copper	1100	5.4		mg/Kg-dry	20	12/29/2012
Lead	1900	4.3		mg/Kg-dry	20	12/29/2012
Selenium	3.4	2.2		mg/Kg-dry	20	12/29/2012
Silver	3.1	2.2		mg/Kg-dry	20	12/29/2012
Tin	150 J	22		mg/Kg-dry	20	12/29/2012
Zinc	4400	110		mg/Kg-dry	200	12/29/2012
oH (25 °C)	SW9045	С		Prep	Date: <b>12/28</b>	/2012 Analyst: RW
pH	7.8			pH Units	1	12/28/2012
ercent Moisture	D2974			Prep	Date: 12/28	/2012 Analyst: RW
Percent Moisture	23.3	0.2		wt%	1	12/29/2012

21/11/13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC02(0-6)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:10:00 PM

Lab ID:

12120653-012B

Matrix: Soil

Analyses	Result	RL Qualif	er Units DF	Date Analyzed
Bioaccessibility Asay Metals by ICP/MS	<b>EPA 920</b>	00/6020 (SW300)	5A) Prep Date: 1/2/2013	Analyst: <b>JG</b>
Lead	12	0.025 *	mg/L 5	1/7/2013
Metals by ICP/MS	<b>SW6020</b>	(SW3050B)	Prep Date: <b>1/3/2013</b>	Analyst: <b>JG</b>
Lead	1900	24	mg/Kg-dry 100	1/4/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC02(0-6)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:10:00 PM

Lab ID:

12120653-012C

Matrix: Soil

 Analyses
 Result
 RL
 Qualifier
 Units
 DF
 Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 1/3/2013
 Analyst: JG 1/4/2013

 Lead
 1600
 20
 mg/Kg-dry
 100
 1/4/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC02(0-6)-121912D

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:10:00 PM

Lab ID: 12120653-013A

Matrix: Soil

Analyses	Result	RL	Quali	fier Units	DF	Date Analyzed
Mercury	SW7471A			Prep	Date: '	12/28/2012 Analyst: LB
Mercury	0.7	0.023		mg/Kg-dry	1	1/2/2013
Metals by ICP/MS	SW6020	(SW30	50B)	Prep	Date: 1	12/28/2012 Analyst: JG
Antimony	ND	26	,	mg/Kg-dry	100	12/31/2012
Arsenic	41	2.6		mg/Kg-dry	20	12/29/2012
Barium	400	2.6		mg/Kg-dry	20	12/29/2012
Cadmium	12	1.3		mg/Kg-dry	20	12/29/2012
Chromium	3400	26		mg/Kg-dry	200	12/29/2012
Copper	1600	6.6		mg/Kg-dry	20	12/29/2012
Lead	2000	1.3		mg/Kg-dry	20	12/29/2012
Selenium	ND	2.6		mg/Kg-dry	20	12/29/2012
Silver	3	2.6		mg/Kg-dry	20	12/29/2012
Tin .	210 J	13		mg/Kg-dry	20	12/29/2012
Zinc	4600	130		mg/Kg-dry	200	12/29/2012
pH (25 °C)	SW9045C		Prep Date		12/28/2012 Analyst: RW	
pН	7.7			pH Units	1	12/28/2012
Percent Moisture	D2974			Prep	Date: 1	2/28/2012 Analyst: RW
Percent Moisture	24.4	0.2		wt%	1	12/29/2012



Qualiflers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 10120**2** 

Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC02(0-6)-121912D

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:10:00 PM

Lah ID:

12120653-013B

Matrix Soil

Lau ID: 12120033-013B	Watrix; Soil						
Analyses	Result	RL Quali	ifier Units	DF	Date Analyzed		
Bioaccessibility Asay Metals by ICP/MS Lead	<b>EPA 92</b> 12	200/6020 (SW30 0.025 · *		o Date: <b>1/2/2013</b> 5	Analyst: <b>JG</b> 1/7/2013		
Metals by ICP/MS Lead	<b>SW602</b> 2000	0 (SW3050B) 26	Pre mg/Kg-dry	p Date: <b>1/3/2013</b> 100	Analyst: <b>JG</b> 1/4/2013		

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

**Client Sample ID:** PA-AC02(0-6)-121912D

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:10:00 PM

Lab ID:

12120653-013C

Matrix: Soil

Analyses

Result

RL Qualifier Units

DF Prep Date: 1/3/2013

Analyst: JG

**Date Analyzed** 

Metals by ICP/MS Lead

SW6020 (SW3050B) 3900

22

mg/Kg-dry 100 1/4/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY02(6-12)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:25:00 PM

Lab ID:

12120653-014A

Matrix: Soil

Analyses	Result	RŁ	Qualifi	er Units	DF	Date Analyzed
Mercury	SW747	1A		Prep	Date: 12/28/201	2 Analyst: LB
Mercury	2.9	0.21		mg/Kg-dry	10	1/2/2013
Metals by ICP/MS	SW602	0 (SW30	50B)	Prep	Date: 12/28/201	2 Analyst: JG
Antimony	ND	20	-	mg/Kg-dry	100	12/31/2012
Arsenic	40	2		mg/Kg-dry	20	12/29/2012
Barium	680	2		mg/Kg-dry	20	12/29/2012
Cadmium	13	0.99		mg/Kg-dry	20	12/29/2012
Chromium	50	2		mg/Kg-dry	20	12/29/2012
Copper	660	5		mg/Kg-dry	20	12/29/2012
Lead	2500	0.99		mg/Kg-dry	20	12/29/2012
Selenium	2.9	2		mg/Kg-dry	20	12/29/2012
Silver	9.6	2		mg/Kg-dry	20	12/29/2012
Tin	88 J	9.9		mg/Kg-dry	20	12/29/2012
Zinc	3000	99		mg/Kg-dry .	200	12/29/2012
oH (25 °C)	SW904	5C		Prep	Date: <b>12/28/201</b> :	2 Analyst: RW
pH	8.0			pH Units	1	12/28/2012
Percent Moisture	D2974			Prep	Date: 12/28/201	2 Analyst: RW
Percent Moisture	15.3	0.2		wt%	1	12/29/2012

21/11/12

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY02(6-12)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:25:00 PM

Lab ID:

12120653-014B

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Bioaccessibility Asay Metals by ICP/MS Lead	<b>EPA 92</b> 13	<b>00/6020</b> 0.025	(SW3005A) *	Prep mg/L	Date: 1/3/2013 5	Analyst: <b>JG</b> 1/3/2013
Metals by ICP/MS Lead	<b>SW602</b> 6	0 (SW3) 24		Prep ng/Kg-dry	Date: 1/3/2013 100	Analyst: <b>JG</b> 1/4/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY02(6-12)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:25:00 PM

Lab ID:

12120653-014C

Matrix: Soil

Analyses

Result

Prep Date: 1/3/2013

**Date Analyzed** Analyst: JG

Metals by ICP/MS

SW6020 (SW3050B)

mg/Kg-dry

RL Qualifier Units

Lead

21

100

1/4/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY04(6-12)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:30:00 PM

Lab ID:

12120653-015A

Matrix: Soil

Analyses	Result	RL	Qualific	er Units	DF	I	ate Analyzed
Mercury	SW7471	Ā		Prep	Date: 12/28	3/ <b>2</b> 012	Analyst: LB
Mercury	1.5	0.11		mg/Kg-dry	5		1/2/2013
Metals by ICP/MS	SW6020	(\$W3	050B)	Prep	Date: 12/28	/2012	Analyst: JG
Antimony	440 J	26	•	mg/Kg-dry	100		12/31/2012
Arsenic	86	2.6		mg/Kg-dry	20		12/29/2012
Barium	1000	2.6		mg/Kg-dry	20		12/29/2012
Cadmium	22	1.3		mg/Kg-dry	20		12/29/2012
Chromium	510	2.6		mg/Kg-dry	20		12/29/2012
Copper	4000	65		mg/Kg-dry	200		12/29/2012
Lead	8700	1.3		mg/Kg-dry	20		12/29/2012
Selenium	4	2.6		mg/Kg-dry	20		12/29/2012
Silver	29	2.6		mg/Kg-dry	20		12/29/2012
Tin	2200 J	13		mg/Kg-dry	20		12/29/2012
Zinc	6000	130		mg/Kg-dry	200		12/29/2012
H (25 °C)	SW9045	С		Prep	Date: 12/28	/2012	Analyst: RW
рН	7.7			pH Units	1		12/28/2012
Percent Moisture	D2974			Prep	Date: 12/28	/2012	Analyst: RW
Percent Moisture	27.6	0.2	*	wt%	1		12/29/2012



Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY04(6-12)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:30:00 PM

Lah ID:

12120653-015B

Matrix: Sail

Lab ID: 12120033-013B							
Analyses	Result	RL Qualifie	r Units DF	Date Analyzed			
Bioaccessibility Asay Metals by ICP/MS	EPA 920	<b>0/6020 (SW3005</b> A	A) Prep Date: 1/3/201;	3 Analyst: <b>JG</b>			
Lead	27	0.025 *	mg/L 5	1/3/2013			
Metals by ICP/MS	<b>SW6020</b>	(SW3050B)	Prep Date: <b>1/3/201</b> ; mg/Kg-dry 100	3 Analyst: JG			
Lead	7500	25		1/4/2013			

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY04(6-12)-121912

Lab Order:

12120653

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Tag Number: Course Grained

Collection Date: 12/19/2012 4:30:00 PM

Lab ID: **Analyses**  12120653-015C

Matrix: Soil

**Date Analyzed** 

Metals by ICP/MS

Result

17

RL Qualifier Units

Prep Date: 1/3/2013

Analyst: JG

Lead

SW6020 (SW3050B) 17000

mg/Kg-dry 100 1/4/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 10120**2** 

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY16(12-24)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:35:00 PM

Lab ID:

12120653-016A

Matrix: Soil

1 -	· · · · · · · · · · · · · · · · · · ·					
Analyses	Result	RL	Qualifier	Units	DF	Date Analyze
Mercury	SW7471A			Prep	Date:	12/28/2012 Analyst: LE
Mercury	9.2	1.2	n	ng/Kg-dry	50	1/2/2013
Metals by ICP/MS	SW6020 (	SW30	50B)	Prep	Date:	12/28/2012 Analyst: JO
Antimony	ND	25	r.	ng/Kg-dry	100	12/31/2012
Arsenic	16	2.5	n	ng/Kg-dry	20	12/29/2012
Barium	320	2.5	n	ng/Kg-dry	20	12/29/2012
Cadmium	3.2	1.3	n	ng/Kg-dry	20	12/29/2012
Chromium	17	2.5	n	ng/Kg-dry	20	12/29/2012
Copper	450	6.4	п	ng/Kg-dry	20	12/29/2012
Lead	2100	5.1	n	ng/Kg-dry	20	12/29/2012
Selenium	ND	2.5	n	ng/Kg-dry	20	12/29/2012
Silver	ND ,	2.5	п	ng/Kg-dry	20	12/29/2012
Tin	57 <b>J</b>	25	* n	ng/Kg-dry	20	12/29/2012
Zinc	980	130	п	ng/Kg-dry	200	12/29/2012
oH (25 °C)	SW9045C			Prep	Date:	12/28/2012 Analyst: RV
pН	8.0		_	pH Units	1	12/28/2012
Percent Moisture	D2974			Prep	Date:	12/28/2012 Analyst: RV
Percent Moisture	20.6	0.2		wt%	1	12/29/2012



ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

**Weston Solutions** 

Client Sample ID: PA-AY16(12-24)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

Collection Date: 12/19/2012 4:35:00 PM

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen 12120653-016B

Lab ID:	12120653-016B	Matrix: Soil					
Analyses		Result	RL	Qualifier	Units	DF	Date Analyzed
Bioaccessibil Lead	lity Asay Metals by ICP/MS	<b>EPA 92</b> 21	00/6020 0.025	(SW3005A)	Prep mg/L	Date: 1/3/2013	Analyst: <b>JG</b> 1/3/2013
Metals by ICF Lead	P/MS	<b>SW602</b> 2500	0 (SW3) 21	•	Prep ng/Kg-dry	Date: 1/3/2013 100	Analyst: <b>JG</b> 1/4/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY16(12-24)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:35:00 PM

Lab ID: Analyses 12120653-016C

Matrix: Soil

SW6020 (SW3050B)

Prep Date: 1/3/2013

**Date Analyzed** 

Metals by ICP/MS

Result

mg/Kg-dry

RL Qualifier Units

Analyst: JG

Lead

2000 5.4

100

1/4/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY18(6-12)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:40:00 PM

Lab ID:

12120653-017A

Matrix: Soil

Analyses	Result	RL	Qualifier Units	DF I	ate Analyzed	
Mercury	SW747	1A	Prep	Date: 12/28/2012	Analyst: LB	
Mercury	1.2	0.067	mg/Kg-dry	3	1/2/2013	
Metals by ICP/MS	SW602	0 (SW305	iOB) Prep	Date: 12/28/2012	Analyst: JG	
Antimony	54丁	22	mg/Kg-dry	100	12/31/2012	
Arsenic	18	2.2	mg/Kg-dry	20	12/29/2012	
Barium	510	2.2	mg/Kg-dry	20	12/29/2012	
Cadmium	40	1.1	mg/Kg-dry	20	12/29/2012	
Chromium	72	2.2	mg/Kg-dry	20	12/29/2012	
Copper	33000	560	mg/Kg-dry	2000	12/31/2012	
Lead	3400	1.1	mg/Kg-dry	20	12/29/2012	
Selenium	5.5	2.2	mg/Kg-dry	20	12/29/2012	
Silver	7.3	2.2	mg/Kg-dry	20	12/29/2012	
Tin	1000 J	11	* mg/Kg-dry	20	12/29/2012	
Zinc	14000	110	mg/Kg-dry	200	12/29/2012	
pH (25 °C)	SW9045	5C	Prep	Date: 12/28/2012	Analyst: RW	
рH	7.5		pH Units	1	12/28/2012	
Percent Moisture	D2974		Prep	Date: 12/28/2012	Analyst: RW	
Percent Moisture	18.2	0.2	* wt%	1	12/29/2012	



Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY18(6-12)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

Collection Date: 12/19/2012 4:40:00 PM

Lab ID:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen 12120653-017B

Matrix: Soil

Analyses Result RL Qualifier Units DF **Date Analyzed Bioaccessibility Asay Metals by ICP/MS** EPA 9200/6020 (SW3005A) Prep Date: 1/3/2013 Analyst: JG Lead 33 0.025 mg/L 1/3/2013 SW6020 (SW3050B) Metals by ICP/MS Prep Date: 1/3/2013 Analyst: JG 4400 22 mg/Kg-dry 100 1/4/2013

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

<sup>\* -</sup> Non-accredited parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY18(6-12)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:40:00 PM

Lab ID:

12120653-017C

Matrix: Soil

Analyses	Result RL Quali	fier Units DF	Date Analyzed
Metals by ICP/MS Lead	<b>SW6020 (SW3050B)</b> 4000 21	Prep Date: 1/3/201 mg/Kg-dry 100	3 Analyst: <b>JG</b> 1/4/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY19(12-24)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:45:00 PM

Lab ID:

12120653-018A

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW7471	A		Prep	Date: 12/28	3/2012 Analyst: LB
Mercury	0.056	0.023		mg/Kg-dry	1	1/2/2013
Metals by ICP/MS	SW6020	(SW30	50B)	Prep	Date: 12/28	3/2012 Analyst: JG
Antimony	ND	24		mg/Kg-dry	100	12/31/2012
Arsenic	14	2.4		mg/Kg-dry	20	12/29/2012
Barium	300	2.4		mg/Kg-dry	20	12/29/2012
Cadmium	15	1.2		mg/Kg-dry	20	12/29/2012
Chromium	30	2.4		mg/Kg-dry	20	12/29/2012
Copper	20000	60		mg/Kg-dry	200	12/29/2012
Lead	1600	1.2		mg/Kg-dry	20	12/29/2012
Selenium	2.9	2.4		mg/Kg-dry	20	12/29/2012
Silver	5:2	2.4		mg/Kg-dry	20	12/29/2012
Tin	710 J	12	11.0	mg/Kg-dry	20	12/29/2012
Zinc	4500	120		mg/Kg-dry	200	12/29/2012
oH (25 °C)	SW90450	;		Prep	Date: 12/28	3/2012 Analyst: RW
РH	7.8			pH Units	1	12/28/2012
Percent Moisture	D2974			Prep	Date: 12/28	3/2012 Analyst: RW
Percent Moisture	15.0	0.2		wt%	1	12/29/2012

2H 114/13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY19(12-24)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project: 20405.012.008.2038.00, Pilsen Soil, SA, Pilsen Collection Date: 12/19/2012 4:45:00 PM

Lab ID:

12120653-018B

Matrix: Soil

THE TOTAL STATE OF THE TAIL ST			Mania. Son	
Analyses	Result	RL Qualifier	Units DF	Date Analyzed
Bioaccessibility Asay Metals by ICP/MS	<b>EPA 920</b>	0/ <b>6020 (SW3005A</b>	Prep Date: 1/3/2013	Analyst: <b>JG</b>
Lead		0.025	mg/L 5	1/3/2013
Metals by ICP/MS	<b>SW6020</b>	(SW3050B)	Prep Date: <b>1/3/2013</b>	Analyst: <b>JG</b>
Lead	2100	22	mg/Kg-dry 100	1/4/2013

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

<sup>\* -</sup> Non-accredited parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY19(12-24)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 4:45:00 PM

Lab ID:

12120653-018C

Matrix: Soil

 Analyses
 Result
 RL
 Qualifier
 Units
 DF
 Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 1/3/2013
 Analyst: JG

 Lead
 1400
 18
 mg/Kg-dry
 100
 1/4/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY05(6-12)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 5:00:00 PM

Lab ID:

12120653-019A

Matrix: Soil

Analyses	Result	RL	Qualifie	Units	DF	Date Analy	zed
TCLP Mercury	SW131	1/7470A		Pren	Date: 1/	2/2013 Analyst:	LB
Mercury	ND	0.0002		mg/L	1	1/2/2013	
Mercury	SW747	1A		Prep	Date: 12	2/28/2012 Analyst:	LB
Mercury	2.7	0.12	1	mg/Kg-dry	5	1/3/2013	
Metals by ICP/MS	SW602	0 (SW30	50B)	Prep	Date: 12	2/28/2012 Analyst:	JG
Antimony	440 ブ	59		mg/Kg-dry	200	12/31/201	
Arsenic	73丁	2.9	1	mg/Kg-dry	20	12/28/201	2
Barium	2700	2.9	1	mg/Kg-dry	20	12/28/201	2
Cadmium	36	1.5	1	mg/Kg-dry	20	12/28/201	2
Chromium	94 J	2.9	1	mg/Kg-dry	20	12/28/2013	2
Copper	22000	74	1	mg/Kg-dry	200	12/29/2012	2
Lead	8800	59		mg/Kg-dry	200	12/29/2012	2
Selenium	5	2.9	1	mg/Kg-dry	20	12/28/2012	2
Silver	86	2.9	1	mg/Kg-dry	20	12/28/2013	2
Tin	1800 J	74	* 1	mg/Kg-dry	100	1/8/2013	
Zinc	7300	150	1	mg/Kg-dry	200	12/29/2012	2
TCLP Metals by ICP/MS	SW131	1/6020 (S	W3005A)	Prep	Date: 12	//31/2012 Analyst:	JG
Arsenic	ND	0.01	•	mg/L	5	12/31/2012	
Barium	2.5	0.5		mg/L	5	12/31/2012	2
Cadmium	0.24	0.005		mg/L	5	12/31/2012	2
Chromium	ND	0.01		mg/L	5	12/31/2012	2.
Lead	9.6	0.005		mg/L	5	12/31/2012	2
Selenium	ND	0.01		mg/L	5	12/31/2012	2
Silver	ND	0.01		mg/L	5	12/31/2012	2
pH (25 °C)	SW904	5C		Prep	Date: 12	/28/2012 Analyst:	RW
рН	7.6			pH Units	1	12/28/2012	
Percent Moisture	D2974			Prep	Date: 12	/28/2012 Analyst:	RW
Percent Moisture	26.9	0.2	*	wt%	1	12/29/2012	



Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY05(6-12)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Collection Date: 12/19/2012 5:00:00 PM

Project: Lab ID:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Matrix: Soil

Lab ID:	12120653-019B				Matri	x: Soil	
Analyses		Result	RL	Qualifier	Units	DF	Date Analyzed
Bioaccessibil	lity Asay Metals by ICP/MS	<b>EPA 9</b> :	200/6020 0.025	(SW3005A)	) Prep	Date: 1/3/2013	Analyst: <b>JG</b>
Metals by ICF	P/MS		20 (SW36 5.2	*	•	Date: 1/3/2013	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

**Client Sample ID:** PA-AY05(6-12)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 5:00:00 PM

Lab ID:

12120653-019C

Matrix: Soil

	TYREST IN DOLL				
Analyses	Result	RL Qualif	ier Units DF	Date Analyzed	
Metals by ICP/MS Lead	<b>SW602</b> 0 26000	(SW3050B) 22	Prep Date: 1/3/20 mg/Kg-dry 100	13 Analyst: JG 1/4/2013	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY07(12-24)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 5:05:00 PM

Lab ID:

12120653-020A

Matrix: Soil

Analyses	Result	RL Qu	alifier Units	DF	Date Analyzed
Mercury	SW7471	A	Prep	Date: 12/28	/2012 Analyst: LB
Mercury	1.7	0.23	mg/Kg-dry	10	1/2/2013
Metals by ICP/MS	SW6020	(SW3050B	) Prep	Date: 12/28	/2012 Analyst: JG
Antimoný	1200	29	mg/Kg-dry	100	12/31/2012
Arsenic	93	2.9	mg/Kg-dry	20	12/29/2012
Barium	4300	2.9	mg/Kg-dry	20	12/29/2012
Cadmium	72	1.4	mg/Kg-dry	20	12/29/2012
Chromium	150	2.9	mg/Kg-dry	20	12/29/2012
Copper	12000	72	mg/Kg-dry	200	12/29/2012
Lead	16000	57	mg/Kg-dry	200	12/29/2012
Selenium	4.7	2.9	mg/Kg-dry	20	12/29/2012
Silver	23	2.9	mg/Kg-dry	20	12/29/2012
Tin	3200	290	* mg/Kg-dry	200	12/29/2012
Zinc	11000	140	mg/Kg-dry	200	12/29/2012
оН (25 °C)	SW9045	С	Prep	Date: 12/28/	/2012 Analyst: RW
рН	7.8		pH Units	1	12/28/2012
Percent Moisture	D2974		Prep	Date: 12/28/	2012 Analyst: RW
Percent Moisture	26.8	0.2	* wt%	1	12/29/2012

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY07(12-24)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

Collection Date: 12/19/2012 5:05:00 PM

Lab ID:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen 12120653-020B

Matrix: Soil

Analyses	Result	RL Qualifie	er Units DF	Date Analyzed			
Bioaccessibility Asay Metals by ICP/MS Lead	<b>EPA 9200</b>	0/ <b>6020 (SW3005</b> /	A) Prep Date: 1/3/2013	3 Analyst: <b>JG</b>			
	46	0.025 *	mg/L 5	1/3/2013			
Metals by ICP/MS	<b>SW6020</b>	(SW3050B)	Prep Date: 1/3/2013	3 Analyst: <b>JG</b>			
Lead	9300	20	mg/Kg-dry 100	1/3/2013			

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY07(12-24)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 5:05:00 PM

Lab ID:

12120653-020C

Matrix: Soil

 Analyses
 Result
 RL
 Qualifier
 Units
 DF
 Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 1/3/2013
 Analyst: JG

 Lead
 29000
 21
 mg/Kg-dry
 100
 1/3/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC03(0-6)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 5:15:00 PM

Lab ID:

12120653-021A

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF I	Date Analyzed
TCLP Mercury	SW131	11/7470A		Prep	Date: 1/2/2013	Analyst: LB
Mercury	ND	0.0002		mg/L	1	1/2/2013
Mercury	SW747	'1A		Prep	Date: 12/28/2012	Analyst: LB
Mercury	3.6	0.23		mg/L-dry	10	1/2/2013
Metals by ICP/MS	SW602	20 (SW30	50B)	Prep	Date: 12/28/2012	Analyst: JG
Antimony	290 J	54	-	mg/Kg-dry	200	12/31/2012
Arsenic	44J	2.7		mg/Kg-dry	20	12/28/2012
Barium	1600	2.7		mg/Kg-dry	20	12/28/2012
Cadmium	42	1.3		mg/Kg-dry	20	12/28/2012
Chromium	260	2.7		mg/Kg-dry	20	12/28/2012
Copper	8400	67		mg/Kg-dry	200	12/29/2012
Lead	5600	5.4		mg/Kg-dry	20	12/28/2012
Selenium	3.5J	2.7		mg/Kg-dry	20	12/28/2012
Silver	41	2.7		mg/Kg-dry	20	12/28/2012
Tin	1100 J	130	*	mg/Kg-dry	200	1/8/2013
Zinc	8100	130		mg/Kg-dry	200	12/29/2012
TCLP Metals by ICP/MS	SW131	1/6020 (5	SW3005A)	Prep	Date: 12/31/2012	Analyst: JG
Arsenic	ND	0.01	•	mg/L	5	12/31/2012
Barium	2.3	0.5		mg/L	5	12/31/2012
Cadmium	0.35	0.005		mg/L	5	12/31/2012
Chromium	ND	0.01		mg/L	5	12/31/2012
Lead	12	0.005		mg/L	5	12/31/2012
Selenium	ND	0.01		mg/L	5	12/31/2012
Silver	ND	0.01		mg/L	5	12/31/2012
оН (25 °C)	SW904	15C		Prep	Date: 12/28/2012	Analyst: RW
рН	7.8			pH Units	1	12/28/2012
Percent Moisture	D2974			Prep	Date: 12/28/2012	Analyst: RW
Percent Moisture	21.3	0.2	*	wt%	1	12/29/2012



Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC03(0-6)-121912

Lab Order:

12120653

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Tag Number: Fine Grained Collection Date: 12/19/2012 5:15:00 PM

Lab ID:

12120653-021B

Matrix: Soil

Eab 1D: 12120035-021D	Mati A. 5011						
Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed	
Bioaccessibility Asay Metals by ICP/MS Lead	<b>EPA 92</b> 6	<b>00/6020</b> 0.025	(SW3005A)	Prep mg/L	Date: <b>1/3/2013</b> 5	Analyst: <b>JG</b> 1/3/2013	
Metals by ICP/MS Lead	<b>SW602</b> (	(SW3)	,	Prep ng/Kg-dry	Date: <b>1/3/2013</b> 100	Analyst: <b>JG</b> 1/3/2013	

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC03(0-6)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 5:15:00 PM

Lab ID:

12120653-021C

Matrix: Soil

RL Qualifier Units **Analyses** Result **Date Analyzed** Metals by ICP/MS SW6020 (SW3050B) Prep Date: 1/3/2013 Analyst: JG Lead 17000 20 mg/Kg-dry 1/3/2013 100

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013
Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC04(0-6)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 5:20:00 PM

Lab ID:

12120653-022A

Matrix: Soil

Analyses	Result	RL	Qualifie	r Ilnite	DF	Date Analyzed
- Indiana de la companya della companya della companya de la companya de la companya della compa	Result	KL	Quanne	Units	Dr ·	Date Analyzeu
TCLP Mercury	SW13 <sup>-</sup>	11/7470A		Prep	Date: 1/2/20	013 Analyst: LB
Mercury	ND	0.0002		mg/L	1	1/2/2013
Mercury	SW747	71A		Prep	Date: 12/28	/2012 Analyst: LB
Mercury	1.3	0.12		mg/Kg-dry	5	12/28/2012
Metals by ICP/MS	SW602	20 (SW36	)50B)	Prep	Date: <b>12/28</b>	/2012 Analyst: JG
Antimony	78 J	5.2	•	mg/Kg-dry	20	12/28/2012
Arsenic	28	2.6		mg/Kg-dry	20	12/28/2012
Barium	980	2.6		mg/Kg-dry	20	12/28/2012
Cadmium	40	1.3		mg/Kg-dry	20	12/28/2012
Chromium	150	2.6		mg/Kg-dry	20	12/28/2012
Copper	5400	65		mg/Kg-dry	200	12/29/2012
Lead	5000	5.2		mg/Kg-dry	20	12/28/2012
Selenium	3.7	2.6		mg/Kg-dry	20	12/28/2012
Silver	19	2.6		mg/Kg-dry	20	12/28/2012
Tin	600	65	*	mg/Kg-dry	100	12/31/2012
Zinc	14000	130		mg/Kg-dry	200	12/29/2012
CLP Metals by ICP/MS	SW131	1/6020 (	SW3005A)	Prep	Date: 12/31/	2012 Analyst: JG
Arsenic	ND	0.01	•	mg/L	5	12/31/2012
Barium	1.7	0.5		mg/L	5	12/31/2012
Cadmium	0.4	0.005		mg/L	5	12/31/2012
Chromium	ND	0.01		mg/L	5	12/31/2012
Lead	12	0.005		mg/L	5	12/31/2012
Selenium	ND	0.01		mg/L	5	12/31/2012
Silver	ND	0.01		mg/L	5	12/31/2012
H (25 °C)	SW904	5C		Prep	Date: 12/28/	2012 Analyst: RW
рН	7.8			pH Units	1	12/28/2012
ercent Moisture	D2974			Prep	Date: 12/28/	2012 Analyst: RW
Percent Moisture	18.0	0.2		wt%	1	12/29/2012

24

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC04(0-6)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 5:20:00 PM

Lab ID:

12120653-022B

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed	
Bioaccessibility Asay Metals by ICP/MS Lead	<b>EPA 9</b> 2	<b>200/6020</b> 0.025	(SW3005A)	Prep mg/L	Date: 1/3/2013	3 Analyst: <b>JG</b> 1/3/2013	
Metals by ICP/MS Lead	<b>SW602</b> 5300	2 <b>0 (SW3</b> 21		Prep ng/Kg-dry	Date: 1/3/2013	3 Analyst: <b>JG</b> 1/3/2013	

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AC04(0-6)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 5:20:00 PM

Lab ID:

12120653-022C

Matrix: Soil

Analyses

Result

RL Qualifier Units

Prep Date: 1/3/2013

**Date Analyzed** Analyst: JG

Metals by ICP/MS Lead

SW6020 (SW3050B) 3600

21

mg/Kg-dry 100

1/3/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY03HS(0-6)-121912

Lab Order:

12120653

Tag Number:

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 5:30:00 PM

Lab ID:

12120653-023A

Matrix: Soil

TCLP Mercury Mercury	<b>SW13</b> 1 ND	1/7470A				
Mercury	ND			Prep	Date: 1/2/2013	Analyst: LB
Wording		0.0002		mg/L	1	1/2/2013
Mercury	SW747	'1A		Prep	Date: 12/28/2012	Analyst: LB
Mercury	2.9	0.12		mg/Kg-dry	5	12/28/2012
Metals by ICP/MS	SW602	20 (SW30	50B)	Prep	Date: 12/28/2012	Analyst: JG
Antimony	13 J	4.8	•	mg/Kg-dry	20	12/28/2012
Arsenic	51	2.4		mg/Kg-dry	20	12/28/2012
Barium	630	2.4		mg/Kg-dry	20	12/28/2012
Cadmium	17	1.2		mg/Kg-dry	20	12/28/2012
Chromium	380	2.4		mg/Kg-dry	20	12/28/2012
Copper	1500	61		mg/Kg-dry	200	12/29/2012
Lead	2600	4.8		mg/Kg-dry	20	12/28/2012
Selenium	4.6	2.4		mg/Kg-dry	20	12/28/2012
Silver	3.1	2.4		mg/Kg-dry	20	12/28/2012
Tín	190	61	*	mg/Kg-dry	100	12/31/2012
Zinç	4800	120		mg/Kg-dry	200	12/29/2012
TCLP Metals by ICP/MS	SW131	1/6020 (9	SW3005A)	Prep	Date: 12/31/2012	Analyst: <b>JG</b>
Arsenic	ND	0.01		mg/L	5	12/31/2012
Barium	1.8	0.5		mg/L	5	12/31/2012
Cadmium	0.083	0.005		mg/L	5	12/31/2012
Chromium	ND	0.01		mg/L	5	12/31/2012
Lead	1.1	0.005		mg/L	5	12/31/2012
Selenium	ND	0.01		mg/L	5	12/31/2012
Silver	ND	0.01		mg/L	5	12/31/2012
pH (25 °C)	SW904	5C		Prep	Date: <b>12/28/2012</b>	Analyst: RW
рН	7.8			pH Units	1	12/28/2012
Percent Moisture	D2974			Prep l	Date: <b>12/28/2012</b>	Analyst: RW
Percent Moisture	18.0	0.2	*	wt%	1	12/29/2012

2/14/13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY03HS(0-6)-121912

Lab Order:

12120653

Tag Number: Fine Grained

Collection Date: 12/19/2012 5:30:00 PM

Project: Lab ID:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen 12120653-023B

Matrix: Soil

					2011	
Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Bioaccessibility Asay Metals by ICP/MS Lead	<b>EPA 9</b> 2	<b>200/6020</b> 0.025	(SW3005A)	Prep mg/L	Date: 1/3/2013 5	Analyst: <b>JG</b> 1/3/2013
Metals by ICP/MS Lead	<b>SW602</b> 2300	20 (SW3) 21	•	Prep ng/Kg-dry	Date: 1/3/2013 100	Analyst: <b>JG</b> 1/3/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: January 09, 2013 Print Date: January 09, 2013

Client:

Weston Solutions

Client Sample ID: PA-AY03HS(0-6)-121912

Lab Order:

12120653

Tag Number: Course Grained

Project:

20405.012.008.2038.00, Pilsen Soil, SA, Pilsen

Collection Date: 12/19/2012 5:30:00 PM

Lab ID:

12120653-023C

Matrix: Soil

Result	KL	Qualifier	Units	DF	Date Analyzed
	(SW30	,	•		Analyst: <b>JG</b> 1/3/2013
	<b>SW6020</b> 1400	•	<b>SW6020 (SW3050B)</b>	, , , , , , , , , , , , , , , , , , , ,	, , , , , , , , , , , , , , , , , , , ,

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

#### PILSEN AREA SOIL SITE CHICAGO, ILLINOIS DATA VALIDATION REPORT

**Date:** May 28, 2013

Laboratory: STAT Analysis Corporation (STAT), Chicago, Illinois

**Laboratory Project #:** 13050282

Data Validation Performed By: Lisa Graczyk, Weston Solutions, Inc. (WESTON®) Superfund

Technical Assessment and Response Team (START)

**Analytical TDD and Work Order** #: S05-0001-1211-003/20405.016.001.2038.00

This data validation report has been prepared by WESTON START under the START III Region V contract. This report documents the data validation for 33 soil samples collected for the Pilsen Area Soil Site that were analyzed for the following parameters and U.S. Environmental Protection Agency methods:

- Total Metals by SW-846 Methods 6020 and 7471A
- Fine Grained Lead by SW-846 Method 6020
- Bioavailablity Lead by EPA Method 9200 and SW-846 Method 6020
- Toxicity Characteristic Leaching Procedure (TCLP) Lead by SW-846 Methods 1311 and 6020
- pH by SW-846 Method 9045C
- Moisture Content by ASTM D2974

A level II data package was requested from STAT. The data validation was conducted in general accordance with the EPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2010. The Attachment contains the results summary sheets with the hand-written qualifiers applied during data validation.

## TOTAL METALS AND FINE GRAINED LEAD BY EPA SW-846 METHODS 6020 AND 7471A AND BIOAVAILABLE LEAD BY EPA METHOD 9200 AND SW-846 METHOD 6020

#### 1. <u>Samples</u>

Attachment A summarizes the samples for which this data validation is being conducted. It includes but the laboratory sample identification, the WESTON START sample identification, and the date and time of sample collection.

#### 2. Holding Times

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

Data Validation Report Pilsen Area Soil Site STAT Analysis Corporation Laboratory Project #: 13050282

#### 3. Blank Results

Method blanks were analyzed with the metals analyses. The blanks contained no metals contamination above the reporting limits. There were detections of some metals below the reporting limits in the blanks. However, the sample results were much greater or contained no detections of these metals. No qualifications were required.

#### 4. <u>Laboratory Control Sample (LCS) Results</u>

The LCS recoveries were within the quality control (QC) limits except for as follows.

In one LCS, antimony was detected high. Detected antimony results associated with this LCS were flagged "J" as estimated.

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

STAT analyzed several site-specific MS/MSDs. The percent recoveries and relative percent differences (RPD) were within QC limits except for as follows.

In many instances of QC limits not being met, the sample concentration was more than four times the spike amount. In these instances, no qualifications were required.

In the MS and MSD of sample PA-RR14,15,16(0-6)-050613, the antimony recovery was low. The antimony result in this sample was flagged "J" as estimated.

In the MS and MSD of sample PA-351-01(0-6)-050713, the copper recovery was high and the antimony recovery was low. The copper result in this sample was flagged "J" and the quantiation limit for antimony was flagged "UJ" as estimated.

#### 6. Field Duplicate Results

There are two field duplicate samples associated with this work order that are identified by a "D" suffix in the sample name.

The field duplicate results were evaluated by calculating the RPDs between the investigative and field duplicate sample results. There is no established QC limit for RPD for field duplicates; however, 50 RPD is generally used for evaluation. The RPDs for detected metals were below 50 which is acceptable.

#### 7. Overall Assessment

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

Data Validation Report Pilsen Area Soil Site STAT Analysis Corporation Laboratory Project #: 13050282

#### TCLP METALS BY EPA SW-846 METHODS 1311 AND 6020

#### 1. Samples

Attachment A summarizes the samples for which this data validation is being conducted. It includes but the laboratory sample identification, the WESTON START sample identification, and the date and time of sample collection.

#### 2. Holding Times

The samples were analyzed within the required holding time limit of 180 days from sample collection.

#### 3. Blank Results

Method blanks were analyzed with the metals analyses. Some of the blanks contained some minor lead contamination. However, the TCLP lead results were much greater than the blank results and no qualifications were required.

#### 4. LCS Results

The LCS recoveries were within the QC limits.

#### 5. MS and MSD Results

STAT analyzed two site-specific MS/MSD samples. The percent recoveries and RPDs were within QC limits except for as follows.

#### 6. Field Duplicate Results

There are two field duplicate samples associated with this work order that are identified by a "D" suffix in the sample name.

The field duplicate results were evaluated by calculating the RPDs between the investigative and field duplicate sample results. There is no established QC limit for RPD for field duplicates; however, 50 RPD is generally used for evaluation. The RPD for one of the field duplicates was below 50 which is acceptable. The RPD for field duplicate PA-RR01,02(6-24)050613D had a high RPD of 134 indicating sample heterogeneity associated with TCLP lead in this sample.

#### 7. Overall Assessment

The TCLP lead data are acceptable for use as qualified based on the information received.

## GENERAL CHEMISTRY PARAMETERS (pH by SW-846 Method 9045C and Moisture Content by ASTM D2974)

#### 1. Samples

Attachment A summarizes the samples for which this data validation is being conducted. It includes but the laboratory sample identification, the WESTON START sample identification, and the date and time of sample collection.

#### 2. <u>Holding Times</u>

The holding time for pH is "as soon as possible" and the holding time for moisture is 28 days. The holding time for moisture was met. For pH, the samples were analyzed approximately 6-7 days from sample collection. No qualifications were applied.

#### 3. Blank Results

Method blanks were analyzed with the moisture analyses and were all non-detect for moisture which is acceptable.

#### 4. LCS Results

LCSs were analyzed with the moisture analyses. The LCS recoveries were within the QC limits.

#### 5. Laboratory Duplicates

Laboratory duplicates were analyzed with the pH and moisture analyses. The RPDs were within QC limits.

#### 6. Field Duplicate Results

There are two field duplicate samples associated with this work order that are identified by a "D" suffix in the sample name.

The field duplicate results were evaluated by calculating the RPDs between the investigative and field duplicate sample results. The RPDs were below 50 which is acceptable.

Data Validation Report Pilsen Area Soil Site STAT Analysis Corporation Laboratory Project #: 13050282

#### 7. Overall Assessment

The pH and moisture data are acceptable for use as qualified based on the information received.

Data Validation Report Pilsen Area Soil Site STAT Analysis Corporation Laboratory Project #: 13050282

# ATTACHMENT A SAMPLE LIST

**Date:** May 23, 2013

**Client:** Weston Solutions

Project: Pilsen Soil Site, Pilsen, Chicago, IL Work Order Sample Summary

**Lab Order:** 13050282

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
13050282-001A	PA-RR14,15,16(0-6)-050613		5/6/2013 3:40:00 PM	5/7/2013
13050282-001B	PA-RR14,15,16(0-6)-050613	Fine Grained	5/6/2013 3:40:00 PM	5/3/2013
13050282-002A	PA-RR14,15,16(6-24)-050613	3	5/6/2013 3:50:00 PM	5/7/2013
13050282-002B	PA-RR14,15,16(6-24)-050613	3Fine Grained	5/6/2013 3:50:00 PM	5/7/2013
13050282-003A	PA-RR11,13(0-6)-050613		5/6/2013 4:00:00 PM	5/7/2013
13050282-003B	PA-RR11,13(0-6)-050613	Fine Grained	5/6/2013 4:00:00 PM	5/7/2013
13050282-004A	PA-RR11,13(6-24)-050613		5/6/2013 4:05:00 PM	5/7/2013
13050282-004B	PA-RR11,13(6-24)-050613	Fine Grained	5/6/2013 4:05:00 PM	5/7/2013
13050282-005A	PA-RR10,12(0-6)-050613		5/6/2013 4:15:00 PM	5/7/2013
13050282-005B	PA-RR10,12(0-6)-050613	Fine Grained	5/6/2013 4:15:00 PM	5/7/2013
13050282-006A	PA-RR10,12(6-24)-050613		5/6/2013 4:20:00 PM	5/7/2013
13050282-006B	PA-RR10,12(6-24)-050613	Fine Grained	5/6/2013 4:20:00 PM	5/7/2013
13050282-007A	PA-RR07,08(0-6)-050613		5/6/2013 4:30:00 PM	5/7/2013
13050282-007B	PA-RR07,08(0-6)-050613	Fine Grained	5/6/2013 4:30:00 PM	5/7/2013
13050282-008A	PA-RR07,08(6-24)-050613		5/6/2013 4:35:00 PM	5/7/2013
13050282-008B	PA-RR07,08(6-24)-050613	Fine Grained	5/6/2013 4:35:00 PM	5/7/2013
13050282-009A	PA-RR01,02(0-6)-050613		5/6/2013 4:40:00 PM	5/7/2013
13050282-009B	PA-RR01,02(0-6)-050613	Fine Grained	5/6/2013 4:40:00 PM	5/7/2013
13050282-010A	PA-RR01,026-24)-050613		5/6/2013 4:45:00 PM	5/7/2013
13050282-010B	PA-RR01,026-24)-050613	Fine Grained	5/6/2013 4:45:00 PM	5/7/2013
13050282-011A	PA-RR04,06(0-6)-050613		5/6/2013 4:55:00 PM	5/7/2013
13050282-011B	PA-RR04,06(0-6)-050613	Fine Grained	5/6/2013 4:55:00 PM	5/7/2013
13050282-011C	PA-RR04,06(0-6)-050613	Course Grained	5/6/2013 4:55:00 PM	5/7/2013
13050282-012A	PA-RR04,06(6-24)-050613		5/6/2013 5:00:00 PM	5/7/2013
13050282-012B	PA-RR04,06(6-24)-050613	Fine Grained	5/6/2013 5:00:00 PM	5/7/2013
13050282-013A	PA-RR01,02(6-24)-050613D		5/6/2013 4:50:00 PM	5/7/2013
13050282-013B	PA-RR01,02(6-24)-050613D	Fine Grained	5/6/2013 4:50:00 PM	5/7/2013
13050282-014A	PA-375-01(0-6)-050713D		5/7/2013 9:40:00 AM	5/7/2013
13050282-014B	PA-375-01(0-6)-050713D	Fine Grained	5/7/2013 9:40:00 AM	5/7/2013
13050282-014C	PA-375-01(0-6)-050713D	Course Grained	5/7/2013 9:40:00 AM	5/7/2013
13050282-015A	PA-375-02(0-12)-050713		5/7/2013 9:45:00 AM	5/7/2013
13050282-015B	PA-375-02(0-12)-050713	Fine Grained	5/7/2013 9:45:00 AM	5/7/2013
13050282-016A	PA-370-01(0-6)-050713		5/7/2013 10:45:00 AM	5/7/2013
13050282-016B	PA-370-01(0-6)-050713	Fine Grained	5/7/2013 10:45:00 AM	5/7/2013
13050282-017A	PA-370-01(0-6)-050713D		5/7/2013 10:50:00 AM	5/7/2013
13050282-017B	PA-370-01(0-6)-050713D	Fine Grained	5/7/2013 10:50:00 AM	5/7/2013
13050282-018A	PA-370-02(0-6)-050713		5/7/2013 10:55:00 AM	5/7/2013
13050282-018B	PA-370-02(0-6)-050713	Fine Grained	5/7/2013 10:55:00 AM	5/7/2013

**Client:** Weston Solutions

**Project:** Pilsen Soil Site, Pilsen, Chicago, IL

**Lab Order:** 13050282

## **Work Order Sample Summary**

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
13050282-019A	PA-370-02(6-12)-050713		5/7/2013 11:00:00 AM	5/7/2013
13050282-019B	PA-370-02(6-12)-050713	Fine Grained	5/7/2013 11:00:00 AM	5/7/2013
13050282-020A	PA-369-01(0-6)-050713		5/7/2013 12:20:00 PM	5/7/2013
13050282-020B	PA-369-01(0-6)-050713	Fine Grained	5/7/2013 12:20:00 PM	5/7/2013
13050282-021A	PA-369-01(0-2)-050713		5/7/2013 12:15:00 PM	5/7/2013
13050282-021B	PA-369-01(0-2)-050713	Fine Grained	5/7/2013 12:15:00 PM	5/7/2013
13050282-022A	PA-369-02(0-12)-050713		5/7/2013 12:25:00 PM	5/7/2013
13050282-022B	PA-369-02(0-12)-050713	Fine Grained	5/7/2013 12:25:00 PM	5/7/2013
13050282-023A	PA-369-03,04(0-6)-050713		5/7/2013 12:30:00 PM	5/7/2013
13050282-023B	PA-369-03,04(0-6)-050713	Fine Grained	5/7/2013 12:30:00 PM	5/7/2013
13050282-024A	PA-371-01(0-6)-050713		5/7/2013 2:15:00 PM	5/7/2013
13050282-024B	PA-371-01(0-6)-050713	Fine Grained	5/7/2013 2:15:00 PM	5/7/2013
13050282-025A	PA-371-02(0-6)-050713		5/7/2013 2:20:00 PM	5/7/2013
13050282-025B	PA-371-02(0-6)-050713	Fine Grained	5/7/2013 2:20:00 PM	5/7/2013
13050282-026A	PA-371-02(0-6)-050713D		5/7/2013 2:25:00 PM	5/7/2013
13050282-026B	PA-371-02(0-6)-050713D	Fine Grained	5/7/2013 2:25:00 PM	5/7/2013
13050282-027A	PA-349-01(0-6)-050713		5/7/2013 3:20:00 PM	5/7/2013
13050282-027B	PA-349-01(0-6)-050713	Fine Grained	5/7/2013 3:20:00 PM	5/7/2013
13050282-028A	PA-349-02(0-12)-050713		5/7/2013 3:25:00 PM	5/7/2013
13050282-028B	PA-349-02(0-12)-050713	Fine Grained	5/7/2013 3:25:00 PM	5/7/2013
13050282-029A	PA-349-03(0-6)-050713		5/7/2013 4:30:00 PM	5/7/2013
13050282-029B	PA-349-03(0-6)-050713	Fine Grained	5/7/2013 4:30:00 PM	5/7/2013
13050282-030A	PA-351-01(0-6)-050713		5/7/2013 3:45:00 PM	5/7/2013
13050282-030B	PA-351-01(0-6)-050713	Fine Grained	5/7/2013 3:45:00 PM	5/7/2013
13050282-031A	PA-141-01(0-6)-050713		5/7/2013 5:40:00 PM	5/7/2013
13050282-031B	PA-141-01(0-6)-050713	Fine Grained	5/7/2013 5:40:00 PM	5/7/2013
13050282-032A	PA-141-02(0-6)-050713		5/7/2013 5:45:00 PM	5/7/2013
13050282-032B	PA-141-02(0-6)-050713	Fine Grained	5/7/2013 5:45:00 PM	5/7/2013
13050282-033A	PA-141-03(0-6)-050713		5/7/2013 5:50:00 PM	5/7/2013
13050282-033B	PA-141-03(0-6)-050713	Fine Grained	5/7/2013 5:50:00 PM	5/7/2013

Data Validation Report Pilsen Area Soil Site STAT Analysis Corporation Laboratory Project #: 13050282

#### ATTACHMENT B

# STAT ANALYSIS CORPORATION RESULTS SUMMARY WITH QUALIFIERS



Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR14,15,16(0-6)-050613

Lab Order:

13050282

Tag Number:

Project: Lab ID: Pilsen Soil Site, Pilsen, Chicago, IL

13050282-001A

Collection Date 5/6/2013 3:40:00 PM

Matrix: Soil

Analyses	Result	RL	Qualifie	er Units	DF	Date Analyzed
Mercury	SW7471	A		Prep	Date: 5/13/2013	Analyst: LB
Mercury	1.2	0.2		mg/Kg-dry	10	5/13/2013
Metals by ICP/MS	SW6020	(SW30	)50B)	Prep	Date: 5/13/2013	Analyst: JG
Antimony	4.7 🏏	4.3		mg/Kg-dry	20	5/14/2013
Cadmium	9.5	1.1		mg/Kg-dry	20	5/14/2013
Chromium	900	2.2		mg/Kg-dry	20	5/14/2013
Copper	770	5.4		mg/Kg-dry	20	5/14/2013
Lead	1500	1.1		mg/Kg-dry	20	5/14/2013
Tin	130	11	*	mg/Kg-dry	20	5/14/2013
Zinc	5800	54		mg/Kg-dry	100	5/14/2013
TCLP Metais by ICP/MS	SW1311	/6020 (	SW3005A)	Prep	Date: 5/12/2013	Analyst: JG
Lead	0.75	0.005		mg/L	5	5/12/2013
pH (25 °C)	SW9045	С		Prep	Date: 5/14/2013	Analyst: PBG
рН	8.2			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/11/2013	Analyst: RW
Percent Moisture	11.8	0.2	*	wt%	1	5/11/2013

28 5/28/13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR14,15,16(0-6)-050613

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 3:40:00 PM

Lab ID:

13050282-001B

Matrix: Soil

Analyses

Result

RL Qualifier Units

Prep Date: 5/19/2013

**Date Analyzed** 

Metals by ICP/MS Lead

9.9

5/19/2013

SW6020 (SW3050B) 3200

mg/Kg-dry 100 Analyst: JG

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



**Report Date:** May 23, 2013 **Print Date:** May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR14,15,16(6-24)-050613

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 3:50:00 PM

Lab ID:

13050282-002A

Matrix: Soil

Analyses	Result	RL Qua	lifier Units	DF	Date Analyzed
Mercury	SW7471	A	Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.78	0.04	mg/Kg-dry	2	5/13/2013
Metals by ICP/MS	SW6020	(SW3050B)	Prep	Date: 5/13/2013	Analyst: JG
Antimony	5.2 J	4.5	mg/Kg-dry	20	5/14/2013
Cadmium	11	1.1	mg/Kg-dry	20	5/14/2013
Chromium	2000	2.3	mg/Kg-dry	20	5/14/2013
Copper	900	5.7	mg/Kg-dry	20	5/14/2013
Lead	2200	1.1	mg/Kg-dry	20	5/14/2013
Tin	120	11	mg/Kg-dry	20	5/14/2013
Zinc	4700	57	mg/Kg-dry	100	5/14/2013
TCLP Metals by ICP/MS	SW1311	/6020 (SW300	(15A) Prep	Date: <b>5/12/2013</b>	Analyst: JG
Lead	0.35	0.005	mg/L	5	5/12/2013
pH (25 °C)	SW9045	С	Prep l	Date: <b>5/14/2013</b>	Analyst: PBG
рН	7.9		pH Units	1	5/14/2013
Percent Moisture	D2974		Prep I	Date: <b>5/11/2013</b>	Analyst: RW
Percent Moisture	16.6	0.2	* wt%	1	5/11/2013



Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR14,15,16(6-24)-050613

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 3:50:00 PM

Lab ID:

13050282-002B

Matrix: Soil

Analyses

RL Qualifier Units DF

Metals by ICP/MS

SW6020 (SW3050B)

Result

Prep Date: 5/19/2013

Analyst: JG

Date Analyzed

Lead

2200

10

mg/Kg-dry

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: May 23, 2013
Print Date: May 23, 2013

Client:

Weston Solutions

13050282-003A

Client Sample ID: PA-RR11,13(0-6)-050613

Lab Order:

13050282

Tag Number:

Project: Lab ID: Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:00:00 PM

Matrix: Soil

Analyses	Result	RL (	Qualifier	Units	DF	Date Analyzed
Mercury	SW7471	Α		Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.55	0.02	r	ng/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW6020	(SW3050	OB)	Prep	Date: 5/13/2013	Analyst: JG
Antimony	6.4 <b>J</b>	4.6	r	ng/Kg-dry	20	5/14/2013
Cadmium	9.3	5.7	r	ng/Kg-dry	100	5/13/2013
Chromium	220	11	r	ng/Kg-dry	100	5/13/2013
Copper	650	5.7	r	ng/Kg-dry	20	5/14/2013
Lead	940	11	г	ng/Kg-dry	100	5/13/2013
Tin	70	11	* n	ng/Kg-dry	20	5/14/2013
Zinc	2200	57	r	ng/Kg-dry	100	5/14/2013
TCLP Metals by ICP/MS	SW1311	/6020 (SV	V3005A)	Prep	Date: 5/12/2013	Analyst: JG
Lead	0.13	0.005	-	mg/L	5	5/12/2013
pH (25 °C)	SW9045	С		Prep	Date: 5/14/2013	Analyst: PBG
pН	7.9			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: <b>5/11/2013</b>	Analyst: RW
Percent Moisture	13.0	0.2	*	wt%	1	5/11/2013

2 × 13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR11,13(0-6)-050613

Lab Order:

13050282

Tag Number: Fine Grained

Collection Date 5/6/2013 4:00:00 PM

Project: Lab ID:

Pilsen Soil Site, Pilsen, Chicago, IL

Analyses

13050282-003B

Matrix: Soil

**Date Analyzed** 

Metals by ICP/MS

SW6020 (SW3050B)

Prep Date: 5/19/2013 100

Analyst: JG

Lead

900

Result

9.7

RL Qualifier Units

mg/Kg-dry

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR11,13(6-24)-050613

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:05:00 PM

Lab ID:

13050282-004A

Matrix: Soil

Analyses	Result	RL Qual	ifier Units	DF	Date Analyzed
Mercury	SW7471	A	Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.58	0.02	mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW6020	(SW3050B)	Prep	Date: 5/13/2013	Analyst: JG
Antimony	8.8 🍑	4.5	mg/Kg-dry	20	5/14/2013
Cadmium	8.6	5.6	mg/Kg-dry	100	5/13/2013
Chromium	43	11	mg/Kg-dry	100	5/13/2013
Copper	360	5.6	mg/Kg-dry	20	5/14/2013
Lead	1000	11	mg/Kg-dry	100	5/13/2013
Tin	110	11	mg/Kg-dry	20	5/14/2013
Zinc	1100	56	mg/Kg-dry	100	5/14/2013
TCLP Metals by ICP/MS	SW1311/	/6020 (SW300	5A) Prep	Date: <b>5/12/2013</b>	Analyst: JG
Lead	0.022	0.005	mg/L	5	5/12/2013
pH (25 °C)	SW9045	С	Prep	Date: 5/14/2013	Analyst: PBG
рН	7.9		pH Units	1	5/14/2013
Percent Moisture	D2974		Prep l	Date: <b>5/11/2013</b>	Analyst: RW
Percent Moisture	15.3	0.2 *	wt%	1	5/11/2013

28 5|28|13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR11,13(6-24)-050613

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:05:00 PM

Lab ID:

13050282-004B

Matrix: Soil

Analyses

Result

RL Qualifier Units

Prep Date: 5/19/2013

DF

**Date Analyzed** Analyst: JG

Metals by ICP/MS

Lead

SW6020 (SW3050B) 980

9.9

mg/Kg-dry

100

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR10,12(0-6)-050613

Lab Order:

13050282

Tag Number:

Project:

Collection Date 5/6/2013 4:15:00 PM

Lab ID:

13050282-005A

Pilsen Soil Site, Pilsen, Chicago, IL

Matrix: Soil

200 121						
Analyses	Result	RL	Qualifie	er Units	DF	Date Analyzed
Mercury	SW7471	I <b>A</b>		Prep	Date: 5/13/2013	Analyst: LB
Mercury	1.1	0.22		mg/Kg-dry	10	5/13/2013
Metals by ICP/MS	SW6020	) (SW3	050B)	Prep	Date: 5/13/2013	Analyst: <b>JG</b>
Antimony	14 5	4.5		mg/Kg-dry	20	5/14/2013
Cadmium	17	5.6		mg/Kg-dry	100	5/13/2013
Chromium	53	11		mg/Kg-dry	100	5/13/2013
Copper	1000	5.6		mg/Kg-dry	20	5/14/2013
Lead	1800	11		mg/Kg-dry	100	5/13/2013
Tin	150	11	*	mg/Kg-dry	20	5/14/2013
Zinc	3800	56		mg/Kg-dry	100	5/14/2013
TCLP Metals by ICP/MS	SW1311	/6020 (	SW3005A)	Prep	Date: 5/14/2013	Analyst: JG
Lead	0.52	0.005		mg/L	5	5/14/2013
pH (25 °C)	SW9045	iC		Prep	Date: 5/14/2013	Analyst: PBG
pH	8.0			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/11/2013	Analyst: RW
Percent Moisture	15.3	0.2	*	wt%	1	5/11/2013

XX 5/28/13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR10,12(0-6)-050613

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:15:00 PM

Lab ID:

13050282-005B

Matrix: Soil

Analyses

Result

RL Qualifier Units

DF

Date Analyzed ·

Metals by ICP/MS Lead

2600

SW6020 (SW3050B) 9.9

mg/Kg-dry

Prep Date: 5/19/2013 100

Analyst: JG 5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: May 23, 2013
Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR10,12(6-24)-050613

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:20:00 PM

Lab ID:

13050282-006A

Matrix: Soil

15050202-00011	IVIGUIA. DOIL				
Analyses	Result	RL Q	ualifier Units	DF	Date Analyzed
Mercury	SW74	71A	Prep	Date: <b>5/13/2013</b>	Analyst: LB
Mercury	1.5	0.21	mg/Kg-dry	10	5/13/2013
Metals by ICP/MS	SW60:	20 (SW3050E	B) Prep	Date: 5/13/2013	Analyst: JG
Antimony	34 J	4.8	mg/Kg-dry	20	5/14/2013
Cadmium	12	5.9	mg/Kg-dry	100	5/13/2013
Chromium	35	12	mg/Kg-dry	100	5/13/2013
Copper	980	5.9	mg/Kg-dry	20	5/14/2013
Lead	2400	12	mg/Kg-dry	100	5/13/2013
Tin	170	12	* mg/Kg-dry	20	5/14/2013
Zinc	2200	59	mg/Kg-dry	100	5/14/2013
TCLP Metals by iCP/MS	SW13 <sup>-</sup>	11/6020 (SW3	005A) Prep	Date: <b>5/14/2013</b>	Analyst: JG
Lead	0.68	0.005	mg/L	5	5/15/2013
pH (25 °C)	SW904	15C	Prep l	Date: <b>5/14/2013</b>	Analyst: PBG
pH	7.9		pH Units	1	5/14/2013
Percent Moisture	D2974		Prep l	Date: <b>5/11/2013</b>	Analyst: RW
Percent Moisture	22.2	0.2	* wt%	1	5/11/2013

1B 5|28|13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR10,12(6-24)-050613

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:20:00 PM

Lab ID:

13050282-006B

Matrix: Soil

**Analyses** 

Result

RL Qualifier Units

Date Analyzed

Metals by ICP/MS

SW6020 (SW3050B)

9.4

mg/Kg-dry

Prep Date: 5/19/2013 100

Analyst: JG

Lead

2300

5/19/2013

·Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR07,08(0-6)-050613

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:30:00 PM

Lab ID:

13050282-007A

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW7471	A		Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.72	0.022		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW6020	(SW30	)50B)	Prep	Date: 5/13/2013	Analyst: JG
Antimony	12 丁	4.1		mg/Kg-dry	20	5/14/2013
Cadmium	71	5.1		mg/Kg-dry	100	5/13/2013
Chromium	45	10		mg/Kg-dry	100	5/13/2013
Copper	6500	250		mg/Kg-dry	1000	5/14/2013
Lead	6800	10		mg/Kg-dry	100	5/13/2013
Tín	540	10	*	mg/Kg-dry	20	5/14/2013
Zinc	46000	510		mg/Kg-dry	1000	5/14/2013
TCLP Metals by ICP/MS	SW1311	/6020 (	SW3005A)	Prep	Date: 5/14/2013	Analyst: <b>JG</b>
Lead	3.6	0.005	ŕ	mg/L	5	5/15/2013
pH (25 °C)	SW9045	С		Prep	Date: 5/14/2013	Analyst: PBG
pH	8.4			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/11/2013	Analyst: RW
Percent Moisture	8.9	0.2	*	wt%	1	5/11/2013

2B 5/28/13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

" - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR07,08(0-6)-050613

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:30:00 PM

Lab ID:

13050282-007B

Matrix: Soil

Analyses

Lead

Result

Qualifier Units

DF

Date Analyzed

Metals by ICP/MS

SW6020 (SW3050B) 7900

Prep Date: 5/19/2013 mg/Kg-dry

Analyst: JG 5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: May 23, 2013
Print Date: May 23, 2013

Client:

Weston Solutions

-13050282-008A

Client Sample ID: PA-RR07,08(6-24)-050613

Lab Order:

13050282

Tag Number:

Project:

13030262

Collection Date 5/6/2013 4:35:00 PM

Lab ID:

Pilsen Soil Site, Pilsen, Chicago, IL

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW7471	A		Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.65	0.02		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW6020	(SW30	50B)	Prep	Date: 5/13/2013	Analyst: JG
Antimony	9 ブ	4.5	,	mg/Kg-dry	20	5/14/2013
Cadmium	49	5.7		mg/Kg-dry	100	5/13/2013
Chromium	43	11		mg/Kg-dry	100	5/13/2013
Copper	3700	280		mg/Kg-dry	1000	5/14/2013
Lead	5500	11		mg/Kg-dry	100	5/13/2013
Tin	450	11	*	mg/Kg-dry	20	5/14/2013
Zinc	24000	570		mg/Kg-dry	1000	5/14/2013
TCLP Metals by ICP/MS	SW1311	/6020 (S	SW3005A)	Prep	Date: 5/14/2013	Analyst: JG
Lead	13	0.005	·	mg/L	5	5/15/2013
pH (25 °C)	SW9045	С		Prep	Date: 5/14/2013	Analyst: PBG
pH	9.1			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: <b>5/11/2013</b>	Analyst: RW
Percent Moisture	19.0	0.2	*	wt%	(3)	5/11/2013

ZX 5/28/13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

- Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR07,08(6-24)-050613

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:35:00 PM

Lab ID:

13050282-008B

Matrix: Soil

Analyses

Result

Qualifier Units

**Date Analyzed** 

Metals by ICP/MS

SW6020 (SW3050B)

Prep Date: 5/19/2013 mg/Kg-dry

Analyst: JG

Lead

9500

9.9

100

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR01,02(0-6)-050613

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:40:00 PM

Lab ID:

13050282-009A

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW747	1 <b>A</b>		Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.52	0.023		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW602	0 (SW30	)50B)	Prep	Date: 5/13/2013	Analyst: JG
Antimony	19 J	3.9		mg/Kg-dry	20	5/14/2013
Cadmium	16	4.9		mg/Kg-dry	100	5/13/2013
Chromium	64	9.8		mg/Kg-dry	100	5/13/2013
Copper	9400	240		mg/Kg-dry	1000	5/14/2013
Lead	4000	9.8		mg/Kg-dry	100	5/13/2013
Tin	1300	9.8	*	mg/Kg-dry	20	5/14/2013
Zinc	26000	490		mg/Kg-dry	1000	5/14/2013
TCLP Metals by ICP/MS	SW131	1/6020 (	SW3005A)	Prep	Date: 5/14/2013	Analyst: JG
Lead	0.87	0.005		mg/L	5	5/15/2013
pH (25 °C)	SW904	5C		Prep	Date: 5/14/2013	Analyst: PBG
pH	8.0			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/11/2013	Analyst: RW
Percent Moisture	14.3	0.2		wt%	1	5/11/2013

2B 5/28/13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR01,02(0-6)-050613

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:40:00 PM

Lab ID:

13050282-009B

Matrix: Soil

**Date Analyzed** 

Analyses

Result

RL Qualifier Units

Prep Date: 5/19/2013

Analyst: JG

Metals by ICP/MS Lead

SW6020 (SW3050B) 4100

9.7

mg/Kg-dry

100

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR01,026-24)-050613

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:45:00 PM

Lab ID:

13050282-010A

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW747	1A		Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.63	0.022		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW602	0 (SW30	)50B)	Prep	Date: 5/13/2013	Analyst: <b>JG</b>
Antimony	7.4 J	4.3	-	mg/Kg-dry	20	5/14/2013
Cadmium	6.1	1.1		mg/Kg-dry	20	5/14/2013
Chromium	34	2.1		mg/Kg-dry	20	5/14/2013
Copper	3700	270		mg/Kg-dry	1000	5/14/2013
Lead	1700	11		mg/Kg-dry	100	5/13/2013
Tin	560	11	*	mg/Kg-dry	20	5/14/2013
Zinc	17000	530		mg/Kg-dry	1000	5/14/2013
CLP Metals by ICP/MS	SW131	1/6020 (	SW3005A)	Prep	Date: 5/14/2013	Analyst: JG
Lead	0.98	0.005		mg/L	5	5/15/2013
оН (25 °C)	SW904	5C		Prep	Date: 5/14/2013	Analyst: PBG
рН	7.6			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/11/2013	Analyst: RW
Percent Moisture	15.4	0.2		wt%	4	5/11/2013

24 5/28/13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR01,026-24)-050613

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Lab ID:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:45:00 PM

Matrix: Soil

Analyses

13050282-010B

Date Analyzed

Metals by ICP/MS

Result

RL Qualifier Units

Prep Date: 5/19/2013

DF

Analyst: JG

Lead

SW6020 (SW3050B) 2200

9.8

mg/Kg-dry

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR04,06(0-6)-050613

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:55:00 PM

Lab ID:

13050282-011A

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF .	Date Analyzed
Mercury	SW7471	A		Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.61	0.02		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW6020	(SW30	50B)	Prep	Date: 5/13/2013	Analyst: JG
Antimony	18 J	4.4		mg/Kg-dry	20	5/14/2013
Cadmium	140	1.1		mg/Kg-dry	20	5/14/2013
Chromium	56	2.2		mg/Kg-dry	20	5/14/2013
Copper	11000	280		mg/Kg-dry	1000	5/14/2013
Lead	11000	56		mg/Kg-dry	1000	5/14/2013
Tin	980	11	*	mg/Kg-dry	20	5/14/2013
Zinc	78000	560		mg/Kg-dry	1000	5/14/2013
TCLP Metals by ICP/MS	SW1311	/6020 (	SW3005A)	Prep	Date: 5/14/2013	Analyst: JG
Lead	12	0.005	•	mg/L	5	5/15/2013
oH (25 °C)	SW9045	C		Prep	Date: 5/14/2013	Analyst: PBG
pН	8.1			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/11/2013	Analyst: RW
Percent Moisture	12.8	0.2		wt%	1	5/11/2013

ZH 5/28/13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 23, 2013 Print Date: May 23, 2013

Client: Weston Solutions

Lab Order:

Project:

13050282

Pilsen Soil Site, Pilsen, Chicago, IL

ab ID: 13050282-011B

Client Sample ID: PA-RR04,06(0-6)-050613

Tag Number: Fine Grained

Collection Date 5/6/2013 4:55:00 PM

Matrix: Soil

Lab ID: 13030282-011B				Matri	x: Soil					
Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed				
In Vitro Extractable Metals by ICP/MS	EPA 9	200/6020	(SW3005A)	Prep	Date: <b>5/19/201</b> 3	Analyst: JG				
Lead	180	1	*	mg/L	200	5/22/2013				
In Vitro Bioaccessibility	EPA 9	200/6020		Prep	Date: 5/22/2013	Analyst: JG				
Lead	77.2	0.01	,	%	1	5/22/2013				
Metals by ICP/MS	SW60	20 (SW3)	)50B)	Prep	Date: 5/19/2013	Analyst: JG				
Lead	23000	4.9	r	ng/Kg-dry	50	5/19/2013				

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting , Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR04,06(6-24)-050613

Lab Order: 13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 5:00:00 PM

Lab ID:

13050282-012A

Matrix: Soil

Analyses	Result	RL Qu	alifier Units	DF	Date Analyzed
Mercury	SW747	1A	Prep	Date: 5/13/2013	Analyst: LB
Mercury	1.6	0.22	mg/Kg-dry	10	5/13/2013
Metals by ICP/MS	SW602	0 (SW3050B	) Prep	Date: 5/13/2013	Analyst: JG
Antimony	ND	4.1	mg/Kg-dry	20	5/14/2013
Cadmium	16	1	mg/Kg-dry	20	5/14/2013
Chromium	27	2	mg/Kg-dry	20	5/14/2013
Copper	1800	250	mg/Kg-dry	1000	5/14/2013
Lead	1700	10	mg/Kg-dry	100	5/13/2013
Tin	240	10	* mg/Kg-dry	20	5/14/2013
Zinc	9900	510	mg/Kg-dry	1000	5/14/2013
CLP Metals by ICP/MS	SW131	1/6020 (SW3	005A) Prep	Date: 5/14/2013	Analyst: JG
Lead	0.24	0.005	mg/L	5	5/15/2013
oH (25 °C)	SW904	5C	Prep	Date: 5/14/2013	Analyst: PBG
PΗ	8.3		pH Units	1	5/14/2013
Percent Moisture	D2974		Prep	Date: 5/11/2013	Analyst: RW
Percent Moisture	13.5	0.2	* wt%	1	5/11/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR04,06(6-24)-050613

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 5:00:00 PM

Lab ID:

Analyses

13050282-012B

Matrix: Soil

Date Analyzed

Metals by ICP/MS

Result

SW6020 (SW3050B)

RL Qualifier Units

Prep Date: 5/19/2013

DF

Analyst: JG

Lead

2600

10

mg/Kg-dry

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample réceived past holding time

- Non-accredited parameter

RL - Reporting ! Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

13050282-013A

Client Sample ID: PA-RR01,02(6-24)-050613D

Lab Order:

Tag Number:

Project:

13050282

Collection Date 5/6/2013 4:50:00 PM

Lab ID:

Pilsen Soil Site, Pilsen, Chicago, IL

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW7471	Α		Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.59	0.02		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW6020	(SW305	(0B)	Prep	Date: 5/13/2013	Analyst: JG
Antimony	ND	23		mg/Kg-dry	100	5/13/2013
Cadmium	8.6	1.2		mg/Kg-dry	20	5/14/2013
Chromium	35	2.3		mg/Kg-dry	20	5/14/2013
Copper	2500	290		mg/Kg-dry	1000	5/14/2013
Lead	1500	58		mg/Kg-dry	1000	5/14/2013
Tìn	600	12	*	mg/Kg-dry	20	5/14/2013
Zinc	14000	580		mg/Kg-dry	1000	5/14/2013
TCLP Metals by ICP/MS	SW1311	/6020 (SI	N3005A)	Prep	Date: 5/14/2013	Analyst: JG
Lead	5	0.005		mg/L	5	5/15/2013
oH (25 °C)	SW9045	iC		Prep	Date: 5/14/2013	Analyst: PBG
pН	7.7			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/11/2013	Analyst: RW
Percent Moisture	15.7	0.2	*	wt%	1	5/11/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-RR01,02(6-24)-050613D

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/6/2013 4:50:00 PM

Lab ID: Analyses 13050282-013B

Matrix: Soil

RL Qualifier Units DF **Date Analyzed** 

Metals by ICP/MS

Lead

SW6020 (SW3050B)

Prep Date: 5/19/2013

Analyst: JG

2200

Result

9.9

mg/Kg-dry

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-375-01(0-6)-050713D

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 9:40:00 AM

Lab ID:

13050282-014A

Matrix: Soil

Analyses	Result	RL (	Qualifie	r Units	DF	Date Analyzed
Mercury	SW7471A	A		Prep	Date: 5/13/201	3 Analyst: LB
Mercury	1	0.25		mg/Kg-dry	10	5/13/2013
Metals by ICP/MS	SW6020	(SW305	0B)	Prep	Date: 5/13/201	3 Analyst: JG
Antimony	ND	4.9	-	mg/Kg-dry	20	5/14/2013
Cadmium	11	1.2		mg/Kg-dry	20	5/14/2013
Chromium	40	2.5		mg/Kg-dry	20	5/14/2013
Copper	680	31		mg/Kg-dry	100	5/14/2013
Lead	1800	6.2		mg/Kg-dry	100	5/14/2013
Tin	84	12	*	mg/Kg-dry	20	5/14/2013
Zinc	2900	62		mg/Kg-dry	100	5/14/2013
TCLP Metals by ICP/MS	SW1311/6	6020 (SV	V3005A)	Prep	Date: 5/14/2013	3 Analyst: JG
Lead	0.16	0.005		mg/L	5	5/15/2013
pH (25 °C)	SW90450	;		Prep	Date: 5/14/2013	B Analyst: PBG
рН	7.0			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/11/2013	Analyst: RW
Percent Moisture	26.4	0.2	*	wt%	13	5/11/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

- Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, 1L 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

**Weston Solutions** 

Client Sample ID: PA-375-01(0-6)-050713D

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 9:40:00 AM

Lab ID:

13050282-014B

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
In Vitro Extractable Metals by ICP/MS Lead	<b>EPA 9</b> 22	<b>200/6020</b> 0.1	(SW3005A)	Prep mg/L	Date: <b>5/19/201</b> 3	3 Analyst: <b>JG</b> 5/22/2013
In Vitro Bioaccessibility Lead	<b>EPA 9</b> .80.9	<b>200/6020</b> 0.01		Prep	Date: <b>5/22/201</b> :	3 Analyst: <b>JG</b> 5/22/2013
Metals by ICP/MS Lead	<b>SW60</b> 2	<b>20 (SW3</b> ) 10		Prep mg/Kg-dry	Date: <b>5/19/201</b> ;	3 Analyst: <b>JG</b> 5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Report Date:** May 23, 2013 **Print Date:** May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-375-02(0-12)-050713

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 9:45:00 AM

Lab ID:

13050282-015A

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	. Date Analyzed
Mercury	SW7471/	Ą		Prep	Date: 5/13/	/2013 Analyst: LB
Mercury	1.3	0.23		mg/Kg-dry	10	5/13/2013
Metals by ICP/MS	SW6020	(SW30	50B)	Prep	Date: 5/13/	/2013 Analyst: JG
Antimony	ND	25	-	mg/Kg-dry	100	5/13/2013
Cadmium	14	1.2		mg/Kg-dry	20	5/14/2013
Chromium	49	2.5		mg/Kg-dry	20	5/14/2013
Copper	750	31		mg/Kg-dry	100	5/14/2013
Lead	2500	6.2		mg/Kg-dry	100	5/14/2013
Tin	130	12	*	mg/Kg-dry	20	5/14/2013
Zinc	3300	62		mg/Kg-dry	100	5/14/2013
TCLP Metals by ICP/MS	SW1311/	6020 (5	SW3005A)	Prep	Date: 5/14/	2013 Analyst: JG
Lead	0.4	0.005	,	mg/L	5	5/15/2013
pH (25 °C)	SW90450	2		Prep	Date: 5/14/	2013 Analyst: PBG
На	7.3			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/11/	2013 Analyst: RW
Percent Moisture	24.8	0.2	*	wt%	1	5/11/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-375-02(0-12)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 9:45:00 AM

Lab ID:

Lead

13050282-015B

Matrix: Soil

**Analyses** 

Result

Qualifier Units

**Date Analyzed** 

Metals by ICP/MS

SW6020 (SW3050B)

9.8

mg/Kg-dry

Prep Date: 5/19/2013

Analyst: JG 5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits .

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-370-01(0-6)-050713

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 10:45:00 AM

Lab ID:

13050282-016A

Matrix: Soil

Analyses	Result	RL	Qualifie	er Units	DF	Date Analyzed
Mercury	SW747	1A		Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.43	0.021		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW602	0 (SW30	50B)	Prep	Date: 5/13/2013	Analyst: JG
Antimony	ND	4.6	-	mg/Kg-dry	20	5/14/2013
Cadmium	6.9	1.1		mg/Kg-dry	20	5/14/2013
Chromium	44	2.3		mg/Kg-dry	20	5/14/2013
Copper	150	29		mg/Kg-dry	100	5/14/2013
Lead	700	5.7		mg/Kg-dry	100	5/14/2013
Tin	28	11	*	mg/Kg-dry	20	5/14/2013
Zinc	1600	57		mg/Kg-dry	100	5/14/2013
TCLP Metals by ICP/MS	SW131	1/6020 (3	SW3005A)	Prep	Date: 5/14/2013	Analyst: JG
Lead	0.33	0.005	·	mg/L	5	5/15/2013
pH (25 °C)	SW904	5C		Prep	Date: 5/14/2013	Analyst: PBG
рН	7.7			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/13/2013	Analyst: RW
Percent Moisture	18.5	0.2		wt%	1	5/14/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-370-01(0-6)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 10:45:00 AM

Lab ID:

13050282-016B

Matrix: Soil

Analyses

Result

RL Qualifier Units

Prep Date: 5/19/2013

Date Analyzed Analyst: JG

Metals by ICP/MS Lead

SW6020 (SW3050B) 1200

9.8

mg/Kg-dry

100

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-370-01(0-6)-050713D

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 10:50:00 AM

Lab ID:

13050282-017A

Matrix: Soil

Analyses	Result	RL Qu	alifier Units	DF	Date Analyzed
Mercury	SW747	1 <b>A</b>	Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.48	0.022	mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW602	0 (SW3050B	) Prep	Date: 5/13/2013	Analyst: <b>JG</b>
Antimony	ND	4.8	mg/Kg-dry	20	5/14/2013
Cadmium	5.5	1.2	mg/Kg-dry	20	5/14/2013
Chromium	46	12	mg/Kg-dry	100	5/13/2013
Copper	150	30	mg/Kg-dry	100	5/14/2013
Lead	950	1.2	mg/Kg-dry	20	5/14/2013
Tin	25	12	* mg/Kg-dry	20	5/14/2013
Zinc	1100	60	mg/Kg-dry	100	5/14/2013
TCLP Metals by ICP/MS	SW131	1/6020 (SW3	005A) Prep	Date: 5/14/2013	Analyst: JG
Lead	0.27	0.005	mg/L	5	5/15/2013
рН (25 °C)	SW904	5C	Prep	Date: 5/14/2013	Analyst: PBG
pН	7.8		pH Units	1	5/14/2013
Percent Moisture	D2974		Prep l	Date: 5/13/2013	Analyst: RW
Percent Moisture	18.5	0.2	* wt%	1	5/14/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-370-01(0-6)-050713D

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 10:50:00 AM

Lab ID:

Matrix: Soil

**Analyses** 

13050282-017B

RL Qualifier Units

**Date Analyzed** 

Metals by ICP/MS

SW6020 (SW3050B)

Prep Date: 5/19/2013

Analyst: JG

Lead

1200

Result

9.9

mg/Kg-dry 100 5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-370-02(0-6)-050713

Tag Number:

Lab Order: Project:

13050282

Collection Date 5/7/2013 10:55:00 AM

Lab ID:

13050282-018A

Pilsen Soil Site, Pilsen, Chicago, IL

Matrix: Soil

13030202 01011						
Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW7471/	A		Prep	Date: 5/13/2013	B Analyst: LB
Mercury	0.77	0.042		mg/Kg-dry	2	5/13/2013
Metals by ICP/MS	SW6020	(SW30	)50B)	. Prep	Date: 5/13/2013	Analyst: JG
Antimony	ND	5		mg/Kg-dry	20	5/14/2013
Cadmium	6.2	1.3		mg/Kg-dry	20	5/14/2013
Chromium	68	13		mg/Kg-dry	100	5/13/2013
Copper	220	31		mg/Kg-dry	100	5/14/2013
Lead	1700	1.3		mg/Kg-dry	20	5/14/2013
Tin	38	13	*	mg/Kg-dry	20	5/14/2013
Zinc	1600	63		mg/Kg-dry	100	5/14/2013
TCLP Metals by ICP/MS	SW1311/	6020 (	SW3005A)	Prep	Date: 5/14/2013	Analyst: JG
Lead	0.4	0.005	·	mg/L	5	5/15/2013
pH (25 °C)	SW90450	3		Prep	Date: 5/14/2013	Analyst: PBG
рН	7.7			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/13/2013	Analyst: RW
Percent Moisture	22.1	0.2	*	wt%	1	5/14/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-370-02(0-6)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Lab ID:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 10:55:00 AM

Analyses

Lead

13050282-018B

Matrix: Soil

RL Qualifier Units

Metals by ICP/MS

SW6020 (SW3050B) 1000

Result

9.9

Prep Date: 5/19/2013 100

Analyst: JG

Date Analyzed

mg/Kg-dry

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-370-02(6-12)-050713

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 11:00:00 AM

Lab ID:

13050282-019A

Matrix: Soil

Analyses	Result	RL Q	ualifier Units	DF	Date Analyzed
Mercury	SW747	1A	Prep	Date: 5/13/2013	Analyst: LB
Mercury	1.7	0.25	mg/Kg-dry	10	5/13/2013
Metals by ICP/MS	SW602	0 (SW3050)	B) Prep	Date: 5/13/2013	Analyst: JG
Antimony	ND	4.5	mg/Kg-dry	20	5/14/2013
Cadmium	8.7	1.1	mg/Kg-dry	20	5/14/2013
Chromium	41	11	mg/Kg-dry	100	5/13/2013
Copper	310	28	mg/Kg-dry	100	5/14/2013
Lead	1700	1.1	mg/Kg-dry	20	5/14/2013
Tin	49	11	* mg/Kg-dry	20	5/14/2013
Zinc	2300	57	mg/Kg-dry	100	5/14/2013
TCLP Metals by ICP/MS	SW131 <sup>-</sup>	1/6020 (SW:	<b>3005A)</b> Prep	Date: 5/14/2013	Analyst: JG
Lead	0.36	0.005	mg/L	5	5/15/2013
pH (25 °C)	SW904	5C	Prep i	Date: <b>5/14/2013</b>	Analyst: PBG
pH	7.7		pH Units	1	5/14/2013
Percent Moisture	D2974		Prep	Date: 5/13/2013	Analyst: RW
Percent Moisture	24.6	0.2	wt%	OH .	5/14/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-370-02(6-12)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 11:00:00 AM

Lab ID:

13050282-019B

Matrix: Soil

Analyses

Result

Qualifier Units

Date Analyzed

Metals by ICP/MS

mg/Kg-dry

Prep Date: 5/19/2013

Analyst: JG

Lead

SW6020 (SW3050B) 2000

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-369-01(0-6)-050713

Lab Order:

13050282

Tag Number:

Project:

Collection Date 5/7/2013 12:20:00 PM

Lab ID:

Pilsen Soil Site, Pilsen, Chicago, IL

Lab ID:	13050282-020A	Matrix: Soil							
Analyses		Result	RL	Qualifie	Units	DF	Date Analyzed		
Mercury		SW747	71A		Prep	Date: 5/13/2013	Analyst: LB		
Mercury		0.73	0.026		mg/Kg-dry	1	5/13/2013		
Metals by ICF	P/MS	SW602	20 (SW30	)50B)	Prep	Date: 5/13/2013	Analyst: <b>JG</b>		
Antimony		ND	5.3	-	mg/Kg-dry	20	5/14/2013		
Cadmium		7.5	1.3		mg/Kg-dry	20	5/14/2013		
Chromium		43	13		mg/Kg-dry	100	5/13/2013		
Copper		440	33		mg/Kg-dry	100	5/14/2013		
Lead		1500	1.3		mg/Kg-dry	20	5/14/2013		
Tin		52	13	*	mg/Kg-dry	20	5/14/2013		
Zinc		1700	66		mg/Kg-dry	100	5/14/2013		
TCLP Metals	by ICP/MS	SW131	11/6020 (	SW3005A)	Prep	Date: 5/14/2013	Analyst: JG		
Lead	•	0.26	0.005	•	mg/L	5	5/15/2013		
рН (25 °C)		SW904	ISC		Prep	Date: <b>5/14/2013</b>	Analyst: PBG		
pH		6.7			pH Units	1	5/14/2013		
Percent Mois	ture	D2974			Prep	Date: <b>5/13/2013</b>	Analyst: RW		
Percent Moist	ure	27.3	0.2	*	wt%	4	5/14/2013		

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-369-01(0-6)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 12:20:00 PM

Lab ID:

Matrix: Soil

**Analyses** 

13050282-020B

**Date Analyzed** 

Metals by ICP/MS

SW6020 (SW3050B)

Prep Date: 5/19/2013

Analyst: JG

Lead

2500

Result

9.9

RL Qualifier Units

mg/Kg-dry

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-369-01(0-2)-050713

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 12:15:00 PM

Lab ID:

13050282-021A

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW747	IA		Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.23	0.024		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW602	) (SW30	150B)	Prep	Date: 5/14/2013	Analyst: JG
Antimony	ND	4.8	•	mg/Kg-dry	20	5/14/2013
Cadmium	ND	1.2		mg/Kg-dry	20	5/14/2013
Chromium	ND	24		mg/Kg-dry	200	5/14/2013
Copper	100	60		mg/Kg-dry	200	5/14/2013
Lead	480	1.2		mg/Kg-dry	20	5/14/2013
Tin	ND	12	*	mg/Kg-dry	20	5/14/2013
Zinc	560	120		mg/Kg-dry	200	5/14/2013
TCLP Metals by ICP/MS	SW1311	1/6020 (	SW3005A)	Prep	Date: 5/14/2013	Analyst: JG
Lead	0.05	0.005	-	mg/L	5	5/15/2013
pH (25 °C)	SW904!	5C		Prep	Date: 5/14/2013	Analyst: PBG
рH	6.3			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/13/2013	Analyst: RW
Percent Moisture	25.8	0.2	*	wt%	1	5/14/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-369-01(0-2)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 12:15:00 PM

Lab ID:

Matrix: Soil

**Analyses** 

13050282-021B

Qualifier Units

**Date Analyzed** 

Metals by ICP/MS

Lead

SW6020 (SW3050B)

Prep Date: 5/19/2013

Analyst: JG

890

Result

9.8

mg/Kg-dry

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-369-02(0-12)-050713

Lab Order:

13050282

Tag Number:

Project:

13030282

Collection Date 5/7/2013 12:25:00 PM

Lab ID:

13050282-022A

Pilsen Soil Site, Pilsen, Chicago, IL

Matrix: Soil

Analyses		Result	RL Qualif	fier Units	DF	Date Analyzed
Mercury		SW747	1A	Prep	Date: 5/13/2013	Analyst: LB
Mercury		1	0.052	mg/Kg-dry	2	5/13/2013
Metals by ICP/MS		SW602	0 (SW3050B)	Prep	Date: 5/14/2013	Analyst: JG
Antimony		ND	4.7	mg/Kg-dry	20	5/14/2013
Cadmium		6.9	1.2	mg/Kg-dry	20	5/14/2013
Chromium		40	24	mg/Kg-dry	200	5/14/2013
Copper	**	560	59	mg/Kg-dry	200	5/14/2013
Lead		1700	1.2	mg/Kg-dry	20	5/14/2013
Tin		87	12 *	mg/Kg-dry	.20	5/14/2013
Zinc		3000	120	mg/Kg-dry	200	5/14/2013
TCLP Metals by ICP/MS		SW131	1/6020 (SW3005/	A) Prep	Date: <b>5/14/2013</b>	Analyst: JG
Lead		0.41	0.005	mg/L	5	5/15/2013
pH (25 °C)		SW904	5C	Prep	Date: 5/14/2013	Analyst: PBG
рН		7.2		pH Units	1	5/14/2013
Percent Moisture		D2974		Prep	Date: 5/13/2013	Analyst: RW
Percent Moisture		27.4	0.2	wt%	1	5/14/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-369-02(0-12)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 12:25:00 PM

Lab ID:

Matrix: Soil

Analyses

13050282-022B

**Date Analyzed** 

Metals by ICP/MS

Lead

SW6020 (SW3050B)

9.9

Result

2100

mg/Kg-dry

RL Qualifier Units

Prep Date: 5/19/2013 100

Analyst: JG

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



**Report Date:** May 23, 2013 **Print Date:** May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-369-03,04(0-6)-050713

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 12:30:00 PM

Lab ID:

13050282-023A

Matrix: Soil

Bub ID: 10000BCB 02511		112442 241 0011							
Analyses	Result	RL	Qualifie	Units	DF	Date Analyzed			
Mercury	SW747	71A		Prep	Date: 5/13/2013	Analyst: LB			
Mercury	1.1	0.043		mg/Kg-dry	2	5/13/2013			
Metals by ICP/MS	SV!60:	20 (SW30	)50B)	Prep	Date: 5/14/2013	Analyst: JG			
Antimony	ND	4.6		mg/Kg-dry	20	5/14/2013			
Cadmium	5.8	1.1		mg/Kg-dry	20	5/14/2013			
Chromium	24	23		mg/Kg-dry	200	5/14/2013			
Соррег	410	57		mg/Kg-dry	200	5/14/2013			
Lead	2300	1.1		mg/Kg-dry	20	5/14/2013			
Tin	49	11	*	mg/Kg-dry	20	5/14/2013			
Zinc	2700	110		mg/Kg-dry	200	5/14/2013			
TCLP Metals by ICP/MS	SW131	1/6020 (	SW3005A)	Prep	Date: 5/14/2013	Analyst: JG			
Lead	1.2	0.005		mg/L	5	5/15/2013			
pH (25 °C)	SW904	I5C		Prep	Date: 5/14/2013	Analyst: PBG			
pH	7.5			pH Units	1	5/14/2013			
Percent Moisture	D2974			Prep	Date: 5/13/2013	Analyst: RW			
Percent Moisture	13.5	0.2		wt%	1	5/14/2013			

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-369-03,04(0-6)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Lab ID:

Lead

13050282-023B

Collection Date 5/7/2013 12:30:00 PM

Matrix: Soil

**Analyses** 

Reșult 🕆

RL Qualifier Units

DF

**Date Analyzed** Analyst: JG

Metals by ICP/MS

SW6020 (SW3050B) 3500

9.9

mg/Kg-dry

Prep Date: 5/19/2013

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



**Report Date:** May 23, 2013 **Print Date:** May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-371-01(0-6)-050713

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 2:15:00 PM

Lab ID:

13050282-024A

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW7471	A		Prep	Date: 5/13/2013	Analyst: LB
Mercury	2	0.25		mg/Kg-dry	10	5/13/2013
Metals by ICP/MS	SW6020	(SW3	)50B)	Prep	Date: 5/14/2013	Analyst: JG
Antimony	ND	5.1	-	mg/Kg-dry	20	5/14/2013
. Cadmium	7.7	1.3		mg/Kg-dry	20	5/14/2013
Chromium	40	26		mg/Kg-dry	200	5/14/2013
Copper	450	64		mg/Kg-dry	200	5/14/2013
Lead	1800	1.3		mg/Kg-dry	20	5/14/2013
Tin	49	13	*	mg/Kg-dry	20	5/14/2013
Zinc	2800	130		mg/Kg-dry	200	5/14/2013
TCLP Metals by ICP/MS	SW1311	6020 (	SW3005A)	Prep	Date: 5/14/2013	Analyst: JG
Lead	0.24	0.005		mg/L	5	5/15/2013
pH (25 °C)	SW9045	С		Prep	Analyst: PBG	
рН	6.4			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/13/2013	Analyst: RW
Percent Moisture	27.1	0.2	*	wt%	-1	5/14/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-371-01(0-6)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 2:15:00 PM

Lab ID:

Analyses

13050282-024B

Matrix: Soil

**Date Analyzed** 

SW6020 (SW3050B)

RL Qualifier Units

Prep Date: 5/19/2013

DF

Analyst: JG

Metals by ICP/MS Lead

2200

Result

9.6

mg/Kg-dry

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-371-02(0-6)-050713

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 2:20:00 PM

Lab ID:

13050282-025A

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW7471	IA		Prep	Date: 5/13/201	I3 Analyst: LB
Mercury	0.31	0.024		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW602	) (SW30	)50B)	Prep	Date: 5/14/201	3 Analyst: JG
Antimony	ND	5.3	-	mg/Kg-dry	20	5/14/2013
Cadmium	ND	1.3		mg/Kg-dry	20	5/14/2013
Chromium	14	2.7		mg/Kg-dry	20	5/14/2013
Copper	54	6.6		mg/Kg-dry	20	5/14/2013
Lead	320	13		mg/Kg-dry-	200	5/14/2013
Tin	ND	13	*	mg/Kg-dry	20	5/14/2013
Zinc	360	13		mg/Kg-dry	20	5/14/2013
TCLP Metals by ICP/MS	SW1311	/6020 (\$	SW3005A)	Prep	Date: 5/15/201	3 Analyst: JG
Lead	0.024	0.005		mg/L	5	5/15/2013
pH (25 °C)	SW9045	SC .		Prep	Date: 5/14/201	3 Analyst: PBG
рН	7.3			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/13/201	3 Analyst: RW
Percent Moisture	28.5	0.2		wt%	4.	5/14/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LubCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-371-02(0-6)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 2:20:00 PM

Lab ID:

13050282-025B

Matrix: Soil

Analyses

Result

**Date Analyzed** 

Metals by ICP/MS Lead

SW6020 (SW3050B) 450

10

RL Qualifier Units

mg/Kg-dry

Prep Date: 5/19/2013 100

Analyst: JG 5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



> Report Date: May 23, 2013 Print Date: May 23, 2013

Client: Lab Order: Weston Solutions

Client Sample ID: PA-371-02(0-6)-050713D

13050282

Tag Number:

Project:

Collection Date 5/7/2013 2:25:00 PM

Lab ID:

13050282-026A

Pilsen Soil Site, Pilsen, Chicago, IL

Matrix: Soil

13030202 02011	02 02011 1744F1AF 0011					
Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW74	71A		Prep	Date: 5/13/2013	3 Analyst: LB
Mercury	0.18	0.025		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW60	20 (SW30	)50B)	Prep	Date: 5/14/2013	3 Analyst: JG
Antimony	ND	5.3		mg/Kg-dry	20	5/14/2013
Cadmium	ND	1.3		mg/Kg-dry	20	5/14/2013
Chromium	14	2.6		mg/Kg-dry	20	5/14/2013
Copper	51	6.6		mg/Kg-dry	20	5/14/2013
Lead	410	13		mg/Kg-dry	200	5/14/2013
Tin	ND	13	*	mg/Kg-dry	20	5/14/2013
Zinc	330	13		mg/Kg-dry	20	5/14/2013
TCLP Metals by ICP/MS	SW13	11/6020 (	SW3005A)	Prep	Date: 5/15/2013	Analyst: JG
Lead	0.033	0.005		mg/L	5	5/15/2013
pH (25 °C)	SW904	45C		Prep	Date: 5/14/2013	Analyst: PBG
pH	7.4			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/13/2013	Analyst: RW
Percent Moisture	27.8	0.2	*	wt%	1	5/14/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-371-02(0-6)-050713D

Lab Order:

13050282

Tag Number: Fine Grained

Project: Lab ID:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 2:25:00 PM

13050282-026B

Matrix: Soil

Analyses

Result

RL Qualifier Units

DF

**Date Analyzed** 

Metals by ICP/MS Lead

SW6020 (SW3050B) 460

10

mg/Kg-dry

Prep Date: 5/19/2013 100

Analyst: JG 5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

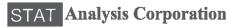
\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-349-01(0-6)-050713

Lab Order:

13050282

Tag Number:

Project:

Collection Date 5/7/2013 3:20:00 PM

Lab ID:

13050282-027A

Pilsen Soil Site, Pilsen, Chicago, IL

Matrix: Soil

Analyses	Result	RL Qualif	ier Units	DF	Date Analyzed
Mercury	SW747	1A	Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.46	0.021	mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW602	0 (SW3050B)	Prep	Date: <b>5/14/2013</b>	Analyst: <b>JG</b>
Antimony	ND	5	mg/Kg-dry	20	5/14/2013
Cadmium	5.4	1.3	mg/Kg-dry	20	5/14/2013
Chromium	29	2.5	mg/Kg-dry	20	5/14/2013
Copper	250	6.3	mg/Kg-dry	20	5/14/2013
Lead	890	13	mg/Kg-dry	200	5/14/2013
Tin	28	13 *	mg/Kg-dry	20	5/14/2013
Zinc	1800	13	mg/Kg-dry	20	5/14/2013
TCLP Metals by ICP/MS	SW131 <sup>-</sup>	1/6020 (SW3005A	A) Prep l	Date: <b>5/15/2013</b>	Analyst: <b>JG</b>
Lead	0.13	0.005	mg/L	5	5/15/2013
рН (25 °C)	SW904	5C	Prep I	Date: <b>5/14/2013</b>	Analyst: PBG
На	7.0		pH Units	1	5/14/2013
Percent Moisture	D2974		Prep I	Date: <b>5/13/2013</b>	Analyst: RW
Percent Moisture	25.3	0.2 *	wt%	1	5/14/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-349-01(0-6)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 3:20:00 PM

Lab ID:

13050282-027B

Matrix: Soil

Analyses

Result

RL Qualifier Units

**Date Analyzed** 

Metals by ICP/MS

Lead

SW6020 (SW3050B) 1400 9.6

Prep Date: 5/19/2013 mg/Kg-dry

Analyst: JG

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-349-02(0-12)-050713

Lab Order:

Tag Number:

13050282

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 3:25:00 PM

Lab ID:

13050282-028A

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW747	'1A		Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.25	0.025		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW602	0 (SW30	50B)	Prep	Date: 5/14/2013	Analyst: JG
Antimony	ND	5.2		mg/Kg-dry	20	5/14/2013
Cadmium	2	1.3		mg/Kg-dry	20	5/14/2013
Chromium	21	2.6		mg/Kg-dry	20	5/14/2013
Copper	100	6.5		mg/Kg-dry	20	5/14/2013
Lead	630	1.3		mg/Kg-dry	20	5/14/2013
Tin	17	13	*	mg/Kg-dry	20	5/14/2013
Zinc	650	13		mg/Kg-dry	20	5/14/2013
CLP Metals by ICP/MS	SW131	1/6020 (5	SW3005A)	Prep	Date: 5/15/2013	Analyst: JG
Lead	0.18	0.005		mg/L	5	5/15/2013
оН (25 °C)	SW904	5C		Prep	Date: 5/14/2013	Analyst: PBG
рН	8.0			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/13/2013	Analyst: RW
Percent Moisture	23.7	0.2	*	wt%	1	5/14/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-349-02(0-12)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 3:25:00 PM

Lab ID:

13050282-028B

Matrix: Soil

Analyses

Result

RL Qualifier Units

**Date Analyzed** 

Metals by ICP/MS

Lead

SW6020 (SW3050B)

4.9

Prep Date: 5/19/2013

Analyst: JG

610

mg/Kg-dry

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

- Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-349-03(0-6)-050713

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 4:30:00 PM

Lab ID: 13050282-029A Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW747	1A		Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.49	0.022		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW602	0 (SW30	50B)	Prep	Date: 5/14/2013	Analyst: JG
Antimony	ND	4.2	·	mg/Kg-dry	20	5/14/2013
Cadmium	2.5	1.1		mg/Kg-dry	20	5/14/2013
Chromium	27	2.1		mg/Kg-dry	20	5/14/2013
Copper	99	5.3		mg/Kg-dry	20	5/14/2013
Lead	1400	11		mg/Kg-dry	200	5/14/2013
Tin	19	11	*	mg/Kg-dry	20	5/14/2013
Zinc	930	11		mg/Kg-dry	20	5/14/2013
TCLP Metals by ICP/MS	SW131 <sup>-</sup>	1/6020 (S	W3005A)	A) Prep Date: 5/15/2013 Analyst:		
Lead	0.55	0.005	·	mg/L	5	5/15/2013
pH (25 °C)	SW904	5C		Prep	Date: 5/14/2013	Analyst: PBG
рH	7.7			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/13/2013	Analyst: RW
Percent Moisture	12.6	0.2	*	wt%	1	5/14/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-349-03(0-6)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 4:30:00 PM

Lab ID:

13050282-029B

Matrix: Soil

Analyses

Result

RL Qualifier Units

Prep Date: 5/19/2013

**Date Analyzed** Analyst: JG

Metals by ICP/MS Lead

SW6020 (SW3050B) 1500

4.9

mg/Kg-dry

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-351-01(0-6)-050713

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 3:45:00 PM

Lab ID: 13050282-030A

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	· SW7471	A		Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.28	0.023		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW6020	(SW30	50B)	Prep	Date: 5/14/2013	Analyst: JG
Antimony	ND UT	4.3		mg/Kg-dry	20	5/14/2013
Cadmium	ND	1.1		mg/Kg-dry	20	5/14/2013
Chromium	14	2.2		mg/Kg-dry	20	5/15/2013
Copper	58 J	54		mg/Kg-dry	200	5/14/2013
Lead	390	1.1		mg/Kg-dry	20	5/14/2013
Tín	ND	11	*	mg/Kg-dry	20	5/14/2013
Zinc	490	110		mg/Kg-dry	200	5/14/2013
TCLP Metals by ICP/MS	SW1311	/6020 (5	W3005A)	Prep	Date: 5/15/2013	Analyst: JG
Lead	0.75	0.005	•	mg/L	5	5/15/2013
pH (25 °C)	SW9045	C		Prep	Date: 5/14/2013	Analyst: PBG
pH	7.8			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/13/2013	Analyst: RW
Percent Moisture	13.5	0.2	*	wt%	1	5/14/2013

24 5/28/13

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-351-01(0-6)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 3:45:00 PM

Lab ID:

13050282-030B

Matrix: Soil

Analyses

Result

Qualifier Units

Prep Date: 5/19/2013

**Date Analyzed** 

Metals by ICP/MS

Lead

SW6020 (SW3050B) 580

9.9

mg/Kg-dry

Analyst: JG 5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

· - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-141-01(0-6)-050713

Lab Order:

13050282

Tag Number:

Project:

Collection Date 5/7/2013 5:40:00 PM

Lab ID:

13050282-031A

Pilsen Soil Site, Pilsen, Chicago, IL

Matrix: Soil

15050202 05111	17466124 0011					
Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW747	1A		Prep	Date: 5/13/2013	Analyst: LB
Mercury	0.64	0.024		mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW602	0 (SW30	50B)	Prep	Date: 5/14/2013	Analyst: JG
Antimony	ND	4.7		mg/Kg-dry	20	5/14/2013
Cadmium	3.3	1.2		mg/Kg-dry	20	5/14/2013
Chromium	33	2.4		mg/Kg-dry	20	5/14/2013
Copper	200	5.9		mg/Kg-dry	20	5/14/2013
Lead	860	12		mg/Kg-dry	200	5/14/2013
Tin	39	12	*	mg/Kg-dry	20	5/14/2013
Zinc	700	12		mg/Kg-dry	20	5/14/2013
TCLP Metals by ICP/MS	SW131	1/6020 (S	SW3005A)	Prep	Date: 5/15/2013	Analyst: JG
Lead	0.22	0.005		mg/L	5	5/15/2013
pH (25 °C)	SW904	5C		Prep	Date: 5/14/2013	Analyst: PBG
pН	8.1			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/13/2013	Analyst: RW
Percent Moisture	17.1	0.2		wt%	1	5/14/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

- Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Report Date:** May 23, 2013 **Print Date:** May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-141-01(0-6)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 5:40:00 PM

Lab ID:

13050282-031B

Matrix: Soil

Analyses

Lead

Result

RL Qualifier Units

Date Analyzed

Metals by ICP/MS

/MS

SW6020 (SW3050B)

mg/Kg-dry

Prep Date: 5/19/2013

Analyst: JG

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

13050282-032A

Client Sample ID: PA-141-02(0-6)-050713

Lab Order:

13050282

Tag Number:

Collection Date 5/7/2013 5:45:00 PM

Project: Lab ID:

Pilsen Soil Site, Pilsen, Chicago, IL

Matrix: Soil

Analyses	Result	RL	Qualifie	r Units	DF	Date Analyzed
Mercury	SW7471	Α		Prep	Date: 5/13/201	3 Analyst: LB
Mercury	0.95	0.038		mg/Kg-dry	2	5/13/2013
Metals by ICP/MS	SW6020	(SW30	150B)	Prep	Date: <b>5/14/201</b>	3 Analyst: JG
Antimony	ND	4.6	•	mg/Kg-dry	20	5/14/2013
Cadmium	3.5	1.1		mg/Kg-dry	20	5/14/2013
Chromium	40	2.3		mg/Kg-dry	20	5/14/2013
Copper	190	5.7		mg/Kg-dry	20	5/14/2013
Lead	1600	11		mg/Kg-dry	200	5/14/2013
Tin	26	11		mg/Kg-dry	20	5/14/2013
Zinç	970	11		mg/Kg-dry	20	5/14/2013
TCLP Metals by ICP/MS	SW1311	/6020 (	SW3005A)	Prep	Date: 5/15/2013	3 Analyst: JG
Lead	0.25	0.005	•	mg/L	5	5/15/2013
pH (25 °C)	SW9045	C		Prep	Date: 5/14/2013	3 Analyst: PBG
рН	7.7			pH Units	1	5/14/2013
Percent Moisture	D2974			Prep	Date: 5/13/2013	B Analyst: RW
Percent Moisture	16.6	0.2		wt%	31	5/14/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-141-02(0-6)-050713

Lab Order:

13050282

Tag Number: Fine Grained

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Lab ID:

13050282-032B

Collection Date 5/7/2013 5:45:00 PM

Matrix: Soil

Analyses

Result

RL Qualifier Units

Prep Date: 5/19/2013

**Date Analyzed** Analyst: JG

Metals by ICP/MS

1200

4.8

Lead

SW6020 (SW3050B)

mg/Kg-dry

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-141-03(0-6)-050713

Lab Order:

13050282

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Collection Date 5/7/2013 5:50:00 PM

Lab ID:

13050282-033A

Matrix: Soil

Analyses	Result	RL Qu	alifier Units	DF	Date Analyzed
Mercury	SW74	71A	Prep	Date: <b>5/13/2013</b>	Analyst: LB
Mercury	0.56	0.021	mg/Kg-dry	1	5/13/2013
Metals by ICP/MS	SW60	20 (SW3050B	) Prep	Date: 5/14/2013	Analyst: JG
Antimony	ND	4.6	mg/Kg-dry	20	5/14/2013
Cadmium	5.9	1.1	mg/Kg-dry	20	5/14/2013
Chromium	110	2.3	mg/Kg-dry	20	5/14/2013
Copper	220	5.7	mg/Kg-dry	20	5/14/2013
Lead	3300	11	mg/Kg-dry	200	5/14/2013
Tin	43	11	* mg/Kg-dry	20	5/14/2013
Zinc	1500	11	mg/Kg-dry	20	5/14/2013
TCLP Metals by ICP/MS	SW13 <sup>-</sup>	11/6020 (SW3	005A) Prep l	Date: <b>5/15/2013</b>	Analyst: <b>JG</b>
Lead	0.56	0.005	mg/L	5	5/15/2013
pH (25 °C)	SW904	45C	Prep I	Date: <b>5/14/2013</b>	Analyst: PBG
рH	8.0		pH Units	1	5/14/2013
Percent Moisture	D2974		Asia.	Date: <b>5/13/2013</b>	Analyst: RW
Percent Moisture	19.6	0.2	wt%	1	5/14/2013

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766 Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

> Report Date: May 23, 2013 Print Date: May 23, 2013

Client:

Weston Solutions

Client Sample ID: PA-141-03(0-6)-050713

Lab Order:

13050282

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Tag Number: Fine Grained

Lab ID:

13050282-033B

Collection Date 5/7/2013 5:50:00 PM Matrix: Soil

Analyses

Result

1400

Qualifier Units

**Date Analyzed** 

Metals by ICP/MS

Lead

SW6020 (SW3050B)

4.9

mg/Kg-dry

Prep Date: 5/19/2013

Analyst: JG

5/19/2013

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

## PILSEN AREA SOIL SITE CHICAGO, ILLINOIS DATA VALIDATION REPORT

**Date:** July 31, 2013

Laboratory: STAT Analysis Corporation (STAT), Chicago, Illinois

**Laboratory Project #:** 13070526

Data Validation Performed By: Lisa Graczyk, Weston Solutions, Inc. (WESTON®) Superfund

Technical Assessment and Response Team (START)

**Analytical TDD and Work Order** #: S05-0001-1211-003/20405.016.001.2038.00

This data validation report has been prepared by WESTON START under the START III Region V contract. This report documents the data validation for 5 solid samples collected for the Pilsen Area Soil Site. The samples are source samples from a baghouse and have been held under custody by NEIC/USGS/EPA since collection in Colorado. The chain-of-custody for the samples state that the samples are less than 75 microns in particle size. The samples were analyzed for the following parameters and U.S. Environmental Protection Agency methods:

- Total Metals by SW-846 Methods 6020 and 7471A
- Moisture Content by ASTM D2974

A level II data package was requested from STAT. The data validation was conducted in general accordance with the EPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2010. The Attachment contains the results summary sheets with the hand-written qualifiers applied during data validation.

#### TOTAL METALS BY EPA SW-846 METHODS 6020 AND 7471A

#### 1. Samples

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

			Date	
Samples	Lab ID	Matrix	Collected	Date Analyzed
BH-1 N105006-05 Split B	13070526-001	Solid	Unknown	7/17/2013
BH-2 N105006-06 Split B	13070526-002	Solid	Unknown	7/17/2013
BH-4 N105006-08 Split B	13070526-003	Solid	Unknown	7/17/2013
BH-4 N105006-09 Split B	13070526-004	Solid	Unknown	7/17/2013
BH-5 N105006-07 Split B	13070526-005	Solid	Unknown	7/17/2013

### 2. <u>Holding Times</u>

The collection dates of the samples are unknown. However, the holding times for metals are 28 days for mercury and 180 days from sample collection to analysis for all other metals. Due to the long holding times for these analyses, it is assumed that they were likely not exceeded and no qualifications are necessary.

### 3. Blank Results

Method blanks were analyzed with the metals analyses. The blanks contained no metals contamination above the reporting limits. There were detections of lead, tin, and mercury below the reporting limits in the blanks. However, the sample results were much greater or contained no detections of these metals. No qualifications were required.

### 4. Laboratory Control Sample (LCS) Results

The LCS recoveries were within the quality control (QC) limits.

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

STAT did not analyze a site-specific MS/MSD. Therefore matrix interferences could not be evaluated. No qualifications were applied.

### 6. Overall Assessment

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

Laboratory Project #: 13070526

### **GENERAL CHEMISTRY PARAMETERS (Moisture Content by ASTM D2974)**

### 1. Samples

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

			Date	
Samples	Lab ID	Matrix	Collected	Date Analyzed
BH-1 N105006-05 Split B	13070526-001	Solid	Unknown	7/15/2013
BH-2 N105006-06 Split B	13070526-002	Solid	Unknown	7/15/2013
BH-4 N105006-08 Split B	13070526-003	Solid	Unknown	7/15/2013
BH-4 N105006-09 Split B	13070526-004	Solid	Unknown	7/15/2013
BH-5 N105006-07 Split B	13070526-005	Solid	Unknown	7/15/2013

## 2. <u>Holding Times</u>

The holding time for moisture is 28 days. The collection dates of the samples are unknown. Due to the long holding time for this analysis, it is assumed that they were likely not exceeded and no qualifications are necessary.

### 3. Blank Results

The method blank was non-detect for moisture which is acceptable.

### 4. LCS Results

The LCS recoveries were within the QC limits.

### 5. <u>Laboratory Duplicates</u>

The RPD was within QC limits for the laboratory duplicate.

## 6. Overall Assessment

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

Data Validation Report Pilsen Area Soil Site STAT Analysis Corporation Laboratory Project #: 13070526

### **ATTACHMENT**

# STAT ANALYSIS CORPORATION RESULTS SUMMARY WITH QUALIFIERS

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

July 24, 2013

Weston Solutions 750 E. Bunker Court Suite 500 Vernon Hills, IL 60061 Telephone: (847) 918-4094 Fax: (847) 918-4055

RE: VP1049, Pilsen Superfund

STAT Project No 13070526

Dear Tonya Balla:

STAT Analysis received 5 samples for the referenced project on 7/10/2013 9:37:00 AM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

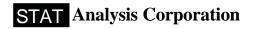
All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Thomas M. Bauer General Manager

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.



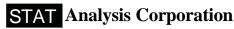
**Date:** July 24, 2013

**Client:** Weston Solutions

Project: VP1049, Pilsen Superfund Work Order Sample Summary

**Lab Order:** 13070526

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
13070526-001A	BH-1 N105006-05 Split B			7/10/2013
13070526-002A	BH-2 N105006-06 Split B			7/10/2013
13070526-003A	BH-3 N105006-08 Split B			7/10/2013
13070526-004A	BH-4 N105006-09 Split B			7/10/2013
13070526-005A	BH-5 N105006-07 Split B			7/10/2013



Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Report Date:** July 24, 2013 **Print Date:** July 24, 2013

Client: Weston Solutions Client Sample ID: BH-1 N105006-05 Split B

Lab Order:13070526Tag Number:Project:VP1049, Pilsen SuperfundCollection DateLab ID:13070526-001AMatrix: Soil

Analyses	Result	RL (	Qualifi	er Units	DF	Date Analyzed
Mercury	SW74	71A		Prep	Date: 7/17/2013	Analyst: <b>LB</b>
Mercury	2.6	0.16		mg/Kg-dry	10	7/17/2013
Metals by ICP/MS	SW60	20 (SW3050	)B)	Prep	Date: 7/16/2013	Analyst: <b>JG</b>
Antimony	75	36		mg/Kg-dry	100	7/17/2013
Cadmium	1500	8.9		mg/Kg-dry	100	7/17/2013
Chromium	44	18		mg/Kg-dry	100	7/17/2013
Copper	12000	45		mg/Kg-dry	100	7/17/2013
Lead	51000	890		mg/Kg-dry	10000	7/17/2013
Tin	5800	89	*	mg/Kg-dry	100	7/17/2013
Zinc	600000	8900		mg/Kg-dry	10000	7/17/2013
Percent Moisture	D2974	1		Prep	Date: 7/15/2013	Analyst: SDA
Percent Moisture	0.3	0.2	*	wt%	1	7/15/2013

ND - Not Detected at the Reporting Limit

Qualifiers: J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

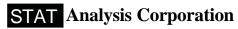
\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Report Date:** July 24, 2013 **Print Date:** July 24, 2013

Client: Weston Solutions Client Sample ID: BH-2 N105006-06 Split B

Lab Order:13070526Tag Number:Project:VP1049, Pilsen SuperfundCollection DateLab ID:13070526-002AMatrix: Soil

Analyses	Result	RL Q	ualifi	er Units	DF	Date Analyzed
Mercury	SW74	71A		Prep	Date: 7/17/2013	Analyst: <b>LB</b>
Mercury	0.52	0.018		mg/Kg-dry	1	7/17/2013
Metals by ICP/MS	SW60	20 (SW3050	В)	Prep	Date: 7/16/2013	Analyst: <b>JG</b>
Antimony	68	39		mg/Kg-dry	100	7/17/2013
Cadmium	1100	9.7		mg/Kg-dry	100	7/17/2013
Chromium	90	19		mg/Kg-dry	100	7/17/2013
Copper	12000	48		mg/Kg-dry	100	7/17/2013
Lead	42000	970		mg/Kg-dry	10000	7/17/2013
Tin	11000	97	*	mg/Kg-dry	100	7/17/2013
Zinc	550000	9700		mg/Kg-dry	10000	7/17/2013
Percent Moisture	D297	4		Prep	Date: <b>7/15/2013</b>	Analyst: SDA
Percent Moisture	0.3	0.2	*	wt%	1	7/15/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

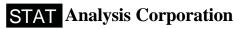
Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Report Date:** July 24, 2013 **Print Date:** July 24, 2013

Client: Weston Solutions Client Sample ID: BH-3 N105006-08 Split B

Lab Order:13070526Tag Number:Project:VP1049, Pilsen SuperfundCollection DateLab ID:13070526-003AMatrix: Soil

Analyses	Result	RL Ç	<b>Qualifi</b>	er Units	DF	Date Analyzed
Mercury	SW747	71A		Prep	Date: 7/17/2013	Analyst: <b>LB</b>
Mercury	3.2	0.21		mg/Kg-dry	10	7/17/2013
Metals by ICP/MS	SW60	20 (SW3050	)B)	Prep	Date: 7/16/2013	Analyst: <b>JG</b>
Antimony	180	40		mg/Kg-dry	100	7/17/2013
Cadmium	510	9.9		mg/Kg-dry	100	7/17/2013
Chromium	92	20		mg/Kg-dry	100	7/17/2013
Copper	62000	5000		mg/Kg-dry	10000	7/17/2013
Lead	12000	990		mg/Kg-dry	10000	7/17/2013
Tin	5800	99	*	mg/Kg-dry	100	7/17/2013
Zinc	400000	9900		mg/Kg-dry	10000	7/17/2013
Percent Moisture	D2974	ļ		Prep	Date: 7/15/2013	Analyst: SDA
Percent Moisture	0.9	0.2	*	wt%	1	7/15/2013

ND - Not Detected at the Reporting Limit

Qualifiers: J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

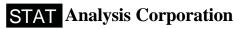
\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range



Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Report Date:** July 24, 2013 **Print Date:** July 24, 2013

Client: Weston Solutions Client Sample ID: BH-4 N105006-09 Split B

Lab Order:13070526Tag Number:Project:VP1049, Pilsen SuperfundCollection DateLab ID:13070526-004AMatrix: Soil

Analyses	Result	RL	Qualifi	er Units	DF	Date Analyzed
Mercury	SW74	71A		Prep	Date: 7/17/2013	3 Analyst: LB
Mercury	1.8	0.18		mg/Kg-dry	10	7/17/2013
Metals by ICP/MS	SW60	20 (SW305	60B)	Prep	Date: 7/16/2013	3 Analyst: <b>JG</b>
Antimony	140	39		mg/Kg-dry	100	7/17/2013
Cadmium	500	9.7		mg/Kg-dry	100	7/17/2013
Chromium	71	19		mg/Kg-dry	100	7/17/2013
Copper	61000	4800		mg/Kg-dry	10000	7/17/2013
Lead	13000	970		mg/Kg-dry	10000	7/17/2013
Tin	5100	97	*	mg/Kg-dry	100	7/17/2013
Zinc	480000	9700		mg/Kg-dry	10000	7/17/2013
Percent Moisture	D2974	ļ		Prep	Date: 7/15/2013	3 Analyst: SDA
Percent Moisture	0.9	0.2	*	wt%	1	7/15/2013

ND - Not Detected at the Reporting Limit

Qualifiers: J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202

**Report Date:** July 24, 2013 **Print Date:** July 24, 2013

Client: Weston Solutions Client Sample ID: BH-5 N105006-07 Split B

Lab Order:13070526Tag Number:Project:VP1049, Pilsen SuperfundCollection DateLab ID:13070526-005AMatrix: Soil

Analyses	Result	RL (	Qualifi	er Units	DF	Date Analyzed
Mercury	SW747	71A		Prep	Date: 7/17/2013	Analyst: <b>LB</b>
Mercury	5.2	0.17		mg/Kg-dry	10	7/17/2013
Metals by ICP/MS	SW602	20 (SW3050	0B)	Prep	Date: 7/16/2013	Analyst: <b>JG</b>
Antimony	49	35		mg/Kg-dry	100	7/17/2013
Cadmium	700	8.8		mg/Kg-dry	100	7/17/2013
Chromium	ND	18		mg/Kg-dry	100	7/17/2013
Copper	ND	4400		mg/Kg-dry	10000	7/17/2013
Lead	34000	880		mg/Kg-dry	10000	7/17/2013
Tin	6300	88	*	mg/Kg-dry	100	7/17/2013
Zinc	650000	8800		mg/Kg-dry	10000	7/17/2013
Percent Moisture	D2974	ļ		Prep	Date: 7/15/2013	Analyst: SDA
Percent Moisture	0.3	0.2	*	wt%	1	7/15/2013

ND - Not Detected at the Reporting Limit

Qualifiers: J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

NATIONAL ENFORCEMENT INVESTIGATIONS CENTER REMARKS Building 53, Box 25227, Denver Federal Center Received by: (Signature) Received by: (Signature) WOLLE TAG VERIFICATION 80225 Denver, Colorado Size fraction TAG NUMBERS Date / Time Date / Time 475KM > > > Remarks Relinquished by: (Signature) Relinquished by: (Signature) 1/10/13 93 3070526 CHAIN OF CUSTODY RECORD Date / Time TAINERS CON. NO. 50 Received for Laboratory by: Received by: (Signature) Received by: (Signature) Semples split by T. Hosick 4/27/2013 NOSOD6-05 SPLITE NIOS006-06 Split 3 Niosoob-ofsplit B NIOSO06 -- 09 Split B N105006-08 Split B STATION LOCATION (Signature) Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files Pilsen Superflurde Date / Time Date / Time Date / Time ENVIRONMENTAL PROTECTION AGENCY Office of Enforcement and Compilance Monitoring 6/27/2013 SARD PROJECT NAME Threat of Horich COMP Relinquished by: (Signature) Relinquished by: (Signature) Relinquished by: (Signature) TIME SAMPLERS: (Signature) DATE PROJ. NO. 3. STA. NO. 7- 玉 P- 45 500 かっち 一玉 B#-4 500 ह 8

8 of 16

M 13703

\* U. S. GOVERNMENT PRINTING DFFICE: 1986-773-427

## Sample Receipt Checklist

Client Name EPA			Date and Tir	me Received:	7/10/2013 9:37:00 AM
Work Order Number 13070526			Received by	: TJW	
Checklist completed by: Signature	Date	11/13	Reviewed by	AMB.	7/11/13
Matrix:	Carrier name	FedEx			
Shipping container/cooler in good condition?		Yes 🗸	No 🗌	Not Present	
Custody seals intact on shippping container/cooler?		Yes 🗌	No 🗆	Not Present	
Custody seals intact on sample bottles?		Yes 🗌	No 🗆	Not Present	Ď.
Chain of custody present?		Yes 🗸	No 🗆		
Chain of custody signed when relinquished and receive	ed?	Yes 🔽	No 🗌		
Chain of custody agrees with sample labels/containers	?	Yes 🗸	No 🗌		
Samples in proper container/bottle?		Yes 🗸	No 🗆		
Sample containers intact?		Yes 🔽	No 🗆		
Sufficient sample volume for indicated test?		Yes 🔽	No 🗌		
All samples received within holding time?		Yes 🗹	No 🗌		
Container or Temp Blank temperature in compliance?		Yes 🗹	No 🗆	Temperatu	re Ambient °C
Water - VOA vials have zero headspace? No \	/OA vials submi	itted 🔲	Yes 🗌	No 🗆	
Water - Samples pH checked?		Yes 🗌	No 🗆	Checked by:	
Water - Samples properly preserved?		Yes 🗌	No 🗆	pH Adjusted?	
Any No response must be detailed in the comments see	ction below.				
			ISSES:	-755	- 777
Comments:					
Client / Person Date contacted:	ontacted:		Conta	icted by:	
Response:					

# PREP BATCH REPORT

Prep Factor Units:

# STAT Analysis Corporation

7/16/2013 9:50:24 A 7/16/2013 1:05:00 P Prep Start Date:

Prep End Date:

7/16/2013 PrepEnd **PrepStart** 7/16/2013 50.000 45.746 47.710 47.755 50.000 46.512 46.685 45.126 42.194 48.828 47.847 48.123 47.985 44.843 47.259 41.876 88.968 96.339 98.619 95.969 87.566 45.005 49.407 47.037 factor mL/g 20 20 20 20 20 Fin Vol 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 Sol Recov 0 Sol Added 0 Technician: VA 1.012 1.048 1.045 1.115 0.519 1.075 1.108 1.185 1.093 1.063 1.039 1.042 1.058 1.024 1.047 1.194 0.562 SampAmt 1.071 0.507 0.521 0.571 1.111 Prep Code: M\_S\_PREP 된 Matrix Soil Prep Batch 70581 13070622-031AMSD 13070622-031AMS 13070622-030A 13070622-031A 13070526-001A 13070622-021A 13070622-024A 13070622-025A 13070622-026A 13070622-027A 13070622-029A 13070622-032A 13070622-034A 13070526-002A 13070526-005A 13070622-023A 13070622-028A 13070622-033A 13070622-035A 13070526-003A 13070526-004A 13070622-022A ILCSS2 7/16/13 IMBS2 7/16/13 Sample ID

# CLIENT: Weston Solutions

Work Order: 13070526

Project: VP1049, Pilsen Superfund

# ANALYTICAL QC SUMMARY REPORT

BatchID: 70581

Sample ID: IMBS2 7/16/13	SampType: MBLK	TestCod	TestCode: M_ICPMS_S	Units: mg/Kg		Prep Dat	Prep Date: <b>7/16/2013</b>	3	Run ID: ICP	Run ID: ICPMS_130717A	
Client ID: ZZZZ	Batch ID: <b>70581</b>	TestN	TestNo: SW6020			Analysis Date: <b>7/17/2013</b>	te: <b>7/17/20</b> 1	ဗ	SeqNo: <b>2463021</b>	3021	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	QN	1.0									
Cadmium	Q	0.25									
Chromium	Q	0.50									
Copper	Q	1.2									
Lead	0.0925	0.25									7
Τin	1.639	2.5									*
Zinc	QN	2.5									
Sample ID: ILCSS2 7/16/13	SampType: LCS	TestCod	TestCode: M_ICPMS_S	Units: mg/Kg		Prep Dat	Prep Date: <b>7/16/2013</b>	3	Run ID: ICP	Run ID: ICPMS_130717A	
Client ID: ZZZZ	Batch ID: <b>70581</b>	TestN	TestNo: SW6020			Analysis Date: <b>7/17/2013</b>	te: <b>7/17/20</b> 1	က	SeqNo: <b>2463022</b>	3022	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	14.68	1.0	12.5	0	117	80	120	0	0		
Cadmium	24.96	0.25	25	0	8.66	80	120	0	0		
Chromium	26.78	0.50	25	0	107	80	120	0	0		
Copper	27.12	1.2	25	0	108	80	120	0	0		
Lead	26.34	0.25	25	0.0925	105	80	120	0	0		
Tin	14.98	2.5	12.5	1.639	107	80	120	0	0		*
Zinc	23.39	2.5	25	0	93.6	80	120	0	0		
Sample ID: 13070622-031AMS	SampType: MS	TestCod	TestCode: M_ICPMS_S	Units: mg/Kg-dry	ry	Prep Date:	e: <b>7/16/2013</b>	3	Run ID: ICP	Run ID: ICPMS-2_130718A	Ą
Client ID: ZZZZ	Batch ID: <b>70581</b>	TestN	TestNo: SW6020			Analysis Date: 7/18/2013	te: <b>7/18/20</b> 1	8	SeqNo: <b>2464940</b>	4940	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	3123	110	28.58	3106	58.8	75	125	0	0		S

B - Analyte detected in the associated Method Blank	E - Value above quantitation range		
S - Spike Recovery outside accepted recovery limits	R - RPD outside accepted recovery limits	H/HT - Holding Time Exceeded	
ND - Not Detected at the Reporting Limit	J - Analyte detected below quantitation limits	* - Non Accredited Parameter	
Qualifiers:			

CLIENT: Weston Solutions

**Work Order:** 13070526

**Project:** VP1049, Pilsen Superfund

# ANALYTICAL QC SUMMARY REPORT

**BatchID:** 70581

Sample ID: 13070622-031AMS Client ID: ZZZZ	SampType: MS Batch ID: 70581	TestCode	TestCode: M_ICPMS_S TestNo: SW6020	Units: mg/Kg-dry	y-dry	Prep Date: <b>7/16/2013</b> Analysis Date: <b>7/18/2013</b>	s: 7/16/2013 e: 7/18/2013	e e	Run ID: ICPMS-2_130718A SeqNo: 2464993	MS-2_130718 4993	Ą
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony Cadmium Lead Tin	11.36 48.68 4565 119	9.7 1.1 1.1	14.29 28.58 28.58 14.29	9.899 20.88 4337 183.9	10.2 97.3 798 -455	75 75 75 75	125 125 125 125	0000	0000		တ တ *တ
Sample ID: 13070622-031AMS Client ID: ZZZZ	SampType: MS Batch ID: 70581	TestCode	TestCode: M_ICPMS_S TestNo: SW6020	Units: mg/Kg-dry	y-dry	Prep Date: Analysis Date:	s: 7/16/2013 e: 7/19/2013	e e	Run ID: ICPMS-2_130719A SeqNo: 2466317	MS-2_130719	А
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium Copper	114.2 539.5	2.3 5.7	28.58 28.58	91.32 584.7	80 -158	75 75	125 125	0	0		S
Sample ID: 13070622-031AMSD Client ID: ZZZZ	SampType: MSD Batch ID: 70581	TestCode	TestCode: M_ICPMS_S TestNo: SW6020	Units: mg/Kg-dry	y-dry	Prep Date: <b>7/16/2013</b> Analysis Date: <b>7/18/2013</b>	e: 7/16/2013	e e	Run ID: ICPMS-3 SeqNo: 2464941	Run ID: ICPMS-2_130718A SeqNo: 2464941	ď
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
ple ID:	SampType: MSD	TestCode	TestCode: M_ICPMS_S	Uni		Prep Date:	123	3	49.0 20 Run ID: ICPMS-2_130718A	MS-2_130718	
Client ID: <b>ZZZZ</b> Analyte	Batch ID: <b>70581</b> Result	TestNc	TestNo: <b>SW6020</b> QL SPK value	SPK Ref Val	%REC	Analysis Date: 7/18/2013 LowLimit HighLimit R	e: <b>7/18/201</b> HighLimit	3 RPD Ref Val	SeqNo: <b>2464994</b> %RPD RPI	<b>4994</b> RPDLimit	Qual
Antimony Cadmium Lead Tin	10.07 59.16 5219 182.1	4.5 1.1 1.1	14.18 28.36 28.36 14.18	9.899 20.88 4337 183.9	1.19 135 3110 -12.9	75 75 75 75	125 125 125 125	11.36 48.68 4565 119	12.1 19.4 13.4 41.9	20 20 20 20	S S S *XS

Weston Solutions CLIENT:

VP1049, Pilsen Superfund 13070526 Work Order: Project:

# ANALYTICAL QC SUMMARY REPORT

**BatchID:** 70581

Sample ID:	Sample ID: 13070622-031AMSD SampType: MSD	SampType: MSD	TestCod	e: M_ICPMS_S	TestCode: M_ICPMS_S Units: mg/Kg-dry	,	Prep Date:	3: 7/16/2013	3	Run ID: ICP	Run ID: ICPMS-2_130719A	Α¢
Client ID:	TITI	Batch ID: <b>70581</b>	TestN	TestNo: SW6020		∢	nalysis Date	Analysis Date: 7/19/2013	ဗ	SeqNo: <b>2466320</b>	6320	
Analyte		Result	PQL	SPK value SPK Ref Val		%REC	LowLimit	HighLimit	%REC LowLimit HighLimit RPD Ref Val	%RPD	%RPD RPDLimit Qual	Qual
Chromium		126.6	2.3	28.36	91.32	125	75	125	114.2	10.3	20	
Copper		678.9	2.7	28.36	584.7	332	75	125	539.5	22.9	20	SR

ery limits B - Analyte detected in the associated Method Blan	E - Value above quantitation range	
S - Spike Recovery outside accepted recove	R - RPD outside accepted recovery limits	H/HT - Holding Time Exceeded
ND - Not Detected at the Reporting Limit	J - Analyte detected below quantitation limits	* - Non Accredited Parameter
Qualifiers:		

# PREP BATCH REPORT

# STAT Analysis Corporation

7/17/2013 12:45:00 Prep Start Date:

7/17/2013 1:24:00 P Prep End Date:

mL/g Technician: LB Prep Code: M\_HG\_S\_PRE Prep Batch 70598

Prep Factor Units:

7/16/2013 7/16/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/16/2013 7/16/2013 7/16/2013 7/16/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 PrepEnd **PrepStart** 7/16/2013 7/16/2013 7/16/2013 7/16/2013 7/16/2013 7/16/2013 7/16/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 7/17/2013 93.750 78.125 100.000 100.000 84.034 91.185 90.634 91.463 80.645 80.863 90.090 95.847 82.645 89.552 78.125 83.333 93.750 84.034 80.645 88.496 88.235 83.565 85.960 106.007 factor 30 30 30 Fin Vol 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Sol Recov 0 Sol Added 0.313 0.3 0.3 0.349 0.329 0.372 0.333 0.335 0.32 0.384 0.36 0.32 0.384 0.339 0.283 0.359 SampAmt 0.328 0.363 0.372 0.34 0.357 0.331 0.371 0.357 된 Matrix Soil 13070512-002BMSD 13070512-002BMS HGLCSS2 7/16/13 HGMBS2 7/16/13 13070512-001B 13070512-002B 13070477-001B 13070477-003B 13070477-004B 13070477-006B 13070477-007B 13070477-011B 13070478-001B 13070526-001A 13070701-001B 13070477-002B 13070477-005B 13070477-010B 13070526-004A 13070526-005A 13070477-008B 13070477-009B 13070526-002A 13070526-003A Sample ID

CLIENT: Weston Solutions

**Work Order:** 13070526

**Project:** VP1049, Pilsen Superfund

# ANALYTICAL QC SUMMARY REPORT

**BatchID:** 70598

Sample ID: HGMBS2 7/16/13	SampType: MBLK	TestCode	M_HG_SOL	TestCode: M_HG_SOLID Units: mg/Kg		Prep Date:	7/16/2013		Run ID: CETAC_130716B	C_130716B	
Client ID: ZZZZ	Batch ID: <b>70598</b>	TestNo	TestNo: SW7471A			Analysis Date: <b>7/16/2013</b>	7/16/2013		SeqNo: <b>2461593</b>	593	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	LowLimit HighLimit RPD Ref Val	Ref Val	%RPD	RPDLimit	Qual
Mercury	0.002	0.020									7
Sample ID: <b>HGLCSS2 7/16/13</b> Client ID: <b>777/2</b>	SampType: LCS Batch ID: 70598	TestCode TestNc	sstCode: M_HG_SOL TestNo: SW7471A	TestCode: M_HG_SOLID Units: mg/Kg TestNo: SW7471A		Prep Date: <b>7/16/2013</b> Analysis Date: <b>7/16/2013</b>	Prep Date: <b>7/16/2013</b> alysis Date: <b>7/16/2013</b>		Run ID: CETAC_130716B SeqNo: 2461594	C_130716B	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	Ref Val	%RPD	RPDLimit	Qual
Mercury	0.239	0.020	0.25	0.002	94.8	80	120	0	0		
Sample ID: 13070512-002BMS Client ID: ZZZZ	SampType: MS Batch ID: 70598	TestCode	sstCode: M_HG_SOL TestNo: SW7471A	TestCode: M_HG_SOLID Units: mg/Kg-dry TestNo: SW7471A		Prep Date: <b>7/16/2013</b> Analysis Date: <b>7/16/2013</b>	Prep Date: <b>7/16/2013</b> alysis Date: <b>7/16/2013</b>		Run ID: CETAC_130716B SeqNo: 2461598	C_130716B	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	LowLimit HighLimit RPD Ref Val	⊰ef Val	%RPD	RPDLimit	Qual
Mercury	0.2931	0.025	0.3066	0.01111	92	75	125	0	0		
Sample ID: 13070512-002BMSD Client ID: ZZZZ	SampType: MSD Batch ID: 70598	TestCode	estCode: M_HG_SOL TestNo: SW7471A	TestCode: M_HG_SOLID Units: mg/Kg-dry TestNo: SW7471A		Prep Date: <b>7/16/2013</b> Analysis Date: <b>7/16/2013</b>	Prep Date: <b>7/16/2013</b> alysis Date: <b>7/16/2013</b>		Run ID: CETAC_130716B SeqNo: 2461599	C_130716B	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit RPD	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.3069	0.025	0.3094	0.01111	92.6	75	125	0.2931	4.61	20	

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded

ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits

Qualifiers:

\* - Non Accredited Parameter

B - Analyte detected in the associated Method Blank E - Value above quantitation range

CLIENT: Weston Solutions

**Work Order:** 13070526

**Project:** VP1049, Pilsen Superfund

ANALYTICAL QC SUMMARY REPORT

BatchID: R91092

	SampType: MBLK	TestCod	TestCode: PMOIST	Units: wt%		Prep Date	Prep Date: <b>7/15/2013</b>		Run ID: BALANCE_130715B	ANCE_13071	5B
Client ID: ZZZZ	Batch ID: <b>R91092</b>	TestN	TestNo: <b>D2974</b>			Analysis Dat	Analysis Date: <b>7/15/2013</b>		SeqNo: <b>2460796</b>	962	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	QN	0.200									*
Sample ID: PMLCS-S 1 7/15/13	SampType: LCS	TestCod	TestCode: PMOIST	Units: wt%		Prep Date	Prep Date: <b>7/15/2013</b>		Run ID: BALANCE_130715B	ANCE_13071	5B
Client ID: ZZZZ	Batch ID: <b>R91092</b>	TestN	TestNo: <b>D2974</b>			Analysis Dat	Analysis Date: <b>7/15/2013</b>		SeqNo: <b>2460797</b>	797	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit	HighLimit RPD	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	4.4	0.200	5	0	88	80	120	0	0		*
Sample ID: PMLCS-W 1 7/15/13	SampType: LCS	TestCod	TestCode: PMOIST	Units: wt%		Prep Date	Prep Date: <b>7/15/2013</b>		Run ID: BALANCE_130715B	ANCE_13071	5B
Client ID: ZZZZ	Batch ID: <b>R91092</b>	TestN	TestNo: <b>D2974</b>			Analysis Dat	Analysis Date: <b>7/15/2013</b>		SeqNo: <b>2460798</b>	798	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	LowLimit HighLimit RPD Ref Val	Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	99.84	0.200	8.66	0	100	80	120	0	0		*
Sample ID: 13070617-008B DUP Client ID: ZZZZ	SampType: <b>DUP</b> Batch ID: <b>R91092</b>	TestCod	TestCode: PMOIST TestNo: D2974	Units: wt%		Prep Date Analysis Dat	Prep Date: <b>7/15/2013</b> Analysis Date: <b>7/15/2013</b>		Run ID: BALANCE_130715B SeqNo: 2460816	ANCE_13071 816	5B
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	13.86	0.200	0	0	0	0	0	14.94	7.50	20	*

S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
H/HT - Holding Time Exceeded

ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits

Qualifiers:

\* - Non Accredited Parameter

16 of 16

B - Analyte detected in the associated Method Blank E - Value above quantitation range

### PILSEN AREA SOIL SITE CHICAGO, ILLINOIS DATA VALIDATION REPORT

Date: September 4, 2013

Laboratory: STAT Analysis Corporation (STAT), Chicago, Illinois

**Laboratory Project #:** 13080639

Data Validation Performed By: Lisa Graczyk, Weston Solutions, Inc. (WESTON®) Superfund

Technical Assessment and Response Team (START)

**Analytical TDD and Work Order** #: S05-0001-1211-003/20405.016.001.2038.00

This data validation report has been prepared by WESTON START under the START III Region V contract. This report documents the data validation for 43 soil samples collected for the Pilsen Area Soil Site that were analyzed for the following parameters and U.S. Environmental Protection Agency methods:

- Total Metals by SW-846 Methods 6020 and 7471A
- Fine Grained Lead by SW-846 Method 6020
- Moisture Content by ASTM D2974

A level II data package was requested from STAT. The data validation was conducted in general accordance with the EPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review" dated January 2010. The Attachment contains the results summary sheets with the hand-written qualifiers applied during data validation.

### TOTAL METALS AND FINE GRAINED LEAD BY EPA SW-846 METHODS 6020 AND 7471A

### 1. <u>Samples</u>

Attachment A summarizes the samples for which this data validation is being conducted. It includes the laboratory sample identification, the WESTON START sample identification, and the date and time of sample collection.

### 2. <u>Holding Times</u>

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

Data Validation Report Pilsen Area Soil Site STAT Analysis Corporation Laboratory Project #: 13070839

### 3. Blank Results

Method blanks were analyzed with the metals analyses. The blanks contained no metals contamination above the reporting limits. There were detections of metals below the reporting limits in the blanks. However, the sample results were much greater or contained no detections of these metals. No qualifications were required.

### 4. <u>Laboratory Control Sample (LCS) Results</u>

The LCS recoveries were within the quality control (QC) limits except for as follows.

In one LCS, antimony was detected high. Detected antimony results were flagged "J" as estimated.

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

STAT analyzed several site-specific MS/MSDs. The percent recoveries and relative percent differences (RPD) were within QC limits except for as follows.

In many instances of QC limits not being met, the sample concentration was more than four times the spike amount. In these instances, no qualifications were required.

In the MS and/or MSD of sample PA-499-01(0-6)-081413, antimony, tin, and mercury had low recoveries. In this sample, the mercury and tin results were flagged "J" and the quantitation limit for antimony was flagged "UJ" as estimated due to potential matrix interference.

In the MS and MSD of sample PA-515-01(0-6)-081613, antimony and mercury had low recoveries and tin had a high recovery. In this sample, the antimony, mercury and tin results were flagged "J" as estimated due to potential matrix interference.

In the MS and MSD of sample PA-516-01(6-18)-081613, antimony had a low recovery and tin had a high recovery. In this sample, the quantitation limit for antimony was flagged "UJ" as estimated due to potential matrix interference. Note that tin did not required qualification because it was not detected in the sample and the high MS/MSD recoveries indicate a high bias.

### 6. Field Duplicate Results

There are five field duplicate samples associated with this work order that is identified by a "D" suffix in the sample name.

The field duplicate results were evaluated by calculating the RPDs between the investigative and field duplicate sample results. There is no established QC limit for RPD for field duplicates;

Data Validation Report Pilsen Area Soil Site STAT Analysis Corporation

Laboratory Project #: 13070839

however, 50 RPD is generally used for evaluation. Most of the RPDs for detected metals were below 50 which is acceptable.

There were only two instances where the RPD exceeded 50; chromium in sample PA-491-01(6-18)-081213D and mercury in sample PA-516-01(0-6)-081613D. These two discrepancies are minor and in general the field duplicate results agreed well with the investigative sample results.

### 7. Overall Assessment

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

### **GENERAL CHEMISTRY PARAMETER (Moisture Content by ASTM D2974)**

### 1. <u>Samples</u>

Attachment A summarizes the samples for which this data validation is being conducted. It includes the laboratory sample identification, the WESTON START sample identification, and the date and time of sample collection.

### 2. Holding Times

The holding time for moisture is 28 days. The holding time for moisture was met.

### 3. Blank Results

Method blanks were analyzed with the moisture analyses and were all non-detect for moisture which is acceptable.

### 4. <u>LCS Results</u>

LCSs were analyzed with the moisture analyses. The LCS recoveries were within the QC limits.

### 5. Laboratory Duplicates

Laboratory duplicates were analyzed with the moisture analyses. The RPDs were within QC limits.

### 6. Field Duplicate Results

There are five field duplicate samples associated with this work order that are identified by a "D" suffix in the sample name.

Data Validation Report Pilsen Area Soil Site STAT Analysis Corporation Laboratory Project #: 13070839

The field duplicate results were evaluated by calculating the RPDs between the investigative and field duplicate sample results. The RPDs were below 50 which is acceptable.

### 7. Overall Assessment

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

Data Validation Report Pilsen Area Soil Site STAT Analysis Corporation Laboratory Project #: 13070839

# ATTACHMENT A SAMPLE LIST

**Date:** August 26, 2013

**Client:** Weston Solutions

Project: Pilsen Soil Site, Pilsen, Chicago, IL Work Order Sample Summary

**Lab Order:** 13080639

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
13080639-001A	PA-489-01(0-6)-081213		8/12/2013 2:40:00 PM	8/17/2013
13080639-001B	PA-489-01(0-6)-081213	Fine Grained	8/12/2013 2:40:00 PM	8/17/2013
13080639-002A	PA-489-01(6-18)-081213		8/12/2013 2:45:00 PM	8/17/2013
13080639-002B	PA-489-01(6-18)-081213	Fine Grained	8/12/2013 2:45:00 PM	8/17/2013
13080639-003A	PA-490-01(0-6)-081213		8/12/2013 3:30:00 PM	8/17/2013
13080639-003B	PA-490-01(0-6)-081213	Fine Grained	8/12/2013 3:30:00 PM	8/17/2013
13080639-004A	PA-491-01(0-6)-081213		8/12/2013 4:20:00 PM	8/17/2013
13080639-004B	PA-491-01(0-6)-081213	Fine Grained	8/12/2013 4:20:00 PM	8/17/2013
13080639-005A	PA-491-01(6-18)-081213		8/12/2013 4:25:00 PM	8/17/2013
13080639-005B	PA-491-01(6-18)-081213	Fine Grained	8/12/2013 4:25:00 PM	8/17/2013
13080639-006A	PA-491-01(6-18)-081213D		8/12/2013 4:30:00 PM	8/17/2013
13080639-006B	PA-491-01(6-18)-081213D	Fine Grained	8/12/2013 4:30:00 PM	8/17/2013
13080639-007A	PA-492-01(0-6)-081313		8/13/2013 10:00:00 AM	8/17/2013
13080639-007B	PA-492-01(0-6)-081313	Fine Grained	8/13/2013 10:00:00 AM	8/17/2013
13080639-008A	PA-493-01(0-6)-081313		8/13/2013 10:45:00 AM	8/17/2013
13080639-008B	PA-493-01(0-6)-081313	Fine Grained	8/13/2013 10:45:00 AM	8/17/2013
13080639-009A	PA-494-01(0-6)-081313		8/13/2013 12:00:00 PM	8/17/2013
13080639-009B	PA-494-01(0-6)-081313	Fine Grained	8/13/2013 12:00:00 PM	8/17/2013
13080639-010A	PA-495-01(0-6)-081313		8/13/2013 2:00:00 PM	8/17/2013
13080639-010B	PA-495-01(0-6)-081313	Fine Grained	8/13/2013 2:00:00 PM	8/17/2013
13080639-011A	PA-495-01(6-24)-081313		8/13/2013 2:05:00 PM	8/17/2013
13080639-011B	PA-495-01(6-24)-081313	Fine Grained	8/13/2013 2:05:00 PM	8/17/2013
13080639-012A	PA-496-01(0-6)-081313		8/13/2013 3:00:00 PM	8/17/2013
13080639-012B	PA-496-01(0-6)-081313	Fine Grained	8/13/2013 3:00:00 PM	8/17/2013
13080639-013A	PA-497-01(0-6)-081313		8/13/2013 3:50:00 PM	8/17/2013
13080639-013B	PA-497-01(0-6)-081313	Fine Grained	8/13/2013 3:50:00 PM	8/17/2013
13080639-014A	PA-498-01(0-6)-081313		8/13/2013 4:50:00 PM	8/17/2013
13080639-014B	PA-498-01(0-6)-081313	Fine Grained	8/13/2013 4:50:00 PM	8/17/2013
13080639-015A	PA-498-01(0-6)-081313D		8/13/2013 4:55:00 PM	8/17/2013
13080639-015B	PA-498-01(0-6)-081313D	Fine Grained	8/13/2013 4:55:00 PM	8/17/2013
13080639-016A	PA-498-01(6-15)-081313		8/13/2013 5:00:00 PM	8/17/2013
13080639-016B	PA-498-01(6-15)-081313	Fine Grained	8/13/2013 5:00:00 PM	8/17/2013
13080639-017A	PA-499-01(0-6)-081413		8/14/2013 9:45:00 AM	8/17/2013
13080639-017B	PA-499-01(0-6)-081413	Fine Grained	8/14/2013 9:45:00 AM	8/17/2013
13080639-018A	PA-500-01(0-6)-081413		8/14/2013 11:00:00 AM	8/17/2013
13080639-018B	PA-500-01(0-6)-081413	Fine Grained	8/14/2013 11:00:00 AM	8/17/2013
13080639-019A	PA-500-01(6-24)-081413		8/14/2013 11:05:00 AM	8/17/2013
13080639-019B	PA-500-01(6-24)-081413	Fine Grained	8/14/2013 11:05:00 AM	8/17/2013

**Client:** Weston Solutions

**Project:** Pilsen Soil Site, Pilsen, Chicago, IL

**Lab Order:** 13080639

# **Work Order Sample Summary**

Lab Sample ID	Client Sample ID	Tag Number	<b>Collection Date</b>	Date Received
13080639-020A	PA-501-01(0-6)-081413		8/14/2013 12:00:00 PM	8/17/2013
13080639-020B	PA-501-01(0-6)-081413	Fine Grained	8/14/2013 12:00:00 PM	8/17/2013
13080639-021A	PA-502-01(0-6)-081413		8/14/2013 2:00:00 PM	8/17/2013
13080639-021B	PA-502-01(0-6)-081413	Fine Grained	8/14/2013 2:00:00 PM	8/17/2013
13080639-022A	PA-502-01(6-24)-081413		8/14/2013 2:05:00 PM	8/17/2013
13080639-022B	PA-502-01(6-24)-081413	Fine Grained	8/14/2013 2:05:00 PM	8/17/2013
13080639-023A	PA-503-01(0-6)-081413		8/14/2013 3:15:00 PM	8/17/2013
13080639-023B	PA-503-01(0-6)-081413	Fine Grained	8/14/2013 3:15:00 PM	8/17/2013
13080639-024A	PA-503-01(6-24)-081413		8/14/2013 3:20:00 PM	8/17/2013
13080639-024B	PA-503-01(6-24)-081413	Fine Grained	8/14/2013 3:20:00 PM	8/17/2013
13080639-025A	PA-504-01(0-6)-081513		8/15/2013 9:15:00 AM	8/17/2013
13080639-025B	PA-504-01(0-6)-081513	Fine Grained	8/15/2013 9:15:00 AM	8/17/2013
13080639-026A	PA-505-01(0-6)-081513		8/15/2013 10:25:00 AM	8/17/2013
13080639-026B	PA-505-01(0-6)-081513	Fine Grained	8/15/2013 10:25:00 AM	8/17/2013
13080639-027A	PA-505-01(0-6)-081513D		8/15/2013 10:30:00 AM	8/17/2013
13080639-027B	PA-505-01(0-6)-081513D	Fine Grained	8/15/2013 10:30:00 AM	8/17/2013
13080639-028A	PA-506-01(0-6)-081513		8/15/2013 11:40:00 AM	8/17/2013
13080639-028B	PA-506-01(0-6)-081513	Fine Grained	8/15/2013 11:40:00 AM	8/17/2013
13080639-029A	PA-507-01(0-6)-081513		8/15/2013 1:30:00 PM	8/17/2013
13080639-029B	PA-507-01(0-6)-081513	Fine Grained	8/15/2013 1:30:00 PM	8/17/2013
13080639-030A	PA-508-01(0-6)-081513		8/15/2013 2:45:00 PM	8/17/2013
13080639-030B	PA-508-01(0-6)-081513	Fine Grained	8/15/2013 2:45:00 PM	8/17/2013
13080639-031A	PA-508-01(6-24)-081513		8/15/2013 2:50:00 PM	8/17/2013
13080639-031B	PA-508-01(6-24)-081513	Fine Grained	8/15/2013 2:50:00 PM	8/17/2013
13080639-032A	PA-509-01(0-6)-081513		8/15/2013 4:00:00 PM	8/17/2013
13080639-032B	PA-509-01(0-6)-081513	Fine Grained	8/15/2013 4:00:00 PM	8/17/2013
13080639-033A	PA-510-01(0-6)-081513		8/15/2013 4:50:00 PM	8/17/2013
13080639-033B	PA-510-01(0-6)-081513	Fine Grained	8/15/2013 4:50:00 PM	8/17/2013
13080639-034A	PA-511-01(0-6)-081613		8/16/2013 8:30:00 AM	8/17/2013
13080639-034B	PA-511-01(0-6)-081613	Fine Grained	8/16/2013 8:30:00 AM	8/17/2013
13080639-035A	PA-512-01(0-6)-081613		8/16/2013 9:20:00 AM	8/17/2013
13080639-035B	PA-512-01(0-6)-081613	Fine Grained	8/16/2013 9:20:00 AM	8/17/2013
13080639-036A	PA-513-01(0-6)-081613		8/16/2013 9:50:00 AM	8/17/2013
13080639-036B	PA-513-01(0-6)-081613	Fine Grained	8/16/2013 9:50:00 AM	8/17/2013
13080639-037A	PA-513-01(0-6)-081613D		8/16/2013 9:55:00 AM	8/17/2013
13080639-037B	PA-513-01(0-6)-081613D	Fine Grained	8/16/2013 9:55:00 AM	8/17/2013
13080639-038A	PA-514-01(0-6)-081613		8/16/2013 11:25:00 AM	8/17/2013
13080639-038B	PA-514-01(0-6)-081613	Fine Grained	8/16/2013 11:25:00 AM	8/17/2013
13080639-039A	PA-514-01(6-24)-081613		8/16/2013 11:30:00 AM	8/17/2013
13080639-039B	PA-514-01(6-24)-081613	Fine Grained	8/16/2013 11:30:00 AM	8/17/2013

**Client:** Weston Solutions

**Project:** Pilsen Soil Site, Pilsen, Chicago, IL

**Lab Order:** 13080639

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
13080639-040A	PA-515-01(0-6)-081613		8/16/2013 1:30:00 PM	8/17/2013
13080639-040B	PA-515-01(0-6)-081613	Fine Grained	8/16/2013 1:30:00 PM	8/17/2013
13080639-041A	PA-516-01(0-6)-081613		8/16/2013 2:50:00 PM	8/17/2013
13080639-041B	PA-516-01(0-6)-081613	Fine Grained	8/16/2013 2:50:00 PM	8/17/2013
13080639-042A	PA-516-01(0-6)-081613D		8/16/2013 2:55:00 PM	8/17/2013
13080639-042B	PA-516-01(0-6)-081613D	Fine Grained	8/16/2013 2:55:00 PM	8/17/2013
13080639-043A	PA-516-01(6-18)-081613		8/16/2013 3:00:00 PM	8/17/2013
13080639-043B	PA-516-01(6-18)-081613	Fine Grained	8/16/2013 3:00:00 PM	8/17/2013

**Work Order Sample Summary** 

Data Validation Report Pilsen Area Soil Site STAT Analysis Corporation Laboratory Project #: 13070839

### ATTACHMENT B

# STAT ANALYSIS CORPORATION RESULTS SUMMARY WITH QUALIFIERS

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766
Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com
Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

August 26, 2013

Weston Solutions 750 E. Bunker Court Suite 500

Vernon Hills, IL 60061 Telephone: (847) 918-4094

Fax: (847) 918-4055

RE: Pilsen Soil Site, Pilsen, Chicago, IL

atio)

STAT Project No: 13080639

Dear Tonya Balla:

STAT Analysis received 43 samples for the referenced project on 8/16/2013 4:42:00 PM. The analytical results are presented in the following report.

All analyses were performed in accordance with the requirements of 35 IAC Part 186 / NELAC standards. Analyses were performed in accordance with methods as referenced on the analytical report. Those analytical results expressed on a dry weight basis are also noted on the analytical report.

All analyses were performed within established holding time criteria, and all Quality Control criteria met EPA or laboratory specifications except when noted in the Case Narrative or Analytical Report. If required, an estimate of uncertainty for the analyses can be provided. A listing of accredited methods/parameters can also be provided.

Thank you for the opportunity to serve you and I look forward to working with you in the future. If you have any questions regarding the enclosed materials, please contact me at (312) 733-0551.

Sincerely,

Catia Giannini

Project Manager

The information contained in this report and any attachments is confidential information intended only for the use of the individual or entities named above. The results of this report relate only to the samples tested. If you have received this report in error, please notify us immediately by phone. This report shall not be reproduced, except in its entirety, unless written approval has been obtained from the laboratory. This analytical report shall become property of the Customer upon payment in full. Otherwise, STAT will be under no obligation to support, defend or discuss the analytical report.

**Date:** August 26, 2013

**Client:** Weston Solutions

Project: Pilsen Soil Site, Pilsen, Chicago, IL Work Order Sample Summary

**Lab Order:** 13080639

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
13080639-001A	PA-489-01(0-6)-081213		8/12/2013 2:40:00 PM	8/17/2013
13080639-001B	PA-489-01(0-6)-081213	Fine Grained	8/12/2013 2:40:00 PM	8/17/2013
13080639-002A	PA-489-01(6-18)-081213		8/12/2013 2:45:00 PM	8/17/2013
13080639-002B	PA-489-01(6-18)-081213	Fine Grained	8/12/2013 2:45:00 PM	8/17/2013
13080639-003A	PA-490-01(0-6)-081213		8/12/2013 3:30:00 PM	8/17/2013
13080639-003B	PA-490-01(0-6)-081213	Fine Grained	8/12/2013 3:30:00 PM	8/17/2013
13080639-004A	PA-491-01(0-6)-081213		8/12/2013 4:20:00 PM	8/17/2013
13080639-004B	PA-491-01(0-6)-081213	Fine Grained	8/12/2013 4:20:00 PM	8/17/2013
13080639-005A	PA-491-01(6-18)-081213		8/12/2013 4:25:00 PM	8/17/2013
13080639-005B	PA-491-01(6-18)-081213	Fine Grained	8/12/2013 4:25:00 PM	8/17/2013
13080639-006A	PA-491-01(6-18)-081213D		8/12/2013 4:30:00 PM	8/17/2013
13080639-006B	PA-491-01(6-18)-081213D	Fine Grained	8/12/2013 4:30:00 PM	8/17/2013
13080639-007A	PA-492-01(0-6)-081313		8/13/2013 10:00:00 AM	8/17/2013
13080639-007B	PA-492-01(0-6)-081313	Fine Grained	8/13/2013 10:00:00 AM	8/17/2013
13080639-008A	PA-493-01(0-6)-081313		8/13/2013 10:45:00 AM	8/17/2013
13080639-008B	PA-493-01(0-6)-081313	Fine Grained	8/13/2013 10:45:00 AM	8/17/2013
13080639-009A	PA-494-01(0-6)-081313		8/13/2013 12:00:00 PM	8/17/2013
13080639-009B	PA-494-01(0-6)-081313	Fine Grained	8/13/2013 12:00:00 PM	8/17/2013
13080639-010A	PA-495-01(0-6)-081313		8/13/2013 2:00:00 PM	8/17/2013
13080639-010B	PA-495-01(0-6)-081313	Fine Grained	8/13/2013 2:00:00 PM	8/17/2013
13080639-011A	PA-495-01(6-24)-081313		8/13/2013 2:05:00 PM	8/17/2013
13080639-011B	PA-495-01(6-24)-081313	Fine Grained	8/13/2013 2:05:00 PM	8/17/2013
13080639-012A	PA-496-01(0-6)-081313		8/13/2013 3:00:00 PM	8/17/2013
13080639-012B	PA-496-01(0-6)-081313	Fine Grained	8/13/2013 3:00:00 PM	8/17/2013
13080639-013A	PA-497-01(0-6)-081313		8/13/2013 3:50:00 PM	8/17/2013
13080639-013B	PA-497-01(0-6)-081313	Fine Grained	8/13/2013 3:50:00 PM	8/17/2013
13080639-014A	PA-498-01(0-6)-081313		8/13/2013 4:50:00 PM	8/17/2013
13080639-014B	PA-498-01(0-6)-081313	Fine Grained	8/13/2013 4:50:00 PM	8/17/2013
13080639-015A	PA-498-01(0-6)-081313D		8/13/2013 4:55:00 PM	8/17/2013
13080639-015B	PA-498-01(0-6)-081313D	Fine Grained	8/13/2013 4:55:00 PM	8/17/2013
13080639-016A	PA-498-01(6-15)-081313		8/13/2013 5:00:00 PM	8/17/2013
13080639-016B	PA-498-01(6-15)-081313	Fine Grained	8/13/2013 5:00:00 PM	8/17/2013
13080639-017A	PA-499-01(0-6)-081413		8/14/2013 9:45:00 AM	8/17/2013
13080639-017B	PA-499-01(0-6)-081413	Fine Grained	8/14/2013 9:45:00 AM	8/17/2013
13080639-018A	PA-500-01(0-6)-081413		8/14/2013 11:00:00 AM	8/17/2013
13080639-018B	PA-500-01(0-6)-081413	Fine Grained	8/14/2013 11:00:00 AM	8/17/2013
13080639-019A	PA-500-01(6-24)-081413		8/14/2013 11:05:00 AM	8/17/2013
13080639-019B	PA-500-01(6-24)-081413	Fine Grained	8/14/2013 11:05:00 AM	8/17/2013

**Client:** Weston Solutions

**Project:** Pilsen Soil Site, Pilsen, Chicago, IL

**Lab Order:** 13080639

# **Work Order Sample Summary**

Lab Sample ID	Client Sample ID	Tag Number	<b>Collection Date</b>	Date Received
13080639-020A	PA-501-01(0-6)-081413		8/14/2013 12:00:00 PM	8/17/2013
13080639-020B	PA-501-01(0-6)-081413	Fine Grained	8/14/2013 12:00:00 PM	8/17/2013
13080639-021A	PA-502-01(0-6)-081413		8/14/2013 2:00:00 PM	8/17/2013
13080639-021B	PA-502-01(0-6)-081413	Fine Grained	8/14/2013 2:00:00 PM	8/17/2013
13080639-022A	PA-502-01(6-24)-081413		8/14/2013 2:05:00 PM	8/17/2013
13080639-022B	PA-502-01(6-24)-081413	Fine Grained	8/14/2013 2:05:00 PM	8/17/2013
13080639-023A	PA-503-01(0-6)-081413		8/14/2013 3:15:00 PM	8/17/2013
13080639-023B	PA-503-01(0-6)-081413	Fine Grained	8/14/2013 3:15:00 PM	8/17/2013
13080639-024A	PA-503-01(6-24)-081413		8/14/2013 3:20:00 PM	8/17/2013
13080639-024B	PA-503-01(6-24)-081413	Fine Grained	8/14/2013 3:20:00 PM	8/17/2013
13080639-025A	PA-504-01(0-6)-081513		8/15/2013 9:15:00 AM	8/17/2013
13080639-025B	PA-504-01(0-6)-081513	Fine Grained	8/15/2013 9:15:00 AM	8/17/2013
13080639-026A	PA-505-01(0-6)-081513		8/15/2013 10:25:00 AM	8/17/2013
13080639-026B	PA-505-01(0-6)-081513	Fine Grained	8/15/2013 10:25:00 AM	8/17/2013
13080639-027A	PA-505-01(0-6)-081513D		8/15/2013 10:30:00 AM	8/17/2013
13080639-027B	PA-505-01(0-6)-081513D	Fine Grained	8/15/2013 10:30:00 AM	8/17/2013
13080639-028A	PA-506-01(0-6)-081513		8/15/2013 11:40:00 AM	8/17/2013
13080639-028B	PA-506-01(0-6)-081513	Fine Grained	8/15/2013 11:40:00 AM	8/17/2013
13080639-029A	PA-507-01(0-6)-081513		8/15/2013 1:30:00 PM	8/17/2013
13080639-029B	PA-507-01(0-6)-081513	Fine Grained	8/15/2013 1:30:00 PM	8/17/2013
13080639-030A	PA-508-01(0-6)-081513		8/15/2013 2:45:00 PM	8/17/2013
13080639-030B	PA-508-01(0-6)-081513	Fine Grained	8/15/2013 2:45:00 PM	8/17/2013
13080639-031A	PA-508-01(6-24)-081513		8/15/2013 2:50:00 PM	8/17/2013
13080639-031B	PA-508-01(6-24)-081513	Fine Grained	8/15/2013 2:50:00 PM	8/17/2013
13080639-032A	PA-509-01(0-6)-081513		8/15/2013 4:00:00 PM	8/17/2013
13080639-032B	PA-509-01(0-6)-081513	Fine Grained	8/15/2013 4:00:00 PM	8/17/2013
13080639-033A	PA-510-01(0-6)-081513		8/15/2013 4:50:00 PM	8/17/2013
13080639-033B	PA-510-01(0-6)-081513	Fine Grained	8/15/2013 4:50:00 PM	8/17/2013
13080639-034A	PA-511-01(0-6)-081613		8/16/2013 8:30:00 AM	8/17/2013
13080639-034B	PA-511-01(0-6)-081613	Fine Grained	8/16/2013 8:30:00 AM	8/17/2013
13080639-035A	PA-512-01(0-6)-081613		8/16/2013 9:20:00 AM	8/17/2013
13080639-035B	PA-512-01(0-6)-081613	Fine Grained	8/16/2013 9:20:00 AM	8/17/2013
13080639-036A	PA-513-01(0-6)-081613		8/16/2013 9:50:00 AM	8/17/2013
13080639-036B	PA-513-01(0-6)-081613	Fine Grained	8/16/2013 9:50:00 AM	8/17/2013
13080639-037A	PA-513-01(0-6)-081613D		8/16/2013 9:55:00 AM	8/17/2013
13080639-037B	PA-513-01(0-6)-081613D	Fine Grained	8/16/2013 9:55:00 AM	8/17/2013
13080639-038A	PA-514-01(0-6)-081613		8/16/2013 11:25:00 AM	8/17/2013
13080639-038B	PA-514-01(0-6)-081613	Fine Grained	8/16/2013 11:25:00 AM	8/17/2013
13080639-039A	PA-514-01(6-24)-081613		8/16/2013 11:30:00 AM	8/17/2013
13080639-039B	PA-514-01(6-24)-081613	Fine Grained	8/16/2013 11:30:00 AM	8/17/2013

**Client:** Weston Solutions

**Project:** Pilsen Soil Site, Pilsen, Chicago, IL

**Lab Order:** 13080639

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
13080639-040A	PA-515-01(0-6)-081613		8/16/2013 1:30:00 PM	8/17/2013
13080639-040B	PA-515-01(0-6)-081613	Fine Grained	8/16/2013 1:30:00 PM	8/17/2013
13080639-041A	PA-516-01(0-6)-081613		8/16/2013 2:50:00 PM	8/17/2013
13080639-041B	PA-516-01(0-6)-081613	Fine Grained	8/16/2013 2:50:00 PM	8/17/2013
13080639-042A	PA-516-01(0-6)-081613D		8/16/2013 2:55:00 PM	8/17/2013
13080639-042B	PA-516-01(0-6)-081613D	Fine Grained	8/16/2013 2:55:00 PM	8/17/2013
13080639-043A	PA-516-01(6-18)-081613		8/16/2013 3:00:00 PM	8/17/2013
13080639-043B	PA-516-01(6-18)-081613	Fine Grained	8/16/2013 3:00:00 PM	8/17/2013

**Work Order Sample Summary** 

**Date:** August 26, 2013

**CLIENT:** Weston Solutions

Project: Pilsen Soil Site, Pilsen, Chicago, IL CASE NARRATIVE

**Lab Order:** 13080639

### Sample report lists:

Fraction A: Results on "as received" basis that the results are corrected for percent moisture.

Fraction B: Fine Grained (less than 250 µm sieve size)

The soils were air dried and sieved for particle size.

The total metals Matrix Spike/Matrix Spike Duplicate (MS/MSD) prepared from sample PA-515-01(0-6)-081613 (13080639-040) (Prep Batch 71453) had recoveries outside control limits. The sample, MS and MSD were redigested in batch 71524. Results are still outside control limits and reported from batch 71524.

Please refer to Analytical QC Summary Report for other QC outliers.

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-489-01(0-6)-081213

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/12/2013 2:40:00 PM

**Lab ID:** 13080639-001A **Matrix:** Soil

Analyses	Result	RL Q	ualifier	· Units	DF I	Date Analyzed
Mercury	SW74	71A		Prep	Date: <b>8/19/2013</b>	Analyst: <b>LB</b>
Mercury	0.14	0.022		mg/Kg-dry	1	8/20/2013
Metals by ICP/MS	SW60	20 (SW3050	0B)	Prep	Date: <b>8/20/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.2		mg/Kg-dry	20	8/22/2013
Cadmium	1.4	1		mg/Kg-dry	20	8/22/2013
Chromium	17	2.1		mg/Kg-dry	20	8/22/2013
Copper	30	5.2		mg/Kg-dry	20	8/22/2013
Lead	160	1		mg/Kg-dry	20	8/22/2013
Tin	ND	10	*	mg/Kg-dry	20	8/22/2013
Zinc	140	10		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	15.3	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-489-01(0-6)-081213

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/12/2013 2:40:00 PM

**Lab ID:** 13080639-001B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 160
 4.7
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-489-01(6-18)-081213

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/12/2013 2:45:00 PM

**Lab ID:** 13080639-002A **Matrix:** Soil

Analyses	Result	RL Q	ualifier Units	DF I	Date Analyzed
Mercury	SW74	71A	Prep	Date: <b>8/19/2013</b>	Analyst: <b>LB</b>
Mercury	0.13	0.022	mg/Kg-dry	1	8/20/2013
Metals by ICP/MS	SW60	20 (SW3050	<b>DB)</b> Prep	Date: <b>8/20/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.4	mg/Kg-dry	20	8/22/2013
Cadmium	1.4	1.1	mg/Kg-dry	20	8/22/2013
Chromium	18	2.2	mg/Kg-dry	20	8/22/2013
Copper	28	5.5	mg/Kg-dry	20	8/22/2013
Lead	92	1.1	mg/Kg-dry	20	8/22/2013
Tin	ND	11	* mg/Kg-dry	20	8/22/2013
Zinc	120	11	mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4	Prep	Date: 8/20/2013	Analyst: SDA
Percent Moisture	16.5	0.2	* wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-489-01(6-18)-081213

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/12/2013 2:45:00 PM

**Lab ID:** 13080639-002B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 150
 4.6
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-490-01(0-6)-081213

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/12/2013 3:30:00 PM

**Lab ID:** 13080639-003A **Matrix:** Soil

Analyses	Result	RL Q	Qualifier	· Units	DF I	Date Analyzed
Mercury	SW74	171A		Prep	Date: <b>8/19/2013</b>	Analyst: <b>LB</b>
Mercury	0.29	0.019		mg/Kg-dry	1	8/20/2013
Metals by ICP/MS	SW60	20 (SW305	0B)	Prep	Date: <b>8/20/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.4		mg/Kg-dry	20	8/22/2013
Cadmium	1.6	1.1		mg/Kg-dry	20	8/22/2013
Chromium	19	2.2		mg/Kg-dry	20	8/22/2013
Copper	33	5.6		mg/Kg-dry	20	8/22/2013
Lead	220	1.1		mg/Kg-dry	20	8/22/2013
Tin	ND	11	*	mg/Kg-dry	20	8/22/2013
Zinc	150	11		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	16.7	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-490-01(0-6)-081213

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/12/2013 3:30:00 PM

**Lab ID:** 13080639-003B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 230
 4.7
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-491-01(0-6)-081213

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/12/2013 4:20:00 PM

**Lab ID:** 13080639-004A **Matrix:** Soil

Analyses	Result	RL (	Qualifie	r Units	DF I	Date Analyzed
Mercury	SW74	171A		Prep	Date: <b>8/19/2013</b>	Analyst: <b>LB</b>
Mercury	0.42	0.024		mg/Kg-dry	1	8/20/2013
Metals by ICP/MS	SW60	)20 (SW30	50B)	Prep	Date: <b>8/20/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.8		mg/Kg-dry	20	8/22/2013
Cadmium	1.8	1.2		mg/Kg-dry	20	8/22/2013
Chromium	21	2.4		mg/Kg-dry	20	8/22/2013
Copper	68	6		mg/Kg-dry	20	8/22/2013
Lead	260	1.2		mg/Kg-dry	20	8/22/2013
Tin	16	12	*	mg/Kg-dry	20	8/22/2013
Zinc	270	12		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	17.4	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-491-01(0-6)-081213

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/12/2013 4:20:00 PM

**Lab ID:** 13080639-004B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 280
 4.9
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

11 Holding time exe

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-491-01(6-18)-081213

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/12/2013 4:25:00 PM

**Lab ID:** 13080639-005A **Matrix:** Soil

Analyses	Result	RL Q	ualifier Units	DF	Date Analyzed
Mercury	SW74	171A	Pro	ep Date: <b>8/19/2</b>	2013 Analyst: LB
Mercury	0.6	0.022	mg/Kg-d	ry 1	8/20/2013
Metals by ICP/MS	SW60	)20 (SW3050	<b>0B)</b> Pro	ep Date: <b>8/20/2</b>	2013 Analyst: JG
Antimony	ND	4.5	mg/Kg-d	ry 20	8/22/2013
Cadmium	1.6	1.1	mg/Kg-d	ry 20	8/22/2013
Chromium	36	2.2	mg/Kg-d	ry 20	8/22/2013
Copper	71	5.6	mg/Kg-d	ry 20	8/22/2013
Lead	270	1.1	mg/Kg-d	ry 20	8/22/2013
Tin	15	11	* mg/Kg-d	ry 20	8/22/2013
Zinc	250	11	mg/Kg-d	ry 20	8/22/2013
Percent Moisture	D297	4	Pro	ep Date: <b>8/20/2</b>	2013 Analyst: SDA
Percent Moisture	13.8	0.2	* wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-491-01(6-18)-081213

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/12/2013 4:25:00 PM

**Lab ID:** 13080639-005B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 400
 4.7
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-491-01(6-18)-081213D

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/12/2013 4:30:00 PM

**Lab ID:** 13080639-006A **Matrix:** Soil

Analyses	Result	RL (	Qualifier	· Units	DF I	Date Analyzed
Mercury	SW74	71A		Prep	Date: <b>8/19/2013</b>	Analyst: <b>LB</b>
Mercury	0.66	0.02		mg/Kg-dry	1	8/20/2013
Metals by ICP/MS	SW602	20 (SW30	50B)	Prep	Date: <b>8/20/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.1		mg/Kg-dry	20	8/22/2013
Cadmium	1.5	1		mg/Kg-dry	20	8/22/2013
Chromium	17	2		mg/Kg-dry	20	8/22/2013
Copper	65	5.1		mg/Kg-dry	20	8/22/2013
Lead	260	1		mg/Kg-dry	20	8/22/2013
Tin	16	10	*	mg/Kg-dry	20	8/22/2013
Zinc	230	10		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974			Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	12.2	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-491-01(6-18)-081213D

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/12/2013 4:30:00 PM

**Lab ID:** 13080639-006B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 390
 4.8
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-492-01(0-6)-081313

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 10:00:00 AM

**Lab ID:** 13080639-007A **Matrix:** Soil

Analyses	Result	RL (	Qualifier	Units	DF I	Date Analyzed
Mercury	SW747	′1A		Prep	Date: <b>8/19/2013</b>	Analyst: <b>LB</b>
Mercury	0.33	0.02		mg/Kg-dry	1	8/20/2013
Metals by ICP/MS	SW602	20 (SW30	50B)	Prep	Date: <b>8/20/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.4		mg/Kg-dry	20	8/22/2013
Cadmium	2.7	1.1		mg/Kg-dry	20	8/22/2013
Chromium	24	2.2		mg/Kg-dry	20	8/22/2013
Copper	66	5.5		mg/Kg-dry	20	8/22/2013
Lead	260	1.1		mg/Kg-dry	20	8/22/2013
Tin	13	11	*	mg/Kg-dry	20	8/22/2013
Zinc	210	11		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974			Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	17.7	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

R - RFD outside accepted recovery mini

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-492-01(0-6)-081313

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 10:00:00 AM

**Lab ID:** 13080639-007B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 210
 4.8
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-493-01(0-6)-081313

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 10:45:00 AM

**Lab ID:** 13080639-008A **Matrix:** Soil

Analyses	Result	RL Q	Qualifie:	r Units	DF I	Date Analyzed
Mercury	SW74	171A		Prep	Date: <b>8/19/2013</b>	Analyst: <b>LB</b>
Mercury	0.39	0.022		mg/Kg-dry	1	8/20/2013
Metals by ICP/MS	SW60	)20 (SW305	i0B)	Prep	Date: <b>8/20/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.3		mg/Kg-dry	20	8/22/2013
Cadmium	1.8	1.1		mg/Kg-dry	20	8/22/2013
Chromium	16	2.2		mg/Kg-dry	20	8/22/2013
Copper	45	5.4		mg/Kg-dry	20	8/22/2013
Lead	190	1.1		mg/Kg-dry	20	8/22/2013
Tin	ND	11	*	mg/Kg-dry	20	8/22/2013
Zinc	170	11		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974			Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	18.5	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

August 26, 2013 **Report Date: Print Date:** August 26, 2013

**Client:** Weston Solutions **Client Sample ID:** PA-493-01(0-6)-081313

Lab Order: 13080639 Tag Number: Fine Grained

**Project:** Pilsen Soil Site, Pilsen, Chicago, IL **Collection Date:** 8/13/2013 10:45:00 AM

Lab ID: 13080639-008B **Matrix:** Soil

**Analyses** Result RLQualifier Units DF **Date Analyzed** 

Metals by ICP/MS SW6020 (SW3050B) Prep Date: 8/22/2013 Analyst: JG 8/22/2013 Lead 210 4.8 mg/Kg-dry 100

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-494-01(0-6)-081313

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 12:00:00 PM

**Lab ID:** 13080639-009A **Matrix:** Soil

Analyses	Result	RL (	Qualifier	r Units	DF I	Date Analyzed
Mercury	SW74	171A		Prep	Date: <b>8/19/2013</b>	Analyst: <b>LB</b>
Mercury	0.17	0.023		mg/Kg-dry	1	8/20/2013
Metals by ICP/MS	SW60	)20 (SW305	50B)	Prep	Date: <b>8/20/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.6		mg/Kg-dry	20	8/22/2013
Cadmium	2	1.2		mg/Kg-dry	20	8/22/2013
Chromium	33	2.3		mg/Kg-dry	20	8/22/2013
Copper	46	5.8		mg/Kg-dry	20	8/22/2013
Lead	120	1.2		mg/Kg-dry	20	8/22/2013
Tin	ND	12	*	mg/Kg-dry	20	8/22/2013
Zinc	170	12		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	17.9	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-494-01(0-6)-081313

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 12:00:00 PM

**Lab ID:** 13080639-009B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 110
 4.9
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-495-01(0-6)-081313

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 2:00:00 PM

**Lab ID:** 13080639-010A **Matrix:** Soil

Analyses	Result	RL Q	Qualifie	r Units	DF	Date Analyzed
Mercury	SW74	171A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.31	0.022		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	)20 (SW305	0B)	Prep	Date: 8/20/2013	Analyst: <b>JG</b>
Antimony	ND	3.8		mg/Kg-dry	20	8/22/2013
Cadmium	2.6	0.95		mg/Kg-dry	20	8/22/2013
Chromium	25	1.9		mg/Kg-dry	20	8/22/2013
Copper	56	4.8		mg/Kg-dry	20	8/22/2013
Lead	930	0.95		mg/Kg-dry	20	8/22/2013
Tin	16	9.5	*	mg/Kg-dry	20	8/22/2013
Zinc	430	9.5		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: 8/20/2013	Analyst: <b>SDA</b>
Percent Moisture	13.8	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-495-01(0-6)-081313

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 2:00:00 PM

**Lab ID:** 13080639-010B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 1000
 4.8
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-495-01(6-24)-081313

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 2:05:00 PM

**Lab ID:** 13080639-011A **Matrix:** Soil

Analyses	Result	RL Q	ualifier	r Units	DF I	Date Analyzed
Mercury	SW74	171A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.49	0.019		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	)20 (SW305	0B)	Prep	Date: <b>8/20/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4		mg/Kg-dry	20	8/22/2013
Cadmium	3.6	1		mg/Kg-dry	20	8/22/2013
Chromium	21	2		mg/Kg-dry	20	8/22/2013
Copper	180	5.1		mg/Kg-dry	20	8/22/2013
Lead	1800	1		mg/Kg-dry	20	8/22/2013
Tin	50	10	*	mg/Kg-dry	20	8/22/2013
Zinc	720	10		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	15.6	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-495-01(6-24)-081313

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 2:05:00 PM

**Lab ID:** 13080639-011B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 1800
 5
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

K - Ki D outside accepted recovery mints

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-496-01(0-6)-081313

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 3:00:00 PM

**Lab ID:** 13080639-012A **Matrix:** Soil

Analyses	Result	RL Q	ualifier	Units	DF	Date Analyzed
Mercury	SW74	71A		Prep	Date: 8/20/2013	Analyst: LB
Mercury	0.12	0.021		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	20 (SW3050	)B)	Prep	Date: 8/20/2013	Analyst: <b>JG</b>
Antimony	ND	4.4		mg/Kg-dry	20	8/22/2013
Cadmium	2.8	1.1		mg/Kg-dry	20	8/22/2013
Chromium	19	2.2		mg/Kg-dry	20	8/22/2013
Copper	64	5.5		mg/Kg-dry	20	8/22/2013
Lead	230	1.1		mg/Kg-dry	20	8/22/2013
Tin	11	11	*	mg/Kg-dry	20	8/22/2013
Zinc	380	11		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: 8/20/2013	8 Analyst: SDA
Percent Moisture	11.9	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

August 26, 2013 **Report Date: Print Date:** August 26, 2013

**Client:** Weston Solutions Client Sample ID: PA-496-01(0-6)-081313

Lab Order: 13080639 Tag Number: Fine Grained

**Project:** Pilsen Soil Site, Pilsen, Chicago, IL **Collection Date:** 8/13/2013 3:00:00 PM

Lab ID: 13080639-012B **Matrix:** Soil

**Analyses** Result RLQualifier Units DF **Date Analyzed** 

Metals by ICP/MS SW6020 (SW3050B) Prep Date: 8/22/2013 Analyst: JG 8/22/2013 Lead 360 4.6 mg/Kg-dry 100

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-497-01(0-6)-081313

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 3:50:00 PM

**Lab ID:** 13080639-013A **Matrix:** Soil

Analyses	Result	RL Q	Qualifier	Units	DF I	Date Analyzed
Mercury	SW74	71A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.4	0.024		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	20 (SW305	0B)	Prep	Date: <b>8/20/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.4		mg/Kg-dry	20	8/22/2013
Cadmium	2.2	1.1		mg/Kg-dry	20	8/22/2013
Chromium	18	2.2		mg/Kg-dry	20	8/22/2013
Copper	53	5.5		mg/Kg-dry	20	8/22/2013
Lead	460	1.1		mg/Kg-dry	20	8/22/2013
Tin	15	11	*	mg/Kg-dry	20	8/22/2013
Zinc	350	11		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	19.6	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-497-01(0-6)-081313

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 3:50:00 PM

**Lab ID:** 13080639-013B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 460
 4.9
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

August 26, 2013 **Report Date: Print Date:** August 26, 2013

**Client:** Weston Solutions **Client Sample ID:** PA-498-01(0-6)-081313

Lab Order: 13080639 Tag Number:

**Collection Date: Project:** Pilsen Soil Site, Pilsen, Chicago, IL 8/13/2013 4:50:00 PM

Lab ID: 13080639-014A Matrix:

Analyses	Result	RL	Qualifier	Units	DF 1	Date Analyzed
Mercury	SW747	'1A		Prep	Date: 8/20/2013	Analyst: <b>LB</b>
Mercury	0.17	0.02		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW602	0 (SW3	050B)	Prep	Date: 8/20/2013	Analyst: <b>JG</b>
Antimony	ND	3.9		mg/Kg-dry	20	8/22/2013
Cadmium	1.5	0.97		mg/Kg-dry	20	8/22/2013
Chromium	16	1.9		mg/Kg-dry	20	8/22/2013
Copper	38	4.8		mg/Kg-dry	20	8/22/2013
Lead	270	0.97		mg/Kg-dry	20	8/22/2013
Tin	ND	9.7	*	mg/Kg-dry	20	8/22/2013
Zinc	200	9.7		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974			Prep	Date: 8/20/2013	Analyst: SDA
Percent Moisture	13.8	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-498-01(0-6)-081313

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 4:50:00 PM

**Lab ID:** 13080639-014B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 340
 4.6
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-498-01(0-6)-081313D

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 4:55:00 PM

**Lab ID:** 13080639-015A **Matrix:** Soil

Analyses	Result	RL (	Qualifier	Units	DF I	Date Analyzed
Mercury	SW747	′1A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.17	0.02		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW602	20 (SW30	50B)	Prep	Date: <b>8/20/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.3		mg/Kg-dry	20	8/22/2013
Cadmium	1.5	1.1		mg/Kg-dry	20	8/22/2013
Chromium	14	2.2		mg/Kg-dry	20	8/22/2013
Copper	36	5.4		mg/Kg-dry	20	8/22/2013
Lead	280	1.1		mg/Kg-dry	20	8/22/2013
Tin	ND	11	*	mg/Kg-dry	20	8/22/2013
Zinc	200	11		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974			Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	14.0	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-498-01(0-6)-081313D

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 4:55:00 PM

**Lab ID:** 13080639-015B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 330
 4.8
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-498-01(6-15)-081313

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 5:00:00 PM

**Lab ID:** 13080639-016A **Matrix:** Soil

Analyses	Result	RL Q	ualifier	Units	DF I	Date Analyzed
Mercury	SW7471A			Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.31	0.019		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	20 (SW3050	0B)	Prep	Date: <b>8/20/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.4		mg/Kg-dry	20	8/22/2013
Cadmium	1.9	1.1		mg/Kg-dry	20	8/22/2013
Chromium	14	2.2		mg/Kg-dry	20	8/22/2013
Copper	41	5.5		mg/Kg-dry	20	8/22/2013
Lead	550	1.1		mg/Kg-dry	20	8/22/2013
Tin	14	11	*	mg/Kg-dry	20	8/22/2013
Zinc	380	11		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	9.9	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-498-01(6-15)-081313

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/13/2013 5:00:00 PM

**Lab ID:** 13080639-016B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 640
 4.8
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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> Report Date: August 26, 2013 Print Date: August 26, 2013

Collection Date: 8/14/2013 9:45:00 AM

Client:

Weston Solutions

Client Sample ID: PA-499-01(0-6)-081413

Lab Order:

13080639

120000000 0174

Tag Number:

Project: Lab ID

Pilsen Soil Site, Pilsen, Chicago, IL

Lab ID: 13080639-017A	Matrix: Soil						
Analyses	Result	RL Qualifie	r Units	DF	Date Analyzed		
Mercury	SW747	1A	Prep	Date: 8/20/2013	B Analyst: LB		
Mercury	0.65 J	0.042	mg/Kg-dry	2	8/21/2013		
Metals by ICP/MS	SW602	0 (SW3050B)	Prep	Date: 8/20/2013	Analyst: JG		
Antimony	ND UJ	4.5 05	mg/Kg-dry	20	8/22/2013		
Cadmium	2.5	1.1	mg/Kg-dry	20	8/22/2013		
Chromium	14	2.3	mg/Kg-dry	20	8/22/2013		
Copper	86	14	mg/Kg-dry	50	8/21/2013		
Lead	1200	1.1	mg/Kg-dry	20	8/22/2013		
Tín	26 J	11 *	mg/Kg-dry	20	8/22/2013		
Zinc	500	11	mg/Kg-dry	20	8/22/2013		
Percent Moisture	D2974		Prep	Date: 8/20/2013	Analyst: SDA		
Percent Moisture	14.3	0.2 *	va/+ 0/2	4	8/20/2013		

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Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-499-01(0-6)-081413

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 9:45:00 AM

**Lab ID:** 13080639-017B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 1100
 5
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-500-01(0-6)-081413

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 11:00:00 AM

**Lab ID:** 13080639-018A **Matrix:** Soil

Analyses	Result	RL Q	ualifier Uı	nits DF	Date Analyzed
Mercury	SW7471A			Prep Date: <b>8/20</b>	/2013 Analyst: LB
Mercury	0.88	0.065	mg/K	(g-dry 3	8/21/2013
Metals by ICP/MS	SW60	)20 (SW3050	)B)	Prep Date: 8/20	/2013 Analyst: JG
Antimony	ND	4.4	mg/K	(g-dry 20	8/22/2013
Cadmium	3.4	1.1	mg/K	(g-dry 20	8/22/2013
Chromium	26	2.2	mg/K	(g-dry 20	8/22/2013
Copper	72	5.5	mg/K	(g-dry 20	8/22/2013
Lead	760	1.1	mg/K	(g-dry 20	8/22/2013
Tin	27	11	* mg/K	(g-dry 20	8/22/2013
Zinc	620	11	mg/K	(g-dry 20	8/22/2013
Percent Moisture	D297	4		Prep Date: 8/20	/2013 Analyst: SDA
Percent Moisture	13.4	0.2	* W	t% 1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-500-01(0-6)-081413

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 11:00:00 AM

**Lab ID:** 13080639-018B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 1300
 4.8
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-500-01(6-24)-081413

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 11:05:00 AM

**Lab ID:** 13080639-019A **Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF 1	Date Analyzed
Mercury	SW7471A		Prep	Analyst: <b>LB</b>		
Mercury	1.7	0.2		mg/Kg-dry	10	8/21/2013
Metals by ICP/MS	SW60	20 (SW30	50B)	Prep	Date: 8/20/2013	Analyst: <b>JG</b>
Antimony	ND	3.9		mg/Kg-dry	20	8/22/2013
Cadmium	3.1	0.97		mg/Kg-dry	20	8/22/2013
Chromium	22	1.9		mg/Kg-dry	20	8/22/2013
Copper	88	4.8		mg/Kg-dry	20	8/22/2013
Lead	930	0.97		mg/Kg-dry	20	8/22/2013
Tin	28	9.7	*	mg/Kg-dry	20	8/22/2013
Zinc	690	9.7		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974			Prep	Date: 8/20/2013	Analyst: SDA
Percent Moisture	12.9	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL -  $Reporting\ /\ Quantitation\ Limit\ for\ the\ analysis$ 

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-500-01(6-24)-081413

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 11:05:00 AM

**Lab ID:** 13080639-019B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 1400
 5
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-501-01(0-6)-081413

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 12:00:00 PM

**Lab ID:** 13080639-020A **Matrix:** Soil

Analyses	Result	RL Qu	ıalifier U	Inits	DF	Date Analyzed
Mercury	SW7471A			Prep	Analyst: <b>LB</b>	
Mercury	0.081	0.026	mg/	Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	020 (SW3050	В)	Prep	Date: <b>8/20/2013</b>	Analyst: <b>JG</b>
Antimony	ND	5.2	mg/	Kg-dry	20	8/22/2013
Cadmium	1.4	1.3	mg/	Kg-dry	20	8/22/2013
Chromium	22	2.6	mg/	Kg-dry	20	8/22/2013
Copper	28	6.5	mg/	Kg-dry	20	8/22/2013
Lead	66	1.3	mg/	Kg-dry	20	8/22/2013
Tin	ND	13	* mg/	Kg-dry	20	8/22/2013
Zinc	150	13	mg/	Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	30.7	0.2	* V	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-501-01(0-6)-081413

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 12:00:00 PM

**Lab ID:** 13080639-020B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 66
 6.5
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-502-01(0-6)-081413

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 2:00:00 PM

**Lab ID:** 13080639-021A **Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF I	Date Analyzed
Mercury	SW7471A			Prep	Analyst: <b>LB</b>	
Mercury	1	0.22		mg/Kg-dry	10	8/21/2013
Metals by ICP/MS	SW602	20 (SW30	50B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.8		mg/Kg-dry	20	8/22/2013
Cadmium	7.3	1.2		mg/Kg-dry	20	8/22/2013
Chromium	60	2.4		mg/Kg-dry	20	8/22/2013
Copper	300	6		mg/Kg-dry	20	8/22/2013
Lead	780	1.2		mg/Kg-dry	20	8/22/2013
Tin	20	12	*	mg/Kg-dry	20	8/22/2013
Zinc	610	12		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974			Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	23.1	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-502-01(0-6)-081413

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 2:00:00 PM

**Lab ID:** 13080639-021B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 620
 5.5
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-502-01(6-24)-081413

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 2:05:00 PM

**Lab ID:** 13080639-022A **Matrix:** Soil

Analyses	Result	RL (	Qualifier	Units	DF I	Date Analyzed
Mercury	SW747	71A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	1.2	0.25		mg/Kg-dry	10	8/21/2013
Metals by ICP/MS	SW602	20 (SW30	50B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.5		mg/Kg-dry	20	8/22/2013
Cadmium	4.9	1.1		mg/Kg-dry	20	8/22/2013
Chromium	38	2.3		mg/Kg-dry	20	8/22/2013
Copper	91	5.6		mg/Kg-dry	20	8/22/2013
Lead	580	1.1		mg/Kg-dry	20	8/22/2013
Tin	26	11	*	mg/Kg-dry	20	8/22/2013
Zinc	490	11		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974			Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	22.1	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

5 - Spike Recovery outside accepted recovery min

R - RPD outside accepted recovery limitsE - Value above quantitation range

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-502-01(6-24)-081413

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 2:05:00 PM

**Lab ID:** 13080639-022B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 770
 5.7
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-503-01(0-6)-081413

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 3:15:00 PM

**Lab ID:** 13080639-023A **Matrix:** Soil

Analyses	Result	RL Q	ualifier	Units	DF I	Date Analyzed
Mercury	SW7471A			Prep	Analyst: <b>LB</b>	
Mercury	0.64	0.024		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	20 (SW3050	B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.7		mg/Kg-dry	20	8/22/2013
Cadmium	6.1	1.2		mg/Kg-dry	20	8/22/2013
Chromium	25	2.4		mg/Kg-dry	20	8/22/2013
Copper	130	5.9		mg/Kg-dry	20	8/22/2013
Lead	1400	1.2		mg/Kg-dry	20	8/22/2013
Tin	21	12	*	mg/Kg-dry	20	8/22/2013
Zinc	830	12		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	17.1	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

5 - Spike Recovery outside accepted recovery min

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

August 26, 2013 **Report Date: Print Date:** August 26, 2013

**Client:** Weston Solutions Client Sample ID: PA-503-01(0-6)-081413

Lab Order: 13080639 Tag Number: Fine Grained

**Project:** Pilsen Soil Site, Pilsen, Chicago, IL **Collection Date:** 8/14/2013 3:15:00 PM

Lab ID: 13080639-023B **Matrix:** Soil

**Analyses** Result RLQualifier Units DF **Date Analyzed** 

Metals by ICP/MS SW6020 (SW3050B) Prep Date: 8/22/2013 Analyst: JG 8/22/2013 Lead 1700 5.8 mg/Kg-dry 100

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-503-01(6-24)-081413

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 3:20:00 PM

**Lab ID:** 13080639-024A **Matrix:** Soil

Analyses	Result	RL Q	Qualifie	r Units	DF I	Date Analyzed
Mercury	SW7471A		Prep	Analyst: <b>LB</b>		
Mercury	0.74	0.062		mg/Kg-dry	3	8/21/2013
Metals by ICP/MS	SW60	)20 (SW305	i0B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.1		mg/Kg-dry	20	8/22/2013
Cadmium	5.1	1		mg/Kg-dry	20	8/22/2013
Chromium	23	2.1		mg/Kg-dry	20	8/22/2013
Copper	140	5.2		mg/Kg-dry	20	8/22/2013
Lead	840	1		mg/Kg-dry	20	8/22/2013
Tin	110	10	*	mg/Kg-dry	20	8/22/2013
Zinc	800	10		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	12.9	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-503-01(6-24)-081413

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/14/2013 3:20:00 PM

**Lab ID:** 13080639-024B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 1200
 4.8
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

Report Date: August 26, 2013 **Print Date:** August 26, 2013

**Client:** Weston Solutions **Client Sample ID:** PA-504-01(0-6)-081513

Lab Order: 13080639 Tag Number:

**Collection Date:** 8/15/2013 9:15:00 AM **Project:** Pilsen Soil Site, Pilsen, Chicago, IL

Lab ID: 13080639-025A Matrix: Soil

Analyses	Result	RL Ç	Qualifier	Units	DF I	Date Analyzed
Mercury	SW74	171A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.19	0.025		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	)20 (SW305	60B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.8		mg/Kg-dry	20	8/22/2013
Cadmium	1.8	1.2		mg/Kg-dry	20	8/22/2013
Chromium	21	2.4		mg/Kg-dry	20	8/22/2013
Copper	41	6.1		mg/Kg-dry	20	8/22/2013
Lead	390	1.2		mg/Kg-dry	20	8/22/2013
Tin	26	12	*	mg/Kg-dry	20	8/22/2013
Zinc	240	12		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	20.2	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-504-01(0-6)-081513

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 9:15:00 AM

**Lab ID:** 13080639-025B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 330
 5.1
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

R - RFD outside accepted recovery mini

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-505-01(0-6)-081513

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 10:25:00 AM

**Lab ID:** 13080639-026A **Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF I	Date Analyzed
Mercury	SW7471A			Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.97	0.077		mg/Kg-dry	3	8/21/2013
Metals by ICP/MS	SW60	020 (SW30	50B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	5.3		mg/Kg-dry	20	8/22/2013
Cadmium	5.5	1.3		mg/Kg-dry	20	8/22/2013
Chromium	53	2.6		mg/Kg-dry	20	8/22/2013
Copper	170	6.6		mg/Kg-dry	20	8/22/2013
Lead	1300	1.3		mg/Kg-dry	20	8/22/2013
Tin	33	13	*	mg/Kg-dry	20	8/22/2013
Zinc	1300	13		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974			Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	25.4	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-505-01(0-6)-081513

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 10:25:00 AM

**Lab ID:** 13080639-026B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 1900
 5.1
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

 $\boldsymbol{B}$  - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-505-01(0-6)-081513D

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 10:30:00 AM

**Lab ID:** 13080639-027A **Matrix:** Soil

Analyses	Result	RL Q	ualifier 1	Units	DF I	Date Analyzed
Mercury	SW7471A			Prep	Analyst: <b>LB</b>	
Mercury	0.87	0.027	mg	g/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	)20 (SW3050	)B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.5	mg	g/Kg-dry	20	8/22/2013
Cadmium	6	1.1	mg	g/Kg-dry	20	8/22/2013
Chromium	35	2.2	mg	g/Kg-dry	20	8/22/2013
Copper	180	5.6	mg	g/Kg-dry	20	8/22/2013
Lead	1400	1.1	mg	g/Kg-dry	20	8/22/2013
Tin	30	11	* mg	g/Kg-dry	20	8/22/2013
Zinc	1300	11	mg	g/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	24.9	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-505-01(0-6)-081513D

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 10:30:00 AM

**Lab ID:** 13080639-027B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 1600
 5.3
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

R - RFD outside accepted recovery mini

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-506-01(0-6)-081513

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 11:40:00 AM

**Lab ID:** 13080639-028A **Matrix:** Soil

Analyses	Result	RL (	Qualifier	r Units	DF I	Date Analyzed
Mercury	SW74	171A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.99	0.063		mg/Kg-dry	3	8/21/2013
Metals by ICP/MS	SW60	)20 (SW305	50B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.6		mg/Kg-dry	20	8/22/2013
Cadmium	4.1	1.1		mg/Kg-dry	20	8/22/2013
Chromium	28	2.3		mg/Kg-dry	20	8/22/2013
Copper	94	5.7		mg/Kg-dry	20	8/22/2013
Lead	940	1.1		mg/Kg-dry	20	8/22/2013
Tin	17	11	*	mg/Kg-dry	20	8/22/2013
Zinc	780	11		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	12.7	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-506-01(0-6)-081513

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 11:40:00 AM

**Lab ID:** 13080639-028B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 1400
 4.8
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-507-01(0-6)-081513

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 1:30:00 PM

**Lab ID:** 13080639-029A **Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF I	Date Analyzed
Mercury	SW7471A		Prep Date: <b>8/20/201</b>		Analyst: <b>LB</b>	
Mercury	0.25	0.02		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW602	20 (SW30	)50B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4		mg/Kg-dry	20	8/22/2013
Cadmium	3.2	0.99		mg/Kg-dry	20	8/22/2013
Chromium	15	2		mg/Kg-dry	20	8/22/2013
Copper	48	4.9		mg/Kg-dry	20	8/22/2013
Lead	270	0.99		mg/Kg-dry	20	8/22/2013
Tin	ND	9.9	*	mg/Kg-dry	20	8/22/2013
Zinc	280	9.9		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974			Prep	Date: <b>8/20/2013</b>	Analyst: <b>SDA</b>
Percent Moisture	11.3	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-507-01(0-6)-081513

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 1:30:00 PM

**Lab ID:** 13080639-029B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 630
 4.7
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-508-01(0-6)-081513

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 2:45:00 PM

**Lab ID:** 13080639-030A **Matrix:** Soil

Analyses	Result	RL	Qualifier	Units	DF I	Date Analyzed
Mercury	SW7471A		Prep Date: <b>8/20/201</b> 3		Analyst: <b>LB</b>	
Mercury	0.48	0.02		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW602	0 (SW30	)50B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.4		mg/Kg-dry	20	8/22/2013
Cadmium	2.7	1.1		mg/Kg-dry	20	8/22/2013
Chromium	26	2.2		mg/Kg-dry	20	8/22/2013
Copper	52	5.5		mg/Kg-dry	20	8/22/2013
Lead	580	1.1		mg/Kg-dry	20	8/22/2013
Tin	ND	11	*	mg/Kg-dry	20	8/22/2013
Zinc	400	11		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974			Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	15.2	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-508-01(0-6)-081513

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 2:45:00 PM

**Lab ID:** 13080639-030B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 290
 4.8
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-508-01(6-24)-081513

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 2:50:00 PM

**Lab ID:** 13080639-031A **Matrix:** Soil

Analyses	Result	RL Q	ualifie	r Units	DF I	Date Analyzed
Mercury	SW7471A		Prep	Analyst: <b>LB</b>		
Mercury	0.34	0.023		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	)20 (SW3050	0B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.1		mg/Kg-dry	20	8/22/2013
Cadmium	1.8	1		mg/Kg-dry	20	8/22/2013
Chromium	9	2.1		mg/Kg-dry	20	8/22/2013
Copper	25	5.2		mg/Kg-dry	20	8/22/2013
Lead	140	1		mg/Kg-dry	20	8/22/2013
Tin	12	10	*	mg/Kg-dry	20	8/22/2013
Zinc	210	10		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	19.2	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-508-01(6-24)-081513

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 2:50:00 PM

**Lab ID:** 13080639-031B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 110
 4.4
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

K - KFD outside accepted recovery mint

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-509-01(0-6)-081513

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 4:00:00 PM

**Lab ID:** 13080639-032A **Matrix:** Soil

Analyses	Result	RL Q	Qualifie	r Units	DF I	Date Analyzed
Mercury	SW7471A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>	
Mercury	1.2	0.076		mg/Kg-dry	3	8/21/2013
Metals by ICP/MS	SW60	20 (SW305	0B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	5		mg/Kg-dry	20	8/22/2013
Cadmium	4.7	1.2		mg/Kg-dry	20	8/22/2013
Chromium	40	2.5		mg/Kg-dry	20	8/22/2013
Copper	120	6.2		mg/Kg-dry	20	8/22/2013
Lead	1400	1.2		mg/Kg-dry	20	8/22/2013
Tin	53	12	*	mg/Kg-dry	20	8/22/2013
Zinc	830	12		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	21.3	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-509-01(0-6)-081513

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 4:00:00 PM

**Lab ID:** 13080639-032B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 1400
 4.9
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-510-01(0-6)-081513

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 4:50:00 PM

**Lab ID:** 13080639-033A **Matrix:** Soil

Analyses	Result	RL (	Qualifier	· Units	DF I	Date Analyzed
Mercury	SW74	71A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.99	0.07		mg/Kg-dry	3	8/21/2013
Metals by ICP/MS	SW60	20 (SW305	50B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.3		mg/Kg-dry	20	8/22/2013
Cadmium	4.1	1.1		mg/Kg-dry	20	8/22/2013
Chromium	28	2.1		mg/Kg-dry	20	8/22/2013
Copper	100	5.4		mg/Kg-dry	20	8/22/2013
Lead	1700	1.1		mg/Kg-dry	20	8/22/2013
Tin	25	11	*	mg/Kg-dry	20	8/22/2013
Zinc	790	11		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974	ļ		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	16.0	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-510-01(0-6)-081513

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/15/2013 4:50:00 PM

**Lab ID:** 13080639-033B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 2200
 4.8
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-511-01(0-6)-081613

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 8:30:00 AM

**Lab ID:** 13080639-034A **Matrix:** Soil

Analyses	Result	RL Qı	ıalifier	Units	DF I	Date Analyzed
Mercury	SW74	71A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.2	0.021	rr	ng/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	20 (SW3050	В)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.4	m	ng/Kg-dry	20	8/22/2013
Cadmium	1.7	1.1	m	ng/Kg-dry	20	8/22/2013
Chromium	21	2.2	m	ng/Kg-dry	20	8/22/2013
Copper	40	5.6	m	ng/Kg-dry	20	8/22/2013
Lead	210	1.1	m	ng/Kg-dry	20	8/22/2013
Tin	ND	11	* m	ng/Kg-dry	20	8/22/2013
Zinc	170	11	m	ng/Kg-dry	20	8/22/2013
Percent Moisture	D2974	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	15.1	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

R - RFD outside accepted recovery mini

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-511-01(0-6)-081613

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 8:30:00 AM

**Lab ID:** 13080639-034B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 370
 4.6
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

**Client:** Weston Solutions **Client Sample ID:** PA-512-01(0-6)-081613

Lab Order: 13080639 Tag Number:

**Collection Date: Project:** Pilsen Soil Site, Pilsen, Chicago, IL 8/16/2013 9:20:00 AM

Lab ID: 13080639-035A Matrix:

Analyses	Result	RL Q	ualifie	r Units	DF	Date Analyzed
Mercury	SW74	71A		Prep	Date: 8/20/2013	Analyst: <b>LB</b>
Mercury	0.27	0.02		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	20 (SW305	0B)	Prep	Date: 8/21/2013	Analyst: <b>JG</b>
Antimony	ND	4.7		mg/Kg-dry	20	8/22/2013
Cadmium	1.7	1.2		mg/Kg-dry	20	8/22/2013
Chromium	19	2.3		mg/Kg-dry	20	8/22/2013
Copper	37	5.9		mg/Kg-dry	20	8/22/2013
Lead	320	1.2		mg/Kg-dry	20	8/22/2013
Tin	ND	12	*	mg/Kg-dry	20	8/22/2013
Zinc	230	12		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974	ļ		Prep	Date: 8/20/2013	Analyst: SDA
Percent Moisture	16.2	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-512-01(0-6)-081613

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 9:20:00 AM

**Lab ID:** 13080639-035B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 520
 4.6
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-513-01(0-6)-081613

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 9:50:00 AM

**Lab ID:** 13080639-036A **Matrix:** Soil

Analyses	Result	RL (	Qualifier	Units	DF I	Date Analyzed
Mercury	SW74	171A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.2	0.022		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	20 (SW30	50B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.2		mg/Kg-dry	20	8/22/2013
Cadmium	1.4	1		mg/Kg-dry	20	8/22/2013
Chromium	31	2.1		mg/Kg-dry	20	8/22/2013
Copper	45	5.2		mg/Kg-dry	20	8/22/2013
Lead	170	1		mg/Kg-dry	20	8/22/2013
Tin	ND	10	*	mg/Kg-dry	20	8/22/2013
Zinc	200	10		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	19.7	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-513-01(0-6)-081613

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 9:50:00 AM

**Lab ID:** 13080639-036B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 230
 4.7
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-513-01(0-6)-081613D

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 9:55:00 AM

**Lab ID:** 13080639-037A **Matrix:** Soil

Analyses	Result	RL (	Qualifier	Units	DF I	Date Analyzed
Mercury	SW74	171A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.28	0.025		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	)20 (SW305	50B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.2		mg/Kg-dry	20	8/22/2013
Cadmium	1.3	1		mg/Kg-dry	20	8/22/2013
Chromium	23	2.1		mg/Kg-dry	20	8/22/2013
Copper	42	5.2		mg/Kg-dry	20	8/22/2013
Lead	140	1		mg/Kg-dry	20	8/22/2013
Tin	ND	10	*	mg/Kg-dry	20	8/22/2013
Zinc	200	10		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	20.6	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-513-01(0-6)-081613D

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 9:55:00 AM

**Lab ID:** 13080639-037B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 210
 4.8
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-514-01(0-6)-081613

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 11:25:00 AM

**Lab ID:** 13080639-038A **Matrix:** Soil

Analyses	Result	RL Q	ualifier	Units	DF	Date Analyzed
Mercury	SW74	171A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.28	0.024	r	mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	)20 (SW3050	0B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.3	r	mg/Kg-dry	20	8/22/2013
Cadmium	2.1	1.1	r	mg/Kg-dry	20	8/22/2013
Chromium	23	2.1	r	mg/Kg-dry	20	8/22/2013
Copper	59	5.4	r	mg/Kg-dry	20	8/22/2013
Lead	410	1.1	r	mg/Kg-dry	20	8/22/2013
Tin	ND	11	* r	mg/Kg-dry	20	8/22/2013
Zinc	370	11	r	mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	18.2	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-514-01(0-6)-081613

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 11:25:00 AM

**Lab ID:** 13080639-038B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 430
 5
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

H - Holding time exceeded

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Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-514-01(6-24)-081613

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 11:30:00 AM

**Lab ID:** 13080639-039A **Matrix:** Soil

Analyses	Result	RL (	Qualifier	· Units	DF I	Date Analyzed
Mercury	SW74	SW7471A		Prep Date: <b>8/20/201</b>		Analyst: <b>LB</b>
Mercury	0.63	0.019		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	)20 (SW305	50B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.7		mg/Kg-dry	20	8/22/2013
Cadmium	3.7	1.2		mg/Kg-dry	20	8/22/2013
Chromium	24	2.3		mg/Kg-dry	20	8/22/2013
Copper	92	5.9		mg/Kg-dry	20	8/22/2013
Lead	760	1.2		mg/Kg-dry	20	8/22/2013
Tin	31	12	*	mg/Kg-dry	20	8/22/2013
Zinc	1700	12		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	17.9	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-514-01(6-24)-081613

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 11:30:00 AM

**Lab ID:** 13080639-039B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 830
 4.7
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

5 - Spike Recovery outside accepted recovery lilling

R - RPD outside accepted recovery limitsE - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP 1L300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client:

Weston Solutions

Client Sample ID: PA-515-01(0-6)-081613

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Lab Order:

13080639

Tag Number:

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

rag rumber.

Collection Date: 8/16/2013 1:30:00 PM

Lab ID:

13080639-040A

Matrix: Soil

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Mercury	SW747	71A	V	Prep	Date: 8/20/2013	Analyst: LB
Mercury	0.89 J	0.096		mg/Kg-dry	5	8/21/2013
Metals by ICP/MS	SW602	20 (SW3	050B)	Prep	Date: 8/23/2013	Analyst: JG
Antimony	9.2 1	4.8		mg/Kg-dry	20	8/23/2013
Cadmium	7.4	1.2		mg/Kg-dry	20	8/23/2013
Chromium	22	2.4		mg/Kg-dry	20	8/23/2013
Copper	140	6		mg/Kg-dry	20	8/23/2013
Lead	1600	1.2		mg/Kg-dry	20	8/23/2013
Tin	29 J	12	*	mg/Kg-dry	20	8/23/2013
Zinc	1100	12		mg/Kg-dry	20	8/23/2013
Percent Moisture	D2974			Prep	Date: 8/20/2013	Analyst: SDA
Percent Moisture	19.1	0.2	*	wt%	1	8/20/2013



ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-515-01(0-6)-081613

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 1:30:00 PM

**Lab ID:** 13080639-040B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 1600
 4.9
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-516-01(0-6)-081613

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 2:50:00 PM

**Lab ID:** 13080639-041A **Matrix:** Soil

Analyses	Result	RL (	Qualifier	Units	DF I	Date Analyzed
Mercury	SW74	71A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.31	0.026		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	20 (SW30	50B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	4.8		mg/Kg-dry	20	8/22/2013
Cadmium	5.3	1.2		mg/Kg-dry	20	8/22/2013
Chromium	32	2.4		mg/Kg-dry	20	8/22/2013
Copper	70	6		mg/Kg-dry	20	8/22/2013
Lead	520	1.2		mg/Kg-dry	20	8/22/2013
Tin	ND	12	*	mg/Kg-dry	20	8/22/2013
Zinc	500	12		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	23.3	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-516-01(0-6)-081613

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 2:50:00 PM

**Lab ID:** 13080639-041B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 450
 4.9
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-516-01(0-6)-081613D

Lab Order: 13080639 Tag Number:

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 2:55:00 PM

**Lab ID:** 13080639-042A **Matrix:** Soil

Analyses	Result	RL Q	<b>Q</b> ualifier	Units	DF I	Date Analyzed
Mercury	SW74	171A		Prep	Date: <b>8/20/2013</b>	Analyst: <b>LB</b>
Mercury	0.62	0.022		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	)20 (SW305	0B)	Prep	Date: <b>8/21/2013</b>	Analyst: <b>JG</b>
Antimony	ND	5.1		mg/Kg-dry	20	8/22/2013
Cadmium	4.2	1.3		mg/Kg-dry	20	8/22/2013
Chromium	33	2.5		mg/Kg-dry	20	8/22/2013
Copper	67	6.3		mg/Kg-dry	20	8/22/2013
Lead	560	1.3		mg/Kg-dry	20	8/22/2013
Tin	ND	13	*	mg/Kg-dry	20	8/22/2013
Zinc	470	13		mg/Kg-dry	20	8/22/2013
Percent Moisture	D297	4		Prep	Date: <b>8/20/2013</b>	Analyst: SDA
Percent Moisture	24.0	0.2	*	wt%	1	8/20/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL -  $Reporting\ /\ Quantitation\ Limit\ for\ the\ analysis$ 

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

Client: Weston Solutions Client Sample ID: PA-516-01(0-6)-081613D

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 2:55:00 PM

**Lab ID:** 13080639-042B **Matrix:** Soil

Analyses Result RL Qualifier Units DF Date Analyzed

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 470
 5
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

 $\boldsymbol{B}$  - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

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> Report Date: August 26, 2013 Print Date: August 26, 2013

Client:

Weston Solutions

Client Sample ID: PA-516-01(6-18)-081613

Lab Order:

13080639

Tag Number:

Collection Date: 8/16/2013 3:00:00 PM

Project:

Pilsen Soil Site, Pilsen, Chicago, IL

Matrix: Soil

13080639-043A Lab ID:

Analyses	Result	RL	Qualifier	Units	DF	Date Analyzed
Mercury	SW74	71A		Prep	Date: 8/20/2013	Analyst: LB
Mercury	0.5	0.022		mg/Kg-dry	1	8/21/2013
Metals by ICP/MS	SW60	20 (SW3	050B)	Prep	Date: 8/21/2013	Analyst: JG
Antimony	ND US	4.8		mg/Kg-dry	20	8/22/2013
Cadmium	3.2	1.2		mg/Kg-dry	20	8/22/2013
Chromium	24	2.4		mg/Kg-dry	20	8/22/2013
Copper	64	6		mg/Kg-dry	20	8/22/2013
Lead	550	1.2		mg/Kg-dry	20	8/22/2013
Tin	ND	12	*	mg/Kg-dry	20	8/22/2013
Zinc	610	12		mg/Kg-dry	20	8/22/2013
Percent Moisture	D2974			Prep	Date: 8/20/2013	Analyst: SDA
Percent Moisture	20.9	0.2	*	wt%	1	8/20/2013



ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

**Analyses** 

2242 West Harrison St., Suite 200, Chicago, IL 60612-3766

Tel: (312) 733-0551 Fax: (312) 733-2386 STATinfo@STATAnalysis.com

Accreditation Numbers: IEPA ELAP 100445; ORELAP IL300001; AIHA 101160; NVLAP LabCode 101202-

**Report Date:** August 26, 2013 **Print Date:** August 26, 2013

DF

**Date Analyzed** 

Client: Weston Solutions Client Sample ID: PA-516-01(6-18)-081613

**Lab Order:** 13080639 **Tag Number:** Fine Grained

Result

Project: Pilsen Soil Site, Pilsen, Chicago, IL Collection Date: 8/16/2013 3:00:00 PM

**Lab ID:** 13080639-043B **Matrix:** Soil

Metala hu ICD/MC

RL

Qualifier

Units

 Metals by ICP/MS
 SW6020 (SW3050B)
 Prep Date: 8/22/2013
 Analyst: JG

 Lead
 740
 5
 mg/Kg-dry
 100
 8/22/2013

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

HT - Sample received past holding time

\* - Non-accredited parameter

Qualifiers:

RL - Reporting / Quantitation Limit for the analysis

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

STAT Analysis Corporation

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e-mail address: STATinfo@STATAnalysis.com AIHA, NVLAP and NELAP accredited

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Company: Weston Solution	ons, Inc	14						P.0	O. No	:		-								1 0	1
Project Number:			Clien	t Tra	cking	g No.		L						/	1	1	1	11	11	77	11
Project Name: Pilsen Soil	Site							Qu	ote N	0.:			,	//	/	//	//	//	//	//	///
Project Location: Pilsen, Chic	ago, Il											1.5	/	//	/	//	//	//	//	//	//
Sampler(s): ), SENA & W	BUDD											/	/	//	/	//	//	//	///	//	
Report To: Tonya Balla	4 4 1 10	Phone:	847	- 9	18 -	-40	94				/	200	329	//	/	//	//	//	///	/	
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e-mail address: STATinfo(a)STATAnalysis.com AIHA, NVLAP and NELAP accredited

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Project Name: Pilsen Soil Site								Qı	note N	vo.:		-11		/	//	/	//	//	//	//	//	//	//
Project Location: Pilsch, (Niggo,	L											Ш	/	//	//	/	/	//	//	//	/	//	//
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Serial Number 68017

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						O Alt	ernate La	boratory Name/	Location	necoo		
THE LEADER IN ENVIRONMENTA PROJECT REFERENCE						5	141	Analysi	S (orp	Phone: Fax:		
Project reference Pilsen Soil Sile	PROJECT NO	,	PROJECT LOCATIO (STATE)	0.76	ATRIX YPE	11.4			RED ANALYSIS		PAGE	1 OF 7
TAL (LAB) PROJECT MANAGER	P.O. NUMBER		CONTRACT NO.	TI							STANDARD F	3 of 3
CLIENT (SITE) PM TONYO Balla	CLIENT PHON	-918-409L	CLIENT FAX	INDICATE	SOLID OR SEMISOLID AIR NONAQUEOUS LIQUID (OIL SOLVENT)	metals	Five-9:22 lead				DELIVERY DATE DU	Ø
Weston Solutions, Inc CLIENT ADDRESS 750 E BUNKER CT	CLIENT E-MAI		dutions com	COMPOSITE (C) OR GRAB (G) INDICAT AQUEOUS (WATER)	OLID OLID (OII S	Select n	1026-W				EXPEDITED F DELIVERY (SURCHARGE	
COMPANY CONTRACTING THIS WORK (IF a	applicable)			(C) O	MISC	00	LE	34			DATE DU	
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GIGNATURE)	DATE		CUSTODY INTACT YES O NO	CUSTOD SEAL NO		SAVANI LOG NO		LABORATOR	RY REMARKS	13	30800	039

### Sample Receipt Checklist

Client Name WESTON VERNON HILLS			Date and Tim	e Received:	8/16/2013 4:42:00 PM
Work Order Number 13080639			Received by:	DO	
Checklist completed by:	Date	7/13	Reviewed by:	EMIP	\$30/13 Date
Matrix: Ca	rrier name <u>Clie</u>	nt Delivere	į		
Shipping container/cooler in good condition?	Yes	•	No 🗆	Not Present	
Custody seals intact on shippping container/cooler?	Yes		No 🗆	Not Present	
Custody seals intact on sample bottles?	Yes		No 🗆	Not Present	
Chain of custody present?	Yes	~	No 🗆		
Chain of custody signed when relinquished and received?	Yes	<b>V</b>	No 🗆		
Chain of custody agrees with sample labels/containers?	Yes	V	No 🗆		
Samples in proper container/bottle?	Yes	V	No 🗆		
Sample containers intact?	Yes	<b>V</b>	No 🗌		
Sufficient sample volume for indicated test?	Yes	<b>V</b>	No 🗆		
All samples received within holding time?	Yes	~	No 🗆		
Container or Temp Blank temperature in compliance?	Yes	V	No 🗌	Temperature	4.5 °C
Water - VOA vials have zero headspace? No VOA	vials submitted		Yes 🔲	No 🗆	
Water - Samples pH checked?	Yes		No 🗆	Checked by:	
Water - Samples properly preserved?	Yes		No 🗌	oH Adjusted?	
Any No response must be detailed in the comments section	n below.			550000	
Comments:					
Client / Person Date contacted:	octed:		Contac	ted by:	
Response:	-				

#### PREP BATCH REPORT

Prep Start Date: 8/23/2013 11:45:47
Prep End Date: 8/23/2013 2:30:00 P

Prep Factor Units:

Prep Batch 71524 Prep Code: M\_S\_PREP Technician: VA mL/g

Sample ID	Matrix	рН	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS2 8/23/13			1	0	0	50	50.000	8/23/2013	8/23/2013
ILCSS2 8/23/13			1	0	0	50	50.000	8/23/2013	8/23/2013
13080662-001B	Soil		1.05	0	0	50	47.619	8/23/2013	8/23/2013
13080701-001B	Soil		1.065	0	0	50	46.948	8/23/2013	8/23/2013
13080701-002B	Soil		1.121	0	0	50	44.603	8/23/2013	8/23/2013
13080701-003B	Soil		1.054	0	0	50	47.438	8/23/2013	8/23/2013
13080701-003BMS	Soil		1.053	0	0	50	47.483	8/23/2013	8/23/2013
13080701-003BMSD	Soil		1.052	0	0	50	47.529	8/23/2013	8/23/2013
13080701-004B	Soil		1.024	0	0	50	48.828	8/23/2013	8/23/2013
13080701-005B	Soil		1.034	0	0	50	48.356	8/23/2013	8/23/2013
13080701-006B	Soil		1.048	0	0	50	47.710	8/23/2013	8/23/2013
13080701-007B	Soil		1.04	0	0	50	48.077	8/23/2013	8/23/2013
13080701-008B	Soil		1.029	0	0	50	48.591	8/23/2013	8/23/2013
13080807-001A	Soil		1.048	0	0	50	47.710	8/23/2013	8/23/2013
13080807-002A	Soil		1.141	0	0	50	43.821	8/23/2013	8/23/2013
13080807-003A	Soil		1.078	0	0	50	46.382	8/23/2013	8/23/2013
13080768-001B	Soil		1.09	0	0	50	45.872	8/23/2013	8/23/2013
13080768-003B	Soil		1.071	0	0	50	46.685	8/23/2013	8/23/2013
13080768-004B	Soil		1.02	0	0	50	49.020	8/23/2013	8/23/2013
13080768-006B	Soil		1.02	0	0	50	49.020	8/23/2013	8/23/2013
13080768-008B	Soil		1.081	0	0	50	46.253	8/23/2013	8/23/2013
13080639-040A	Soil		1.031	0	0	50	48.497	8/23/2013	8/23/2013
13080639-040AMS	Soil		1.04	0	0	50	48.077	8/23/2013	8/23/2013
13080639-040AMSD	Soil		1.036	0	0	50	48.263	8/23/2013	8/23/2013

Pilsen Soil Site, Pilsen, Chicago, IL

**Work Order:** 13080639

**Project:** 

ANALYTICAL QC SUMMARY REPORT

**BatchID: 71524** 

Sample ID	IMBS2 8/23/13	SampType:	MBLK	TestCod	e: M_ICPMS	S_S Units: mg/Kg		Prep Date	e: <b>8/23/2</b> 0	013	Run ID: ICI	PMS_130823	ВА
Client ID:	ZZZZZ	Batch ID:	71524	TestN	o: <b>SW6020</b>			Analysis Date	e: <b>8/23/2</b> 0	013	SeqNo: 25	00386	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony			ND	1.0									
Cadmium			0.135	0.25									J
Chromium			0.137	0.50									J
Copper			ND	1.2									
Lead			0.224	0.25									J
Tin			1.592	2.5									J*
Zinc			ND	2.5									
Sample ID	ILCSS2 8/23/13	SampType:	LCS	TestCod	e: M_ICPMS	S_S Units: mg/Kg		Prep Date	e: <b>8/23/2</b> 0	013	Run ID: ICI	PMS_130823	ВА
Client ID:	ZZZZZ	Batch ID:	71524	TestN	o: <b>SW6020</b>			Analysis Date	e: <b>8/23/2</b> 0	013	SeqNo: 25	00387	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony			14.95	1.0	12.5	0	120	80	120	0	0		
Cadmium			24.66	0.25	25	0.135	98.1	80	120	0	0		
Chromium			25.41	0.50	25	0.137	101	80	120	0	0		
Copper			25.3	1.2	25	0	101	80	120	0	0		
Lead			25.23	0.25	25	0.224	100	80	120	0	0		
Tin			14.32	2.5	12.5	1.592	102	80	120	0	0		*
Zinc			23.55	2.5	25	0	94.2	80	120	0	0		
Sample ID	13080639-040AMS	SampType:	MS	TestCod	e: M_ICPMS	S_S Units: mg/Kg	-dry	Prep Date	e: <b>8/23/2</b> 0	013	Run ID: ICI	PMS-2_1308	23A
Client ID:	PA-515-01(0-6)-0816	Batch ID:	71524	TestN	o: <b>SW6020</b>			Analysis Date	e: <b>8/23/2</b> 0	013	SeqNo: 25	00330	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony			21.14	4.8	14.86	9.154	80.7	75	125	0	0		
Cadmium			36.08	1.2	29.71	7.403	96.5	75	125	0	0		
Chromium			53.16	2.4	29.71	22.17	104	75	125	0	0		
Copper			179.1	5.9	29.71	136.9	142	75	125	0	0		S
Lead			1751	1.2	29.71	1558	649	75	125	0	0		S
Zinc			1031	12	29.71	1052	-70.6	75	125	0	0		S

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

**Work Order:** 13080639

ANALYTICAL QC SUMMARY REPORT

Project: Pilsen Soil Site, Pilsen, Chicago, IL BatchID: 71524

Sample ID	13080639-040AMS	SampType:	мѕ	TestCode	e: M_ICPMS	S_S Units: mg/	/Kg-dry	Prep Date	8/23/2	013	Run ID: IC	PMS_130823	3A
Client ID:	PA-515-01(0-6)-0816	Batch ID:	71524	TestNo	o: <b>SW6020</b>			Analysis Date	: 8/23/2	013	SeqNo: 25	00421	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tin			68.52	12	14.86	28.9	267	75	125	0	0		S*
Sample ID	13080639-040AMSD	SampType:	MSD	TestCode	e: M_ICPMS	S_S Units: mg/	/Kg-dry	Prep Date	8/23/2	013	Run ID: IC	PMS-2_1308	23A
Client ID:	PA-515-01(0-6)-0816	Batch ID:	71524	TestNo	o: <b>SW6020</b>			Analysis Date	: 8/23/2	013	SeqNo: 25	00332	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony			20.46	4.8	14.91	9.154	75.8	75	125	21.14	3.31	20	
Cadmium			38.45	1.2	29.83	7.403	104	75	125	36.08	6.36	20	
Chromium			56.9	2.4	29.83	22.17	116	75	125	53.16	6.80	20	
Copper			199.7	6.0	29.83	136.9	211	75	125	179.1	10.9	20	S
Lead			2347	1.2	29.83	1558	2640	75	125	1751	29.1	20	SR
Zinc			1139	12	29.83	1052	291	75	125	1031	9.93	20	S
Sample ID	13080639-040AMSD	SampType:	MSD	TestCode	e: M_ICPMS	S_S Units: mg/	/Kg-dry	Prep Date	8/23/2	013	Run ID: ICI	PMS_130823	BA
Client ID:	PA-515-01(0-6)-0816	Batch ID:	71524	TestNo	o: <b>SW6020</b>			Analysis Date	: 8/23/2	013	SeqNo: 25	00422	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tin			41.16	12	14.91	28.9	82.2	75	125	68.52	49.9	20	R*

J - Analyte detected below quantitation limits

<sup>\* -</sup> Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

H/HT - Holding Time Exceeded

#### PREP BATCH REPORT

Prep Start Date: 8/21/2013 9:40:03 A
Prep End Date: 8/21/2013 4:50:00 P

Prep Factor Units:

Prep Batch 71436 Prep Code: M\_S\_PREP Technician: VA mL/g

Sample ID	Matrix	рН	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS3 8/20/13			1	0	0	50	50.000	8/20/2013	8/20/2013
ILCSS3 8/20/13			1	0	0	50	50.000	8/20/2013	8/20/2013
13080637-001B	Soil		1.094	0	0	50	45.704	8/20/2013	8/20/2013
13080637-001BMS	Soil		1.074	0	0	50	46.555	8/20/2013	8/20/2013
13080637-001BMSD	Soil		1.076	0	0	50	46.468	8/20/2013	8/20/2013
13080598-001A	Solid		1.029	0	0	50	48.591	8/20/2013	8/20/2013
13080598-002A	Solid		1.004	0	0	50	49.801	8/20/2013	8/20/2013
13080598-003A	Solid		0.516	0	0	50	96.899	8/20/2013	8/20/2013
13080598-004A	Solid		0.992	0	0	50	50.403	8/20/2013	8/20/2013
13080681-001B	Soil		1.071	0	0	50	46.685	8/20/2013	8/20/2013
13080682-001A	Soil		1.13	0	0	50	44.248	8/20/2013	8/20/2013
13080692-001A	Soil		1.075	0	0	50	46.512	8/20/2013	8/20/2013
13080639-041A	Soil		1.079	0	0	50	46.339	8/21/2013	8/21/2013
13080639-042A	Soil		1.041	0	0	50	48.031	8/21/2013	8/21/2013
13080639-043A	Soil		1.033	0	0	50	48.403	8/21/2013	8/21/2013
13080639-043AMS	Soil		1.034	0	0	50	48.356	8/21/2013	8/21/2013
13080639-043AMSD	Soil		1.031	0	0	50	48.497	8/21/2013	8/21/2013

**Work Order:** 13080639

on Solutions
ANALYTICAL QC SUMMARY REPORT

Project: Pilsen Soil Site, Pilsen, Chicago, IL BatchID: 71436

Sample ID	IMBS3 8/20/13	SampType:	MBLK	TestCod	e: M_ICPMS	S_S Units: mg/Kg		Prep Da	te: <b>8/20/2</b>	013	Run ID: ICI	PMS_13082	1B
Client ID:	ZZZZZ	Batch ID:	71436	TestN	o: <b>SW6020</b>			Analysis Da	te: <b>8/21/2</b>	013	SeqNo: 249	98757	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony			ND	1.0									
Cadmium			0.142	0.25									J
Chromium			0.2965	0.50									J
Copper			0.196	1.2									J
Lead			0.184	0.25									J
Tin			1.526	2.5									J*
Zinc			ND	2.5									
Sample ID	ILCSS3 8/20/13	SampType:	LCS	TestCod	e: M_ICPMS	S_S Units: mg/Kg		Prep Da	te: <b>8/20/2</b>	013	Run ID: ICI	PMS_13082	1B
Client ID:	ZZZZZ	Batch ID:	71436	TestN	o: <b>SW6020</b>			Analysis Da	te: <b>8/21/2</b>	013	SeqNo: 249	98758	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony			14.4	1.0	12.5	0	115	80	120	0	0		
Cadmium			23.73	0.25	25	0.142	94.4	80	120	0	0		
Chromium			24.58	0.50	25	0.2965	97.2	80	120	0	0		
Copper			25.04	1.2	25	0.196	99.4	80	120	0	0		
Lead			24.8	0.25	25	0.184	98.5	80	120	0	0		
Tin			13.63	2.5	12.5	1.526	96.8	80	120	0	0		*
Zinc			23.28	2.5	25	0	93.1	80	120	0	0		
Sample ID	13080637-001BMS	SampType:	MS	TestCod	e: M_ICPMS	S_S Units: mg/Kg	-dry	Prep Da	te: <b>8/20/2</b>	013	Run ID: ICI	PMS_13082	1B
Client ID:	ZZZZZ	Batch ID:	71436	TestN	o: <b>SW6020</b>			Analysis Da	te: <b>8/21/2</b>	013	SeqNo: 24	98764	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony			2.31	2.2	13.89	0	16.6	75	125	0	0		S
Cadmium			26.78	0.56	27.78	0.7205	93.8	75	125	0	0		
Chromium			42.98	1.1	27.78	18.55	88	75	125	0	0		
Copper			44.62	2.8	27.78	23.38	76.5	75	125	0	0		
			40.41	0.56	27.78	15.27	90.5	75	125	0	0		
Lead Tin			12.73	5.6	13.89	0	91.6	75	125	0	0		*

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

Weston Solutions **CLIENT:** 

Work Order: 13080639

Pilsen Soil Site, Pilsen, Chicago, IL **Project:** 

#### ANALYTICAL QC SUMMARY REPORT

**BatchID: 71436** 

Sample ID	13080639-043AMS	SampType:	MS	TestCoo	le: M_ICPMS	S_S Units: m	g/Kg-dry	Prep Da	te: <b>8/21/2</b>	013	Run ID: ICI	PMS-2_1308	322A
Client ID:	PA-516-01(6-18)-081	Batch ID:	71436	TestN	lo: <b>SW6020</b>			Analysis Da	te: <b>8/22/2</b>	013	SeqNo: 249	99197	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Antimony			9.087	4.8	14.91	0	61	75	125	0	0		S
Cadmium			32.69	1.2	29.81	3.232	98.8	75	125	0	0		
Chromium			51.27	2.4	29.81	23.6	92.8	75	125	0	0		
Copper			94.39	6.0	29.81	63.68	103	75	125	0	0		
Lead			729.8	1.2	29.81	547	613	75	125	0	0		S
Tin			28.33	12	14.91	9.573	126	75	125	0	0		S
Zinc			650.5	12	29.81	607	146	75	125	0	0		S
Sample ID	13080637-001BMSD	SampType:	MSD	TestCoo	de: M_ICPMS	S_S Units: m	g/Kg-dry	Prep Da	te: <b>8/20/2</b>	013	Run ID: ICI	PMS_13082	1B
Client ID:	ZZZZZ	Batch ID:	71436	TestN	lo: <b>SW6020</b>			Analysis Da	te: <b>8/21/2</b>	013	SeqNo: 249	98765	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Antimony			2.339	2.2	13.86	0	16.9	75	125	2.31	1.25	20	S
Cadmium			27.2	0.55	27.73	0.7205	95.5	75	125	26.78	1.54	20	
Chromium			43.71	1.1	27.73	18.55	90.7	75	125	42.98	1.67	20	
Copper			47.42	2.8	27.73	23.38	86.7	75	125	44.62	6.09	20	
Lead			42.39	0.55	27.73	15.27	97.8	75	125	40.41	4.79	20	
Tin			13.19	5.5	13.86	0	95.1	75	125	12.73	3.54	20	,
Zinc			77.35	5.5	27.73	50.26	97.7	75	125	73.05	5.72	20	
Sample ID	13080639-043AMSD	SampType:	MSD	TestCoo	le: M_ICPMS	S_S Units: m	g/Kg-dry	Prep Da	te: <b>8/21/2</b>	013	Run ID: ICI	PMS-2_1308	322A
Client ID:	PA-516-01(6-18)-081	Batch ID:	71436	TestN	lo: <b>SW6020</b>			Analysis Da	te: <b>8/22/2</b>	013	SeqNo: <b>24</b> 9	99198	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qu
Antimony			8.234	4.8	14.95	0	55.1	75	125	9.087	9.84	20	5
Cadmium			33.04	1.2	29.9	3.232	99.7	75	125	32.69	1.05	20	
Chromium			54.42	2.4	29.9	23.6	103	75	125	51.27	5.95	20	
Copper			101.6	6.0	29.9	63.68	127	75	125	94.39	7.36	20	5
_ead			690.1	1.2	29.9	547	479	75	125	729.8	5.60	20	5
Tin			32.28	12	14.95	9.573	152	75	125	28.33	13.0	20	S
Zinc			654.2	12	29.9	607	158	75	125	650.5	0.565	20	S
Qualifiers	s: ND - Not Detec	ted at the Re	porting Lim	it	S - Spi	ke Recovery ou	tside accepted r	ecovery limi	'S	B - Analyte detec	cted in the asso	ciated Metho	nd Bla

\* - Non Accredited Parameter

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

#### PREP BATCH REPORT

Prep Start Date: 8/20/2013 4:30:20 P Prep End Date: 8/20/2013 7:10:00 P

Prep Factor Units:

Prep Batch 71437 Prep Code: M\_S\_PREP Technician: VA mL/g

Sample ID	Matrix	рН	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS4 8/20/13			1	0	0	50	50.000	8/20/2013	8/20/2013
ILCSS4 8/20/13			1	0	0	50	50.000	8/20/2013	8/20/2013
13080639-001A	Soil		1.125	0	0	50	44.444	8/20/2013	8/20/2013
13080639-002A	Soil		1.083	0	0	50	46.168	8/20/2013	8/20/2013
13080639-003A	Soil		1.081	0	0	50	46.253	8/20/2013	8/20/2013
13080639-004A	Soil		1.011	0	0	50	49.456	8/20/2013	8/20/2013
13080639-005A	Soil		1.035	0	0	50	48.309	8/20/2013	8/20/2013
13080639-006A	Soil		1.12	0	0	50	44.643	8/20/2013	8/20/2013
13080639-007A	Soil		1.111	0	0	50	45.005	8/20/2013	8/20/2013
13080639-008A	Soil		1.134	0	0	50	44.092	8/20/2013	8/20/2013
13080639-009A	Soil		1.048	0	0	50	47.710	8/20/2013	8/20/2013
13080639-010A	Soil		1.215	0	0	50	41.152	8/20/2013	8/20/2013
13080639-011A	Soil		1.172	0	0	50	42.662	8/20/2013	8/20/2013
13080639-012A	Soil		1.038	0	0	50	48.170	8/20/2013	8/20/2013
13080639-013A	Soil		1.129	0	0	50	44.287	8/20/2013	8/20/2013
13080639-014A	Soil		1.202	0	0	50	41.597	8/20/2013	8/20/2013
13080639-015A	Soil		1.07	0	0	50	46.729	8/20/2013	8/20/2013
13080639-016A	Soil		1.013	0	0	50	49.358	8/20/2013	8/20/2013
13080639-017A	Soil		1.035	0	0	50	48.309	8/20/2013	8/20/2013
13080639-017AMS	Soil		1.035	0	0	50	48.309	8/20/2013	8/20/2013
13080639-017AMSD	Soil		1.034	0	0	50	48.356	8/20/2013	8/20/2013
13080639-018A	Soil		1.055	0	0	50	47.393	8/20/2013	8/20/2013
13080639-019A	Soil		1.185	0	0	50	42.194	8/20/2013	8/20/2013
3080639-020A	Soil		1.114	0	0	50	44.883	8/20/2013	8/20/2013

**Work Order:** 13080639

ANALYTICAL QC SUMMARY REPORT

**Project:** Pilsen Soil Site, Pilsen, Chicago, IL

**BatchID: 71437** 

Sample ID	IMBS4 8/20/13	SampType:	MBLK	TestCod	de: M_ICPMS	S_S Units: mg/Kg		Prep Date	8/20/20	113	Run ID: ICI	PMS_13082	nΔ
•	ZZZZZ	Batch ID:			No: <b>SW6020</b>			Analysis Date			SegNo: 24		<b>.</b>
CIICH ID.		Dalcii ID.	7 1437	1650	NO. 3440020			Alialysis Date	. 0/21/20	713	Sequo. 24	31204	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony			ND	1.0									
Cadmium			ND	0.25									
Chromium			0.081	0.50									J
Copper			ND	1.2									
Lead			ND	0.25									
Tin			2.052	2.5									J*
Zinc			ND	2.5									
Sample ID	ILCSS4 8/20/13	SampType:	LCS	TestCod	de: M_ICPMS	S_S Units: mg/Kg		Prep Date	8/20/20	013	Run ID: ICI	PMS_13082	1A
Client ID:	ZZZZZ	Batch ID:	71437	TestN	No: <b>SW6020</b>			Analysis Date	: 8/21/20	013	SeqNo: 24	98116	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony			14.32	1.0	12.5	0	115	80	120	0	0		
Cadmium			23.43	0.25	25	0	93.7	80	120	0	0		
Chromium			24.32	0.50	25	0.081	97	80	120	0	0		
Copper			24.28	1.2	25	0	97.1	80	120	0	0		
Lead			24.38	0.25	25	0	97.5	80	120	0	0		
Tin			13.38	2.5	12.5	2.052	90.6	80	120	0	0		*
Zinc			22.8	2.5	25	0	91.2	80	120	0	0		
Sample ID	13080639-017AMS	SampType:	MS	TestCod	de: M_ICPMS	S_S Units: mg/Kg	dry	Prep Date	: 8/20/20	013	Run ID: ICI	PMS_13082	0A
Client ID:	PA-499-01(0-6)-0814	Batch ID:	71437	TestN	No: <b>SW6020</b>			Analysis Date	: 8/21/20	013	SeqNo: 24	97290	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper			108.1	14	28.19	85.57	80	75	125	0	0		
Sample ID	13080639-017AMS	SampType:	MS	TestCo	de: M_ICPMS	S_S Units: mg/Kg	·dry	Prep Date	: 8/20/20	)13	Run ID: IC	PMS-2_1308	322A
Client ID:	PA-499-01(0-6)-0814	Batch ID:	71437	TestN	No: <b>SW6020</b>			Analysis Date	: 8/22/20	013	SeqNo: 24	99206	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony			10.25	4.5	14.09	2.141	57.6	75	125	0	0		S
Qualifiers	: ND - Not Dete	cted at the Re	porting Limit		S - Spi	ke Recovery outside	accepted r	ecovery limits		B - Analyte detec	cted in the asso	ciated Metho	od Blan
	J - Analyte dete	ected below q	uantitation limit	s	_	D outside accepted re	-	-	1	E - Value above	quantitation rar	ige	
	* - Non Accred	lited Paramet	er		H/HT -	· Holding Time Excee	ded						

Work Order:

13080639

**Project:** Pilsen Soil Site, Pilsen, Chicago, IL

#### ANALYTICAL QC SUMMARY REPORT

**BatchID: 71437** 

Sample ID	13080639-017AMS	SampType:	MS	TestCod	e: M_ICPMS	S_S Units: m	g/Kg-dry	Prep Dat	te: <b>8/20/2</b>	013	Run ID: ICI	PMS-2_1308	22A
Client ID:	PA-499-01(0-6)-0814	Batch ID:	71437	TestN	o: <b>SW6020</b>			Analysis Da	te: <b>8/22/2</b> 0	013	SeqNo: 24	99206	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium			31.6	1.1	28.19	2.488	103	75	125	0	0		
Chromium			39.58	2.3	28.19	14.41	89.3	75	125	0	0		
Lead			940.8	1.1	28.19	1153	-754	75	125	0	0		S
Tin			40.64	11	14.09	25.54	107	75	125	0	0		*
Zinc			640.9	11	28.19	497.4	509	75	125	0	0		S
Sample ID	13080639-017AMSD	SampType:	MSD	TestCod	e: M_ICPMS	S_S Units: m	g/Kg-dry	Prep Dat	te: <b>8/20/2</b>	013	Run ID: ICI	PMS_130820	)A
Client ID:	PA-499-01(0-6)-0814	Batch ID:	71437	TestN	o: <b>SW6020</b>			Analysis Da	te: <b>8/21/2</b> 0	013	SeqNo: 24	97291	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Copper			112.3	14	28.21	85.57	94.9	75	125	108.1	3.83	20	
Sample ID	13080639-017AMSD	SampType:	MSD	TestCod	e: M_ICPMS	S_S Units: m	g/Kg-dry	Prep Dat	te: <b>8/20/2</b>	013	Run ID: ICI	PMS-2_1308	22A
Client ID:	PA-499-01(0-6)-0814	Batch ID:	71437	TestN	o: <b>SW6020</b>			Analysis Da	te: <b>8/22/2</b> 0	013	SeqNo: 24	99208	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony			10.8	4.5	14.11	2.141	61.4	75	125	10.25	5.19	20	S
Cadmium			30.87	1.1	28.21	2.488	101	75	125	31.6	2.32	20	
Chromium			41.12	2.3	28.21	14.41	94.6	75	125	39.58	3.81	20	
Lead			988	1.1	28.21	1153	-586	75	125	940.8	4.89	20	S
Tin			32.57	11	14.11	25.54	49.9	75	125	40.64	22.0	20	SR*
Zinc			564.2	11	28.21	497.4	237	75	125	640.9	12.7	20	S

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

<sup>\* -</sup> Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

#### PREP BATCH REPORT

Prep Start Date: 8/21/2013 9:40:45 A
Prep End Date: 8/21/2013 12:55:00

Prep Factor Units:

Prep Batch 71453 Prep Code: M\_S\_PREP Technician: VA mL/g

Sample ID	Matrix	рН	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS1 8/21/13			1	0	0	50	50.000	8/21/2013	8/21/2013
ILCSS1 8/21/13			1	0	0	50	50.000	8/21/2013	8/21/2013
13080639-021A	Soil		1.091	0	0	50	45.830	8/21/2013	8/21/2013
13080639-022A	Soil		1.137	0	0	50	43.975	8/21/2013	8/21/2013
13080639-023A	Soil		1.02	0	0	50	49.020	8/21/2013	8/21/2013
13080639-024A	Soil		1.112	0	0	50	44.964	8/21/2013	8/21/2013
13080639-025A	Soil		1.035	0	0	50	48.309	8/21/2013	8/21/2013
13080639-026A	Soil		1.016	0	0	50	49.213	8/21/2013	8/21/2013
13080639-027A	Soil		1.195	0	0	50	41.841	8/21/2013	8/21/2013
13080639-028A	Soil		1.005	0	0	50	49.751	8/21/2013	8/21/2013
13080639-029A	Soil		1.14	0	0	50	43.860	8/21/2013	8/21/2013
13080639-030A	Soil		1.066	0	0	50	46.904	8/21/2013	8/21/2013
13080639-031A	Soil		1.197	0	0	50	41.771	8/21/2013	8/21/2013
13080639-032A	Soil		1.021	0	0	50	48.972	8/21/2013	8/21/2013
13080639-033A	Soil		1.111	0	0	50	45.005	8/21/2013	8/21/2013
13080639-034A	Soil		1.06	0	0	50	47.170	8/21/2013	8/21/2013
13080639-035A	Soil		1.018	0	0	50	49.116	8/21/2013	8/21/2013
13080639-036A	Soil		1.19	0	0	50	42.017	8/21/2013	8/21/2013
13080639-037A	Soil		1.205	0	0	50	41.494	8/21/2013	8/21/2013
13080639-038A	Soil		1.139	0	0	50	43.898	8/21/2013	8/21/2013
13080639-039A	Soil		1.041	0	0	50	48.031	8/21/2013	8/21/2013
13080639-040A	Soil		1.184	0	0	50	42.230	8/21/2013	8/21/2013
13080639-040AMS	Soil		1.182	0	0	50	42.301	8/21/2013	8/21/2013
13080639-040AMSD	Soil		1.187	0	0	50	42.123	8/21/2013	8/21/2013

Work Order:

### ANALYTICAL QC SUMMARY REPORT

**Project:** Pilsen Soil Site, Pilsen, Chicago, IL

13080639

**BatchID: 71453** 

Sample ID	IMBS1 8/21/13	SampType: MBI	LK TestCo	ode: M_ICPMS	S_S Units: mg/Kg	9	Prep Da	te: <b>8/21/2</b>	013	Run ID: IC	PMS_13082	2A
Client ID:	ZZZZZ	Batch ID: 714	53 Test	No: <b>SW6020</b>			Analysis Da	ite: 8/22/2	013	SeqNo: 24	99369	
Analyte		Res	sult PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		1	ND 1.0									
Cadmium		0.1	61 0.25									J
Chromium		0.19	0.50									J
Copper		0.1	93 1.2									J
Lead		0.19	0.25									J
Tin		1.5	82 2.5									J*
Zinc		1	ND 2.5									
Sample ID	ILCSS1 8/21/13	SampType: LCS	TestCo	ode: M_ICPMS	S_S Units: mg/Kg	9	Prep Da	te: <b>8/21/2</b>	013	Run ID: IC	PMS_13082	2A
Client ID:	ZZZZZ	Batch ID: 714	53 Test	No: <b>SW6020</b>			Analysis Da	ite: 8/22/2	013	SeqNo: 24	99370	
Analyte		Res	ult PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		15.	.31 1.0	12.5	0	122	80	120	0	0		S
Cadmium		24.	74 0.25	25	0.161	98.3	80	120	0	0		
Chromium		24.	.87 0.50	25	0.1985	98.7	80	120	0	0		
Copper		24	4.9 1.2	25	0.193	98.8	80	120	0	0		
Lead		25.	14 0.25	25	0.1975	99.8	80	120	0	0		
Tin		14.	.28 2.5	12.5	1.582	102	80	120	0	0		*
Zinc		23.	98 2.5	25	0	95.9	80	120	0	0		
Sample ID	13080639-040AMS	SampType: MS	TestCo	ode: M_ICPMS	S_S Units: mg/K	g-dry	Prep Da	te: <b>8/21/2</b>	013	Run ID: IC	PMS_13082	2A
Client ID:	PA-515-01(0-6)-0816	Batch ID: 714	53 Test	No: <b>SW6020</b>			Analysis Da	ite: 8/22/2	013	SeqNo: 24	99375	
Analyte		Res	sult PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		10.	.07 4.2	13.07	3.527	50.1	75	125	0	0		S
Cadmium		33	3.3 1.0	26.14	8.107	96.4	75	125	0	0		
Chromium		52.	55 2.1	26.14	27.84	94.5	75	125	0	0		
Copper		197	7.1 5.2	26.14	152.9	169	75	125	0	0		S
Lead		18	29 1.0	26.14	2202	-1430	75	125	0	0		S
Tin		49.	43 10	13.07	33.57	121	75	125	0	0		*
Zinc		10	53 10	26.14	1040	48.7	75	125	0	0		S
Onalifier	ND Not Date	cted at the Reportin	ag Limit	c cn	ike Recovery outside	a a a a m t a d r	acovery limit	to	R - Analyte dete	atad in the ease	! - 4 - 4 M - 41-	. J. D11.

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

\* - Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

ANALYTICAL QC SUMMARY REPORT

Work Order: 13080639

**BatchID: 71453 Project:** Pilsen Soil Site, Pilsen, Chicago, IL

Sample ID Client ID:	13080639-040AMSD PA-515-01(0-6)-0816		TestCode: M_ICPMS_S Units: mg/Kg-dry TestNo: SW6020				te: <b>8/21/2</b> 0	Run ID: ICPMS_130822A SeqNo: 2499376					
Analyte	(1.7)	Batch ID:	Result	PQL	SPK value	SPK Ref Val	%REC	,	HighLimit		%RPD	RPDLimit	Qual
Antimony			9.06	4.2	13.02	3.527	42.5	75	125	10.07	10.6	20	S
Cadmium			32.04	1.0	26.03	8.107	91.9	75	125	33.3	3.87	20	
Chromium			48.71	2.1	26.03	27.84	80.2	75	125	52.55	7.58	20	
Copper			154.4	5.2	26.03	152.9	5.92	75	125	197.1	24.3	20	SR
Lead			1450	1.0	26.03	2202	-2890	75	125	1829	23.1	20	SR
Tin			55.09	10	13.02	33.57	165	75	125	49.43	10.8	20	S*
Zinc			877.9	10	26.03	1040	-622	75	125	1053	18.1	20	S

E - Value above quantitation range

#### PREP BATCH REPORT

Prep Start Date: 8/22/2013 10:00:41
Prep End Date: 8/22/2013 1:05:00 P

Prep Factor Units:

Prep Batch 71490 Prep Code: M\_S\_PREP Technician: VA mL/g

Sample ID	Matrix	рН	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS1 8/22/13			1	0	0	50	50.000	8/22/2013	8/22/2013
ILCSS1 8/22/13			1	0	0	50	50.000	8/22/2013	8/22/2013
13080639-001B	Soil		1.069	0	0	50	46.773	8/22/2013	8/22/2013
13080639-002B	Soil		1.079	0	0	50	46.339	8/22/2013	8/22/2013
13080639-003B	Soil		1.064	0	0	50	46.992	8/22/2013	8/22/2013
13080639-004B	Soil		1.017	0	0	50	49.164	8/22/2013	8/22/2013
13080639-005B	Soil		1.054	0	0	50	47.438	8/22/2013	8/22/2013
13080639-006B	Soil		1.039	0	0	50	48.123	8/22/2013	8/22/2013
13080639-007B	Soil		1.036	0	0	50	48.263	8/22/2013	8/22/2013
13080639-008B	Soil		1.033	0	0	50	48.403	8/22/2013	8/22/2013
13080639-009B	Soil		1.024	0	0	50	48.828	8/22/2013	8/22/2013
13080639-010B	Soil		1.048	0	0	50	47.710	8/22/2013	8/22/2013
13080639-011B	Soil		1.001	0	0	50	49.950	8/22/2013	8/22/2013
13080639-012B	Soil		1.087	0	0	50	45.998	8/22/2013	8/22/2013
13080639-013B	Soil		1.014	0	0	50	49.310	8/22/2013	8/22/2013
13080639-014B	Soil		1.078	0	0	50	46.382	8/22/2013	8/22/2013
13080639-015B	Soil		1.037	0	0	50	48.216	8/22/2013	8/22/2013
13080639-016B	Soil		1.043	0	0	50	47.939	8/22/2013	8/22/2013
13080639-017B	Soil		1.002	0	0	50	49.900	8/22/2013	8/22/2013
13080639-017BMS	Soil		1.017	0	0	50	49.164	8/22/2013	8/22/2013
13080639-017BMSD	Soil		1.011	0	0	50	49.456	8/22/2013	8/22/2013
13080639-018B	Soil		1.036	0	0	50	48.263	8/22/2013	8/22/2013
13080639-019B	Soil		1.004	0	0	50	49.801	8/22/2013	8/22/2013
N2711a1 8/22/13			0.506	0	0	50	98.814	8/22/2013	8/22/2013

**Work Order:** 13080639

**Project:** Pilsen Soil Site, Pilsen, Chicago, IL

#### ANALYTICAL QC SUMMARY REPORT

**BatchID: 71490** 

Sample ID:	: IMBS1 8/22/13	SampType: MBLK	TestCode: M_IC	CPMS_S Units: mg/Kg		Prep Date	: 8/22/2013	3	Run ID: ICP	MS-2_1308	22A
Client ID:	ZZZZZ	Batch ID: 71490	TestNo: SW6	6020		Analysis Date	: 8/22/2013	3	SeqNo: <b>249</b>	9232	
Analyte		Result	PQL SPK v	value SPK Ref Val	%REC	LowLimit F	HighLimit R	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		0.202	0.25								J
Sample ID:	: ILCSS1 8/22/13	SampType: <b>LCS</b>	TestCode: M_IC	CPMS_S Units: mg/Kg		Prep Date	: 8/22/2013	3	Run ID: ICP	MS-2_1308	22A
Client ID:	ZZZZZ	Batch ID: <b>71490</b>	TestNo: SW6	6020		Analysis Date	: 8/22/2013	3	SeqNo: <b>249</b>	9233	
Analyte		Result	PQL SPK v	alue SPK Ref Val	%REC	LowLimit F	HighLimit R	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		25.18	0.25	25 0.202	99.9	80	120	0	0		
Sample ID:	: N2711A1 8/22/13	SampType: LCS	TestCode: M_IC	CPMS_S Units: mg/Kg		Prep Date	: 8/22/2013	3	Run ID: ICP	MS_130823	A
Client ID:	ZZZZZ	Batch ID: <b>71490</b>	TestNo: SW6	6020		Analysis Date	: 8/23/2013	3	SeqNo: <b>250</b>	0181	
Analyte		Result	PQL SPK v	value SPK Ref Val	%REC	LowLimit H	HighLimit R	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		1399	4.9	1399 0.202	100	85	115	0	0		
Sample ID:	: 13080639-017BMS	SampType: MS	TestCode: M_IC	CPMS_S Units: mg/Kg	-dry	Prep Date	: 8/22/2013	3	Run ID: ICP	MS-2_1308	22A
Client ID:	PA-499-01(0-6)-0814	Batch ID: <b>71490</b>	TestNo: SW6	6020		Analysis Date	: 8/22/2013	3	SeqNo: <b>249</b>	9237	
Analyte		Result	PQL SPK v	alue SPK Ref Val	%REC	LowLimit F	HighLimit R	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		1147	4.9 2	24.58 1089	235	75	125	0	0		S
Sample ID:	: 13080639-017BMSD	SampType: MSD	TestCode: M_IC	CPMS_S Units: mg/Kg	-dry	Prep Date	: 8/22/2013	3	Run ID: ICP	MS-2_1308	22A
Client ID:	PA-499-01(0-6)-0814	Batch ID: <b>71490</b>	TestNo: SW6	6020		Analysis Date	8/22/2013	3	SeqNo: <b>249</b>	9238	
Analyte		Result	PQL SPK v	alue SPK Ref Val	%REC	LowLimit I	HighLimit R	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		1164	4.9 2	24.73 1089	303	75	125	1147	1.49	20	S

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

<sup>\* -</sup> Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

#### PREP BATCH REPORT

Prep Start Date: 8/22/2013 1:10:52 P Prep End Date: 8/22/2013 4:35:00 P

Prep Factor Units:

Prep Batch 71493 Prep Code: M\_S\_PREP Technician: VA mL/g

Sample ID	Matrix	рН	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS2 8/22/13			1	0	0	50	50.000	8/22/2013	8/22/2013
ILCSS2 8/22/13			1	0	0	50	50.000	8/22/2013	8/22/2013
13080639-020B	Soil		0.774	0	0	50	64.599	8/22/2013	8/22/2013
13080639-021B	Soil		0.904	0	0	50	55.310	8/22/2013	8/22/2013
13080639-022B	Soil		0.872	0	0	50	57.339	8/22/2013	8/22/2013
13080639-023B	Soil		0.856	0	0	50	58.411	8/22/2013	8/22/2013
13080639-024B	Soil		1.048	0	0	50	47.710	8/22/2013	8/22/2013
13080639-025B	Soil		0.979	0	0	50	51.073	8/22/2013	8/22/2013
13080639-026B	Soil		0.974	0	0	50	51.335	8/22/2013	8/22/2013
13080639-027B	Soil		0.951	0	0	50	52.576	8/22/2013	8/22/2013
13080639-028B	Soil		1.035	0	0	50	48.309	8/22/2013	8/22/2013
13080639-029B	Soil		1.07	0	0	50	46.729	8/22/2013	8/22/2013
13080639-030B	Soil		1.048	0	0	50	47.710	8/22/2013	8/22/2013
13080639-031B	Soil		1.142	0	0	50	43.783	8/22/2013	8/22/2013
13080639-032B	Soil		1.027	0	0	50	48.685	8/22/2013	8/22/2013
13080639-033B	Soil		1.05	0	0	50	47.619	8/22/2013	8/22/2013
13080639-034B	Soil		1.093	0	0	50	45.746	8/22/2013	8/22/2013
13080639-035B	Soil		1.085	0	0	50	46.083	8/22/2013	8/22/2013
13080639-036B	Soil		1.061	0	0	50	47.125	8/22/2013	8/22/2013
13080639-037B	Soil		1.049	0	0	50	47.664	8/22/2013	8/22/2013
13080639-040B	Soil		1.03	0	0	50	48.544	8/22/2013	8/22/2013
13080639-040BMS	Soil		1.033	0	0	50	48.403	8/22/2013	8/22/2013
13080639-040BMSD	Soil		1.033	0	0	50	48.403	8/22/2013	8/22/2013
N2711a2 8/22/13			0.507	0	0	50	98.619	8/22/2013	8/22/2013

**Work Order:** 13080639

**Project:** 

Qualifiers:

Pilsen Soil Site, Pilsen, Chicago, IL

#### ANALYTICAL QC SUMMARY REPORT

**BatchID: 71493** 

Sample ID: IMBS2 8/22/13 Client ID: ZZZZZ	SampType: MBLK Batch ID: 71493	TestCode: M_ICPMS_S Units: mg/Kg TestNo: SW6020	Prep Date: Analysis Date:	8/22/2013 8/22/2013	Run ID: ICPMS_130822A SeqNo: 2499726
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit H	lighLimit RPD Ref Val	%RPD RPDLimit Qual
Lead	0.191	0.25			J
Sample ID: ILCSS2 8/22/13 Client ID: ZZZZZ	SampType: LCS  Batch ID: 71493	TestCode: M_ICPMS_S Units: mg/Kg TestNo: SW6020	Prep Date:	8/22/2013 8/22/2013	Run ID: ICPMS_130822A SegNo: 2499727
Analyte	Result		·	lighLimit RPD Ref Val	%RPD RPDLimit Qual
Lead	25.82	0.25 25 0.191	102 80	120 0	0
Sample ID: N2711A2 8/22/13 Client ID: ZZZZZ	SampType: <b>LCS</b> Batch ID: <b>71493</b>	TestCode: M_ICPMS_S Units: mg/Kg TestNo: SW6020	Prep Date: Analysis Date:	8/22/2013 8/22/2013	Run ID: ICPMS_130822A SeqNo: 2499728
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit H	lighLimit RPD Ref Val	%RPD RPDLimit Qual
Lead	1317	4.9 1400 0.191	94 85	115 0	0
Sample ID: 13080639-040BM: Client ID: PA-515-01(0-6)-08	1 71	TestCode: M_ICPMS_S Units: mg/Kg-dr TestNo: SW6020	Prep Date:	8/22/2013 8/22/2013	Run ID: ICPMS_130822A SeqNo: 2499733
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit H	lighLimit RPD Ref Val	%RPD RPDLimit Qual
Lead	2011	4.8 24.2 1639	1530 75	125 0	0 S
Sample ID: 13080639-040BM: Client ID: PA-515-01(0-6)-08	1 21	TestCode: M_ICPMS_S Units: mg/Kg-dr TestNo: SW6020	ry Prep Date: Analysis Date:	8/22/2013 8/22/2013	Run ID: ICPMS_130822A SeqNo: 2499734
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit H	lighLimit RPD Ref Val	%RPD RPDLimit Qual
Lead	2111	4.8 24.2 1639	1950 75	125 2011	4.86 20 S

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

<sup>\* -</sup> Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

#### PREP BATCH REPORT

Prep Start Date: 8/22/2013 1:10:39 P Prep End Date: 8/22/2013 4:35:00 P

Prep Factor Units:

Prep Batch 71494 Prep Code: M\_S\_PREP Technician: VA mL/g

Sample ID	Matrix	рН	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
IMBS3 8/22/13			1	0	0	50	50.000	8/22/2013	8/22/2013
ILCSS3 8/22/13			1	0	0	50	50.000	8/22/2013	8/22/2013
13080639-038B	Soil		1.134	0	0	50	44.092	8/22/2013	8/22/2013
13080639-039B	Soil		1.061	0	0	50	47.125	8/22/2013	8/22/2013
13080639-041B	Soil		1.014	0	0	50	49.310	8/22/2013	8/22/2013
13080639-042B	Soil		1.002	0	0	50	49.900	8/22/2013	8/22/2013
13080639-043B	Soil		1.005	0	0	50	49.751	8/22/2013	8/22/2013
13080639-043BMS	Soil		1.042	0	0	50	47.985	8/22/2013	8/22/2013
13080639-043BMSD	Soil		1.045	0	0	50	47.847	8/22/2013	8/22/2013
N2711a3 8/22/13			0.504	0	0	50	99.206	8/22/2013	8/22/2013

**Work Order:** 13080639

**Project:** Pilsen Soil Site, Pilsen, Chicago, IL

#### ANALYTICAL QC SUMMARY REPORT

**BatchID: 71494** 

				•
Sample ID: IMBS3 8/22/13	SampType: <b>MBLK</b>	TestCode: M_ICPMS_S Units: mg/Kg	Prep Date: 8/22/2013	Run ID: ICPMS-2_130822A
Client ID: ZZZZZ	Batch ID: 71494	TestNo: SW6020	Analysis Date: 8/22/2013	SeqNo: <b>2499267</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Lead	0.132	0.25		J
Sample ID: ILCSS3 8/22/13	SampType: LCS	TestCode: M_ICPMS_S Units: mg/Kg	Prep Date: 8/22/2013	Run ID: ICPMS-2_130822A
Client ID: ZZZZZ	Batch ID: 71494	TestNo: SW6020	Analysis Date: 8/22/2013	SeqNo: <b>2499268</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Lead	24.96	0.25 25 0.132	99.3 80 120 0	0
Sample ID: N2711A3 8/22/1	3 SampType: LCS	TestCode: M_ICPMS_S Units: mg/Kg	Prep Date: 8/22/2013	Run ID: ICPMS-2_130822A
Client ID: ZZZZZ	Batch ID: 71494	TestNo: SW6020	Analysis Date: 8/22/2013	SeqNo: <b>2499269</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Lead	1583	5.0 1401 0.132	113 85 115 0	0
Sample ID: 13080639-043B	MS SampType: MS	TestCode: M_ICPMS_S Units: mg/Kg-	dry Prep Date: 8/22/2013	Run ID: ICPMS-2_130822A
Client ID: <b>PA-516-01(6-18</b> )	)-081 Batch ID: 71494	TestNo: SW6020	Analysis Date: 8/22/2013	SeqNo: <b>2499272</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Lead	793.5	5.0 25 738	222 75 125 0	0 S
Sample ID: 13080639-043B	MSD SampType: MSD	TestCode: M_ICPMS_S Units: mg/Kg-	dry Prep Date: 8/22/2013	Run ID: ICPMS-2_130822A
Client ID: <b>PA-516-01(6-18</b> )	)-081 Batch ID: 71494	TestNo: SW6020	Analysis Date: 8/22/2013	SeqNo: <b>2499273</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Lead	784	5.0 25 738	184 75 125 793.5	1.20 20 S

Qualifiers: ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

<sup>\* -</sup> Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

#### PREP BATCH REPORT

Prep Start Date: 8/19/2013 6:57:00 P Prep End Date: 8/19/2013 7:35:00 P

Prep Factor Units:

Prep Batch 71402 Prep Code: M\_HG\_S\_PRE Technician: LB mL/g

Sample ID	Matrix	рН	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBS1 8/19/13			0.3	0	0	30	100.000	8/19/2013	8/19/2013
HGLCSS1 8/19/13			0.3	0	0	30	100.000	8/19/2013	8/19/2013
13080538-003B	Soil		0.324	0	0	30	92.593	8/19/2013	8/19/2013
13080538-005B	Soil		0.326	0	0	30	92.025	8/19/2013	8/19/2013
13080538-006B	Soil		0.309	0	0	30	97.087	8/19/2013	8/19/2013
13080538-008A	Soil		0.312	0	0	30	96.154	8/19/2013	8/19/2013
13080538-009A	Soil		0.306	0	0	30	98.039	8/19/2013	8/19/2013
13080538-010B	Soil		0.309	0	0	30	97.087	8/19/2013	8/19/2013
13080598-001A	Solid		0.305	0	0	30	98.361	8/19/2013	8/19/2013
13080598-002A	Solid		0.325	0	0	30	92.308	8/19/2013	8/19/2013
13080598-003A	Solid		0.322	0	0	30	93.168	8/19/2013	8/19/2013
13080598-004A	Solid		0.321	0	0	30	93.458	8/19/2013	8/19/2013
13080598-002AMS	Solid		0.321	0	0	30	93.458	8/19/2013	8/19/2013
13080598-002AMSD	Solid		0.325	0	0	30	92.308	8/19/2013	8/19/2013
13080639-001A	Soil		0.322	0	0	30	93.168	8/19/2013	8/19/2013
13080639-002A	Soil		0.321	0	0	30	93.458	8/19/2013	8/19/2013
13080639-003A	Soil		0.377	0	0	30	79.576	8/19/2013	8/19/2013
13080639-004A	Soil		0.3	0	0	30	100.000	8/19/2013	8/19/2013
13080639-005A	Soil		0.319	0	0	30	94.044	8/19/2013	8/19/2013
13080639-006A	Soil		0.336	0	0	30	89.286	8/19/2013	8/19/2013
13080639-007A	Soil		0.373	0	0	30	80.429	8/19/2013	8/19/2013
13080639-008A	Soil		0.34	0	0	30	88.235	8/19/2013	8/19/2013
13080639-009A	Soil		0.32	0	0	30	93.750	8/19/2013	8/19/2013
13080677-001A	Soil		0.344	0	0	30	87.209	8/19/2013	8/19/2013

**Work Order:** 13080639

ston Solutions
ANALYTICAL QC SUMMARY REPORT
80639

Project: Pilsen Soil Site, Pilsen, Chicago, IL BatchID: 71402

Sample ID	HGMBS1 8/19/13	SampType:	MBLK	TestCod	le: <b>M_HG_S</b> (	OLI Units: mg/Kg		Prep Date	e: <b>8/19/2</b>	013	Run ID: CE	TAC_13082	0A
Client ID:	ZZZZZ	Batch ID:	71402	TestN	o: <b>SW7471A</b>	<b>A</b>		Analysis Date	e: <b>8/20/2</b>	013	SeqNo: 24	96954	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury			ND	0.020									
Sample ID	HGLCSS1 8/19/13	SampType:	LCS	TestCod	le: <b>M_HG_S</b> (	OLI Units: mg/Kg		Prep Date	e: <b>8/19/2</b>	013	Run ID: CE	TAC_13082	0A
Client ID:	ZZZZZ	Batch ID:	71402	TestN	o: <b>SW7471A</b>	<b>\</b>		Analysis Date	e: <b>8/20/2</b>	013	SeqNo: 24	96955	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury			0.227	0.020	0.25	0	90.8	80	120	0	0		
Sample ID	13080598-002AMS	SampType:	MS	TestCod	le: <b>M_HG_S</b> (	OLI Units: mg/Kg	j-dry	Prep Date	e: <b>8/19/2</b>	013	Run ID: CE	TAC_13082	0B
Sample ID Client ID:	13080598-002AMS ZZZZZ	SampType: Batch ID:			le: <b>M_HG_S</b> lo: <b>SW7471A</b>	0 0	j-dry	Prep Date Analysis Date			Run ID: CE SeqNo: 24	_	0B
					o: <b>SW7471</b> A	0 0	y-dry %REC	Analysis Date	e: <b>8/20/2</b>			_	<b>0B</b> Qual
Client ID:			71402	TestN	o: <b>SW7471</b> A			Analysis Date	e: <b>8/20/2</b>	013	SeqNo: 24	97016	
Client ID:	22222	Batch ID:	<b>71402</b> Result 2.44	PQL 0.10	o: <b>SW7471A</b>	SPK Ref Val	%REC 132	Analysis Date	e: <b>8/20/2</b> HighLimit 125	013 RPD Ref Val	SeqNo: <b>24</b> %RPD 0	97016	Qual S
Client ID: Analyte Mercury	22222	Batch ID:	71402 Result 2.44 MSD	PQL 0.10 TestCod	o: <b>SW7471A</b> SPK value  0.2552	SPK Ref Val 2.102  OLI Units: mg/Kg	%REC 132	Analysis Date LowLimit 75	e: <b>8/20/2</b> HighLimit 125 e: <b>8/19/2</b>	013 RPD Ref Val 0	SeqNo: <b>24</b> %RPD 0	97016  RPDLimit  ETAC_13082	Qual S
Client ID: Analyte Mercury Sample ID	13080598-002AMSD	Batch ID: SampType:	71402 Result 2.44 MSD	PQL 0.10 TestCod	SPK value 0.2552	SPK Ref Val 2.102  OLI Units: mg/Kg	%REC 132	Analysis Date  LowLimit  75  Prep Date Analysis Date	e: <b>8/20/2</b> HighLimit 125 e: <b>8/19/2</b>	013 RPD Ref Val 0 013 013	SeqNo:         24           %RPD         0           Run ID:         CE	97016  RPDLimit  ETAC_13082	Qual S

J - Analyte detected below quantitation limits

<sup>\* -</sup> Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

#### PREP BATCH REPORT

Prep Start Date: 8/20/2013 5:07:00 P Prep End Date: 8/20/2013 5:45:00 P

Prep Factor Units:

Prep Batch 71452 Prep Code: M\_HG\_S\_PRE Technician: LB mL/g

Sample ID	Matrix	рН	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBS1 8/20/13			0.3	0	0	30	100.000	8/20/2013	8/20/2013
HGLCSS1 8/20/13			0.3	0	0	30	100.000	8/20/2013	8/20/2013
13080692-001A	Soil		0.315	0	0	30	95.238	8/20/2013	8/20/2013
13080639-010A	Soil		0.315	0	0	30	95.238	8/20/2013	8/20/2013
13080639-011A	Soil		0.365	0	0	30	82.192	8/20/2013	8/20/2013
13080639-012A	Soil		0.32	0	0	30	93.750	8/20/2013	8/20/2013
13080639-013A	Soil		0.314	0	0	30	95.541	8/20/2013	8/20/2013
13080639-014A	Soil		0.345	0	0	30	86.957	8/20/2013	8/20/2013
13080639-015A	Soil		0.35	0	0	30	85.714	8/20/2013	8/20/2013
13080639-016A	Soil		0.352	0	0	30	85.227	8/20/2013	8/20/2013
13080639-017A	Soil		0.335	0	0	30	89.552	8/20/2013	8/20/2013
13080639-017AMS	Soil		0.344	0	0	30	87.209	8/20/2013	8/20/2013
13080639-017AMSD	Soil		0.341	0	0	30	87.977	8/20/2013	8/20/2013
13080639-018A	Soil		0.318	0	0	30	94.340	8/20/2013	8/20/2013
13080639-019A	Soil		0.342	0	0	30	87.719	8/20/2013	8/20/2013
13080639-020A	Soil		0.33	0	0	30	90.909	8/20/2013	8/20/2013
13080639-021A	Soil		0.36	0	0	30	83.333	8/20/2013	8/20/2013
13080639-022A	Soil		0.306	0	0	30	98.039	8/20/2013	8/20/2013
13080639-023A	Soil		0.304	0	0	30	98.684	8/20/2013	8/20/2013
13080639-024A	Soil		0.333	0	0	30	90.090	8/20/2013	8/20/2013
13080639-025A	Soil		0.306	0	0	30	98.039	8/20/2013	8/20/2013
13080639-026A	Soil		0.312	0	0	30	96.154	8/20/2013	8/20/2013
13080639-027A	Soil		0.3	0	0	30	100.000	8/20/2013	8/20/2013
13080639-028A	Soil		0.326	0	0	30	92.025	8/20/2013	8/20/2013

Work Order: 13080639 ANALYTICAL QC SUMMARY REPORT

Project:	Pilsen Soil	Site, Pilsen, Chicago, IL			BatchID:	71452
Sample ID H	CMRS1 8/20/13	SampType: MRI K	TestCode: M HG SOLL Lin	nite: malka Pren C	ate: 8/20/2013	Pup ID: CE

Sample ID	HGMBS1 8/20/13	SampType:	MBLK	TestCod	e: <b>M_HG_S</b> C	OLI Units: mg/Kg		Prep Date	e: <b>8/20/2</b> 0	013	Run ID: CI	ETAC_13082	1A
Client ID:	ZZZZZ	Batch ID:	71452	TestN	o: <b>SW7471A</b>			Analysis Date	e: <b>8/21/2</b> 0	013	SeqNo: 24	97895	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury			ND	0.020									
Sample ID	HGLCSS1 8/20/13	SampType:	LCS	TestCod	e: <b>M_HG_S</b> C	OLI Units: mg/Kg		Prep Date	e: <b>8/20/2</b> 0	013	Run ID: CI	ETAC_13082	1A
Client ID:	ZZZZZ	Batch ID:	71452	TestN	o: <b>SW7471A</b>			Analysis Date	e: <b>8/21/2</b> 0	013	SeqNo: 24	97896	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury			0.228	0.020	0.25	0	91.2	80	120	0	0		
Sample ID	13080639-017AMS	SampType:	MS	TestCod	e: <b>M_HG_SC</b>	OLI Units: mg/Kg	-dry	Prep Date	e: <b>8/20/2</b> 0	013	Run ID: CI	ETAC_13082	1F
Sample ID Client ID:	13080639-017AMS PA-499-01(0-6)-0814	. ,,			e: <b>M_HG_SC</b> o: <b>SW7471A</b>	0 0	-dry	Prep Date Analysis Date			Run ID: CI SeqNo: 24		1F
'		. ,,				0 0	-dry %REC	Analysis Date	e: <b>8/21/2</b> 0				<b>1F</b> Qual
Client ID:		. ,,	71452	TestN	o: <b>SW7471A</b>	0 0		Analysis Date	e: <b>8/21/2</b> 0	013	SeqNo: 24	98271	
Client ID:	PA-499-01(0-6)-0814	Batch ID:	<b>71452</b> Result 0.7998	TestN PQL 0.041	o: <b>SW7471A</b> SPK value	SPK Ref Val	%REC 58.9	Analysis Date	e: <b>8/21/20</b> HighLimit 125	RPD Ref Val	SeqNo: <b>24</b> %RPD 0	98271	Qual S
Client ID: Analyte Mercury	PA-499-01(0-6)-0814	Batch ID:  SampType:	71452 Result 0.7998 MSD	PQL 0.041 TestCod	o: <b>SW7471A</b> SPK value  0.2544	SPK Ref Val  0.65  OLI Units: mg/Kg	%REC 58.9	Analysis Date LowLimit 75	e: <b>8/21/20</b> HighLimit 125 e: <b>8/20/20</b>	013 RPD Ref Val 0	SeqNo: <b>24</b> %RPD 0	RPDLimit  ETAC_13082	Qual S
Client ID: Analyte Mercury Sample ID	PA-499-01(0-6)-0814 13080639-017AMSD	Batch ID:  SampType:	71452 Result 0.7998 MSD	PQL 0.041 TestCod	o: <b>SW7471A</b> SPK value  0.2544 e: <b>M_HG_SC</b>	SPK Ref Val  0.65  OLI Units: mg/Kg	%REC 58.9	Analysis Date  LowLimit  75  Prep Date Analysis Date	e: <b>8/21/20</b> HighLimit 125 e: <b>8/20/20</b>	013 RPD Ref Val 0 013 013	SeqNo: 24  %RPD  0  Run ID: CI	RPDLimit  ETAC_13082	Qual S

J - Analyte detected below quantitation limits

H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

#### PREP BATCH REPORT

Prep Start Date: 8/20/2013 6:16:00 P Prep End Date: 8/20/2013 6:57:00 P

Prep Factor Units:

Prep Batch 71461 Prep Code: M\_HG\_S\_PRE Technician: LB mL/g

Sample ID	Matrix	рН	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBS2 8/20/13			0.3	0	0	30	100.000	8/20/2013	8/20/2013
HGLCSS2 8/20/13			0.3	0	0	30	100.000	8/20/2013	8/20/2013
13080639-029A	Soil		0.338	0	0	30	88.757	8/20/2013	8/20/2013
13080639-030A	Soil		0.348	0	0	30	86.207	8/20/2013	8/20/2013
13080639-031A	Soil		0.327	0	0	30	91.743	8/20/2013	8/20/2013
13080639-032A	Soil		0.3	0	0	30	100.000	8/20/2013	8/20/2013
13080639-033A	Soil		0.308	0	0	30	97.403	8/20/2013	8/20/2013
13080639-034A	Soil		0.332	0	0	30	90.361	8/20/2013	8/20/2013
13080639-035A	Soil		0.361	0	0	30	83.102	8/20/2013	8/20/2013
13080639-036A	Soil		0.338	0	0	30	88.757	8/20/2013	8/20/2013
13080639-037A	Soil		0.303	0	0	30	99.010	8/20/2013	8/20/2013
13080639-038A	Soil		0.304	0	0	30	98.684	8/20/2013	8/20/2013
13080639-039A	Soil		0.395	0	0	30	75.949	8/20/2013	8/20/2013
13080639-040A	Soil		0.387	0	0	30	77.519	8/20/2013	8/20/2013
13080639-040AMS	Soil		0.388	0	0	30	77.320	8/20/2013	8/20/2013
13080639-040AMSD	Soil		0.389	0	0	30	77.121	8/20/2013	8/20/2013
13080639-041A	Soil		0.305	0	0	30	98.361	8/20/2013	8/20/2013
13080639-042A	Soil		0.359	0	0	30	83.565	8/20/2013	8/20/2013
13080643-001A	Solid		0.348	0	0	30	86.207	8/20/2013	8/20/2013
13080643-002A	Solid		0.39	0	0	30	76.923	8/20/2013	8/20/2013
13080643-003A	Solid		0.318	0	0	30	94.340	8/20/2013	8/20/2013
13080643-004A	Solid		0.359	0	0	30	83.565	8/20/2013	8/20/2013
13080681-001B	Soil		0.307	0	0	30	97.720	8/20/2013	8/20/2013
13080682-001A	Soil		0.322	0	0	30	93.168	8/20/2013	8/20/2013

Weston Solutions **CLIENT:** 

Work Order: 13080639 ANALYTICAL QC SUMMARY REPORT

**BatchID: 71461 Project:** Pilsen Soil Site, Pilsen, Chicago, IL

Sample ID	HGMBS2 8/20/13	SampType:	MBLK	TestCod	e: <b>M_HG_S</b> (	OLI Units: mg/Kg		Prep Date	e: <b>8/20/2</b> 0	013	Run ID: CE	TAC_13082	1F
Client ID:	ZZZZZ	Batch ID:	71461	TestN	o: <b>SW7471A</b>	<b>\</b>		Analysis Date	e: <b>8/21/2</b> 0	013	SeqNo: 24	98232	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury			ND	0.020									
Sample ID	HGLCSS2 8/20/13	SampType:	LCS	TestCod	le: <b>M_HG_S</b> (	OLI Units: mg/Kg		Prep Date	e: <b>8/20/2</b> 0	013	Run ID: CE	TAC_13082	1F
Client ID:	ZZZZZ	Batch ID:	71461	TestN	o: <b>SW7471A</b>	<b>\</b>		Analysis Date	e: <b>8/21/2</b> 0	013	SeqNo: 24	98233	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury			0.226	0.020	0.25	0	90.4	80	120	0	0		
Sample ID	13080639-040AMS	SampType:	MS	TestCod	e: <b>M_HG_S</b> (	OLI Units: mg/Kg	-dry	Prep Date	e: <b>8/20/2</b> 0	013	Run ID: CE	TAC_13082	1F
Sample ID Client ID:	13080639-040AMS PA-515-01(0-6)-0816				le: M_HG_S0 lo: SW7471A	0 0	-dry	Prep Date Analysis Date			Run ID: CE SeqNo: 24	_	1F
•						0 0	-dry %REC	Analysis Date	e: <b>8/21/2</b> 0			_	<b>1F</b> Qual
Client ID:			71461	TestN	 lo: <b>SW7471A</b>		·	Analysis Date	e: <b>8/21/2</b> 0	013	SeqNo: 24	98276	
Client ID:	PA-515-01(0-6)-0816	Batch ID:	<b>71461</b> Result 1.047	TestN PQL 0.096	o: <b>SW7471A</b>	SPK Ref Val 0.8863	%REC 67	Analysis Date	e: <b>8/21/20</b> HighLimit 125	RPD Ref Val	SeqNo: <b>24</b> %RPD 0	98276	Qual S
Client ID: Analyte Mercury	PA-515-01(0-6)-0816	Batch ID:  SampType:	71461 Result 1.047 MSD	PQL 0.096 TestCod	o: <b>SW7471A</b> SPK value  0.2389	SPK Ref Val  0.8863  DLI Units: mg/Kg	%REC 67	Analysis Date  LowLimit   75	e: <b>8/21/20</b> HighLimit 125 e: <b>8/20/20</b>	013 RPD Ref Val 0	SeqNo: <b>24</b> %RPD 0	98276  RPDLimit  ETAC_13082	Qual S
Client ID: Analyte Mercury Sample ID	PA-515-01(0-6)-0816 13080639-040AMSD	Batch ID:  SampType:	71461 Result 1.047 MSD	PQL 0.096 TestCod	SPK value 0.2389	SPK Ref Val  0.8863  DLI Units: mg/Kg	%REC 67	Analysis Date  LowLimit   75  Prep Date	HighLimit 125 2: 8/20/20 2: 8/21/20	013  RPD Ref Val  0  013  013	SeqNo:         24           %RPD         0           Run ID:         CE	98276  RPDLimit  ETAC_13082	Qual S

J - Analyte detected below quantitation limits

<sup>\* -</sup> Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

H/HT - Holding Time Exceeded

## **STAT** Analysis Corporation

## PREP BATCH REPORT

Prep Start Date: 8/20/2013 6:30:00 P Prep End Date: 8/20/2013 7:09:00 P

Prep Factor Units:

Prep Batch 71462 Prep Code: M\_HG\_S\_PRE Technician: LB mL/g

Sample ID	Matrix	рН	SampAmt	Sol Added	Sol Recov	Fin Vol	factor	PrepStart	PrepEnd
HGMBS3 8/20/13			0.3	0	0	30	100.000	8/20/2013	8/20/2013
HGLCSS3 8/20/13			0.3	0	0	30	100.000	8/20/2013	8/20/2013
13080634-001B	Soil		0.326	0	0	30	92.025	8/20/2013	8/20/2013
13080634-002B	Soil		0.348	0	0	30	86.207	8/20/2013	8/20/2013
13080634-003B	Soil		0.312	0	0	30	96.154	8/20/2013	8/20/2013
13080634-004B	Soil		0.37	0	0	30	81.081	8/20/2013	8/20/2013
13080634-005B	Soil		0.309	0	0	30	97.087	8/20/2013	8/20/2013
13080634-006B	Soil		0.326	0	0	30	92.025	8/20/2013	8/20/2013
13080634-007B	Soil		0.388	0	0	30	77.320	8/20/2013	8/20/2013
13080634-008B	Soil		0.324	0	0	30	92.593	8/20/2013	8/20/2013
13080634-009B	Soil		0.347	0	0	30	86.455	8/20/2013	8/20/2013
13080634-010B	Soil		0.365	0	0	30	82.192	8/20/2013	8/20/2013
13080634-011B	Soil		0.304	0	0	30	98.684	8/20/2013	8/20/2013
13080634-012B	Soil		0.336	0	0	30	89.286	8/20/2013	8/20/2013
13080634-013B	Soil		0.305	0	0	30	98.361	8/20/2013	8/20/2013
13080634-014B	Soil		0.319	0	0	30	94.044	8/20/2013	8/20/2013
13080634-015B	Soil		0.304	0	0	30	98.684	8/20/2013	8/20/2013
13080634-016B	Soil		0.31	0	0	30	96.774	8/20/2013	8/20/2013
13080634-017B	Soil		0.375	0	0	30	80.000	8/20/2013	8/20/2013
13080634-018B	Soil		0.337	0	0	30	89.021	8/20/2013	8/20/2013
13080634-019B	Soil		0.317	0	0	30	94.637	8/20/2013	8/20/2013
13080639-043A	Soil		0.331	0	0	30	90.634	8/20/2013	8/20/2013
13080639-043AMS	Soil		0.328	0	0	30	91.463	8/20/2013	8/20/2013
13080639-043AMSD	Soil		0.327	0	0	30	91.743	8/20/2013	8/20/2013

**CLIENT:** Weston Solutions

**Work Order:** 13080639

**Project:** 

ANALYTICAL QC SUMMARY REPORT

Pilsen Soil Site, Pilsen, Chicago, IL

BatchID: 71462

Sample ID	HGMBS3 8/20/13	SampType:	MBLK	TestCod	le: <b>M_HG_S</b> (	OLI Units: mg/Kg		Prep Date	: 8/20/2	013	Run ID: CI	ETAC_13082	1F
Client ID:	ZZZZZ	Batch ID:	71462	TestN	lo: <b>SW7471A</b>	1		Analysis Date	e: <b>8/21/2</b>	013	SeqNo: 24	98252	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury			ND	0.020									
Sample ID	HGLCSS3 8/20/13	SampType:	LCS	TestCod	le: <b>M_HG_S</b> (	OLI Units: mg/Kg		Prep Date	: 8/20/2	013	Run ID: CI	ETAC_13082	1F
Client ID:	ZZZZZ	Batch ID:	71462	TestN	lo: <b>SW7471A</b>	<b>\</b>		Analysis Date	e: <b>8/21/2</b>	013	SeqNo: 24	98253	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury			0.227	0.020	0.25	0	90.8	80	120	0	0		
Sample ID	13080639-043AMS	SampType:	MS	TestCod	le: <b>M_HG_S</b> (	OLI Units: mg/Kg	-dry	Prep Date	: 8/20/2	013	Run ID: CI	TAC_13082	1F
Sample ID Client ID:	13080639-043AMS PA-516-01(6-18)-081				le: M_HG_S0	0 0	-dry	Prep Date Analysis Date			Run ID: CE SeqNo: 24	_	1F
'					 lo: <b>SW7471A</b>	0 0	-dry %REC	Analysis Date	e: <b>8/21/2</b>			_	<b>1F</b> Qual
Client ID:			71462	TestN	 lo: <b>SW7471A</b>		·	Analysis Date	e: <b>8/21/2</b>	013	SeqNo: 24	98257	
Client ID:		Batch ID:	<b>71462</b> Result 0.7737	TestN PQL 0.023	lo: <b>SW7471A</b>	SPK Ref Val 0.4873	%REC 102	Analysis Date	e: <b>8/21/2</b> HighLimit 125	013  RPD Ref Val  0	SeqNo: <b>24</b> %RPD 0	98257	Qual
Client ID: Analyte Mercury	PA-516-01(6-18)-081	Batch ID:  SampType:	71462 Result 0.7737 MSD	PQL 0.023	lo: <b>SW7471A</b> SPK value  0.2819	SPK Ref Val  0.4873  DLI Units: mg/Kg	%REC 102	Analysis Date LowLimit F	e: <b>8/21/2</b> HighLimit 125 : <b>8/20/2</b>	013 RPD Ref Val 0	SeqNo: <b>24</b> %RPD 0	98257  RPDLimit  ETAC_13082	Qual
Client ID: Analyte Mercury Sample ID	PA-516-01(6-18)-081	Batch ID:  SampType:	71462 Result 0.7737 MSD	PQL 0.023	o: <b>SW7471A</b> SPK value  0.2819  de: <b>M_HG_S</b>	SPK Ref Val  0.4873  DLI Units: mg/Kg	%REC 102	Analysis Date  LowLimit H  75  Prep Date  Analysis Date	e: <b>8/21/2</b> HighLimit 125 : <b>8/20/2</b>	013 RPD Ref Val 0 013 013	SeqNo:         24           %RPD         0           Run ID:         CF	98257  RPDLimit  ETAC_13082	Qual

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

<sup>\* -</sup> Non Accredited Parameter

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank

E - Value above quantitation range

**CLIENT:** Weston Solutions

**Work Order:** 13080639

**Project:** 

ANALYTICAL QC SUMMARY REPORT

Pilsen Soil Site, Pilsen, Chicago, IL **BatchID:** R92317

Sample ID PMMBK 1 8/	<b>20/13</b> SampType	e: MBLK	TestCod	e: <b>PMOIST</b>	Units: wt%		Prep Date:	8/20/2	013	Run ID: BA	LANCE_130	0820C
Client ID: ZZZZZ	Batch ID	: R92317	TestN	o: <b>D2974</b>			Analysis Date	: 8/20/2	013	SeqNo: 24	97375	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		ND	0.200									*
Sample ID PMLCS-S 1	<b>8/20/13</b> SampType	e: LCS	TestCod	e: PMOIST	Units: wt%		Prep Date:	8/20/2	013	Run ID: BA	ALANCE_130	0820C
Client ID: ZZZZZ	Batch ID	: R92317	TestN	o: <b>D2974</b>			Analysis Date	: 8/20/2	013	SeqNo: 24	97377	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit F	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture		4.82	0.200	5	0	96.4	80	120	0	0		*
Sample ID PMLCS-W 1	<b>8/20/13</b> SampType	e: LCS	TestCod	e: <b>PMOIST</b>	Units: wt%		Prep Date:	8/20/2	013	Run ID: BA	ALANCE_130	)820C
Sample ID PMLCS-W 1 Client ID: ZZZZZ	8/20/13 SampType Batch ID			e: <b>PMOIST</b> o: <b>D2974</b>	Units: wt%		Prep Date: Analysis Date			Run ID: BA		0820C
'					Units: wt%	%REC	Analysis Date	: 8/20/2				0820C Qual
Client ID: ZZZZZ		: R92317	TestN	o: <b>D2974</b>			Analysis Date	: 8/20/2	013	SeqNo: 24	97379	
Client ID: ZZZZZ Analyte	Batch ID	R92317 Result 99.79	TestN PQL 0.200	o: <b>D2974</b> SPK value	SPK Ref Val	%REC	Analysis Date	: <b>8/20/2</b> HighLimit 120	013  RPD Ref Val  0	SeqNo: <b>24</b> %RPD 0	97379	Qual *
Client ID: ZZZZZ  Analyte  Percent Moisture	Batch ID	Result 99.79	PQL 0.200 TestCod	o: <b>D2974</b> SPK value 99.8	SPK Ref Val	%REC 100	Analysis Date LowLimit F	: <b>8/20/2</b> HighLimit 120 : <b>8/20/2</b>	013 RPD Ref Val 0	SeqNo: <b>24</b> %RPD 0	97379  RPDLimit  ALANCE_130	Qual *
Client ID: ZZZZZ  Analyte  Percent Moisture  Sample ID 13080634-01	Batch ID  Batch ID	Result 99.79	PQL 0.200 TestCod	o: D2974  SPK value  99.8 e: PMOIST	SPK Ref Val	%REC 100	Analysis Date  LowLimit H  80  Prep Date: Analysis Date	: <b>8/20/2</b> HighLimit 120 : <b>8/20/2</b>	013 RPD Ref Val 0 013 013	SeqNo:         24           %RPD         0           Run ID:         BA	97379  RPDLimit  ALANCE_130	Qual *

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

H/HT - Holding Time Exceeded

B - Analyte detected in the associated Method Blank

**CLIENT:** Weston Solutions

Pilsen Soil Site, Pilsen, Chicago, IL

4.89

0.200

Work Order: 13080639

**Project:** 

Percent Moisture

ANALYTICAL QC SUMMARY REPORT

BatchID: R92320

0

0

Sample ID PMMBK 2 8/20/13 Client ID: ZZZZZ	3 SampType: MBLK Batch ID: R92320	TestCode: P		Prep Date: <b>8/20/2013</b> Analysis Date: <b>8/20/2013</b>	Run ID: BA	ALANCE_1308 197484	820D
Analyte	Result	PQL SP	K value SPK Ref Va	%REC LowLimit HighLimit RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	ND	0.200					*

Sample ID	PMLCS-S 2 8/20/13	SampType: LCS	TestCode: PMOIST	Units: wt%	Prep Date:	8/20/2013	Run ID: BA	LANCE_1308	320D
Client ID:	ZZZZZ	Batch ID: R92320	TestNo: <b>D2974</b>		Analysis Date:	8/20/2013	SeqNo: 249	97485	
Analyte		Result	PQL SPK value	SPK Ref Val	%REC LowLimit H	lighLimit RPD Ref Val	%RPD	RPDLimit	Qual

5

Sample ID	PMLCS-W 2 8/20/13	SampType:	LCS	TestCode: PMOIST	Units: wt%	Prep Date:	8/20/2013	Run ID:	BALANCE_130820D
Client ID:	ZZZZZ	Batch ID:	R92320	TestNo: <b>D2974</b>		Analysis Date:	8/20/2013	SeqNo:	2497486

0

97.8

80

120

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Percent Moisture	99.81	0.200	99.8	0	100	80	120	0	0	*

Sample ID	13080639-017A DUP	SampType:	DUP	TestCode	: PMOIST	Units: wt%		Prep Date:	8/20/20	013	Run ID:	BALANCE_	130820D
Client ID:	PA-499-01(0-6)-0814	Batch ID:	R92320	TestNo	: D2974			Analysis Date	: 8/20/20	013	SeqNo:	2497488	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RP	D RPDLim	t Qual

Percent Moisture 12.07 0.200 0 0 0 0 0 14.25 16.6 20 **CLIENT:** Weston Solutions

**Work Order:** 13080639

on Solutions
ANALYTICAL QC SUMMARY REPORT

Project: Pilsen Soil Site, Pilsen, Chicago, IL BatchID: R92324

Sample ID	PMMBK 3 8/20/13	SampType:	MBLK	TestCod	e: PMOIST	Units: wt%		Prep Date:	8/20/2	013	Run ID: B	ALANCE_130	820E
Client ID:	ZZZZZ	Batch ID:	R92324	TestN	o: <b>D2974</b>			Analysis Date:	8/20/2	013	SeqNo: 2	497608	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Mo	oisture		ND	0.200									*
Sample ID	PMLCS-S 3 8/20/13	SampType:	LCS	TestCod	e: PMOIST	Units: wt%		Prep Date:	8/20/2	013	Run ID: B	ALANCE_130	820E
Client ID:	ZZZZZ	Batch ID:	R92324	TestN	o: <b>D2974</b>			Analysis Date:	8/20/2	013	SeqNo: 2	497609	
Analyte			Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Mo	oisture		5.68	0.200	5	0	114	80	120	0	C		*
Sample ID	PMLCS-W 3 8/20/13	SampType:	LCS	TestCod	e: PMOIST	Units: wt%		Prep Date:	8/20/2	013	Run ID: B	ALANCE 130	820E
		- 1 71 -										_	
Client ID:	ZZZZZ	Batch ID:			o: <b>D2974</b>			Analysis Date:		013	SeqNo: 2	497610	
Client ID: Analyte	ZZZZZ	. ,,			o: <b>D2974</b> SPK value		%REC	Analysis Date:	8/20/2	013 RPD Ref Val	SeqNo: <b>2</b> %RPD	4 <b>97610</b> RPDLimit	Qual
		. ,,	R92324	TestN				Analysis Date:	8/20/2		·	RPDLimit	
Analyte	oisture	Batch ID:	<b>R92324</b> Result  99.77	TestN PQL 0.200	SPK value	SPK Ref Val	%REC	Analysis Date:	: <b>8/20/2</b> HighLimit 120	RPD Ref Val	%RPD	RPDLimit	Qual *
Analyte Percent Mo	oisture	Batch ID:  SampType:	R92324  Result  99.77  DUP	PQL 0.200	SPK value 99.8	SPK Ref Val	%REC 100	Analysis Date: LowLimit F	: <b>8/20/2</b> HighLimit 120 <b>8/20/2</b>	RPD Ref Val 0	%RPD	RPDLimit  ALANCE_130	Qual *
Analyte Percent Mo	0isture 13080639-040A DUP	Batch ID:  SampType:	R92324  Result  99.77  DUP	PQL 0.200	SPK value 99.8 le: PMOIST	SPK Ref Val	%REC 100	Analysis Date:  LowLimit H  80  Prep Date: Analysis Date:	8/20/2 HighLimit 120 8/20/2 : 8/20/2	RPD Ref Val 0	%RPD	RPDLimit  ALANCE_130	Qual *

J - Analyte detected below quantitation limits

E - Value above quantitation range

## APPENDIX D EPA FIELDS SUPPLEMENTAL DATA ANALYSIS

## Pilsen-Kramer Site Comparison of Abundance of Metals Bar Graph

Linda Jacobson, Research Associate John Canar, Environmental Scientist

24 February 2014

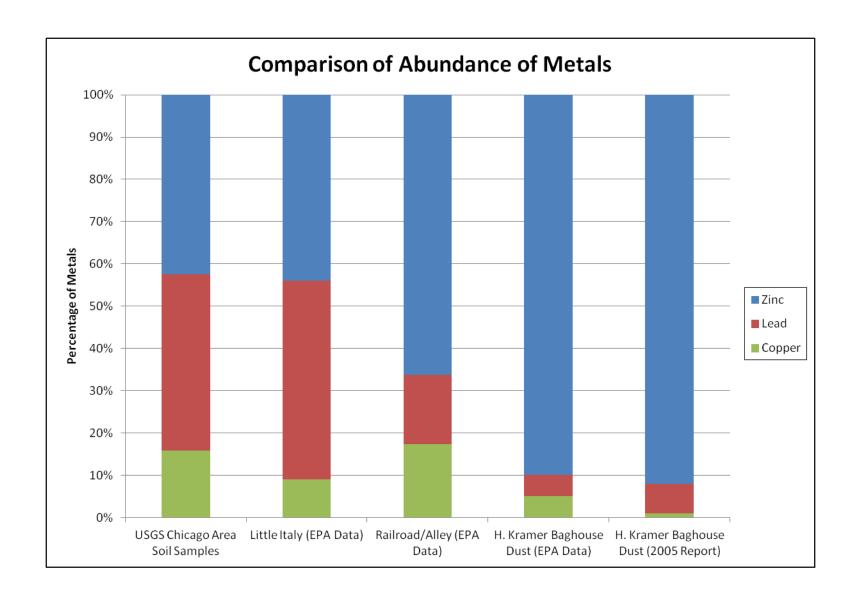
#### Introduction

Soil samples were collected near the H. Kramer site and surrounding areas by the USGS; the EPA; and Conestoga-Rovers & Associates (CRA) and TRC Environmental Corporation (TRC). The USGS samples were taken in the surrounding area. The EPA samples were taken in 2012 and 2013 and were subset into Little Italy and Railroad/Alley. The samples taken by CRA and TRC were taken at the H. Kramer baghouse and are detailed in the 2005 report (Report to Illinois EPA Regarding Soil Sampling at H. Kramer Co., Inc. and Vicinity.pdf). The EPA also collected samples at the H. Kramer baghouse in 2013. Zinc, Lead, and Copper from these sampling events were compared in this bar graph.

#### **Methods and Analysis**

The bar graph (below) shows the percent of Zinc, Lead, and Copper for the samples collected by the USGS in the Chicago area, the samples collected by the EPA in the Little Italy area from 0 to 6 inches, the samples collected by the EPA in the Railroad/Alley area from 0 to 6 inches, the samples taken by the EPA in the H. Kramer baghouse, and the samples taken by CRA and TRC in the H. Kramer baghouse. The percents of metals for the USGS Chicago area samples and the H. Kramer baghouse samples taken by CRA and TRC are from the "Comparison of Abundance of Metals" graph in the 2005 report. For the EPA samples taken in the Little Italy area, the percent of Zinc was obtained by dividing the sum of the Zinc laboratory concentrations in the Little Italy area by the total of the Zinc, Lead, and Copper laboratory concentrations for the Little Italy area. This was repeated to obtain the percents of Lead and Copper for the Little Italy area. The Zinc, Lead, and Copper percents were obtained for the EPA samples taken in the Railroad/Alley area and the H. Kramer baghouse using the same method. The percents were graphed in a stacked column graph.

Please contact the FIELDS Group via John Canar (<u>canar.john@epa.gov</u>) about this document.







### Pilsen-Kramer Site (Superfund Removal Program) Simple Linear Regression and Diagnostics Results (2012-2013 Sampling Events)

Prepared by John Canar FIELDS Group, US EPA, Region V

29 January 2014

#### Introduction

Simple linear regression and regression diagnostics were used to find the "best fitting" linear relationship between XRF measurements of Lead levels in soil samples and their corresponding laboratory measurements using the SAS® software. This relationship is quantified into a model (equation) of XRF measurements of Lead and its corresponding laboratory measurement. The statistical methods employed were drawn from SAS® literature and three regression texts: <a href="Statistical Methods">Statistical Methods</a> in Water Resources, 1992; and <a href="Applied Regression Analysis and Other Multivariate Methods">Applied Regression Analysis and Other Multivariate Methods</a>, 1978 and 1988. (See "References" section for a complete list of regression resources.) The data set used for this analysis was provided by Weston Solutions, the USEPA contractor for the Pilsen-Kramer Superfund site. The data include all sampling events from and including 2012 and 2013. This site is under the direction of Ramon Mendoza, USEPA OSC.

The steps used to perform simple linear regression were:

- 1. Plot the data;
- 2. Compute the least squares regression statistics;
- 3. Examine adherence to the assumptions of regression using residual plots; and
- 4. Employ regression diagnostics (Helsel and Hirsch, 1992).

#### Data

A total of 192 soil samples with corresponding XRF values were submitted for laboratory analysis and were used in the below regression.

#### **Results**

There was a statistically significant linear regression relationship between XRF Lead values and their corresponding Laboratory values (results not shown). However, regression diagnostics found that some of the assumptions of regression were violated. These violations included extreme residuals, heteroscedasticity, and non-normality of the residuals (see Figures 1 and 2). (The null hypothesis of each of the four tests in Figure 2 is that the residuals are from a normal distribution. If using an alpha value of 0.05, one would not reject the null hypothesis for all four tests.) The heteroscedasticity of the residuals meant that a data transformation would likely overcome this violation of one of the statistical assumptions of regression. Hence, the natural log of the XRF Lead values and their corresponding Laboratory value were taken.

There was a statistically significant linear regression relationship between natural log of XRF Lead values and their corresponding natural log of Laboratory values (results not shown). However, regression diagnostics found that some of the assumptions of regression were violated. These violations included extreme residuals and non-normality of the residuals (see Figures 3 and 4). However, the heteroscedasticity now appears much less apparent. To overcome these violations, four observations with Studentized residual values greater than 2.5, a value used as a rule of thumb for extreme values, were removed from the data set. The new data set was regressed and the linear regression was significant (results not shown). The assumption of a lack of extreme residuals and normality of the residuals was violated (results not shown). One observation with an extreme residual was removed from the data set and the new data set was regressed. The regression results were significant but the assumption of a lack of extreme residuals and normality of the residuals was violated (results not shown). Another observation with an extreme residual was removed, the new dataset was regressed, and again the violations occurred. This was performed four more times until all the assumptions of regression were met. Figure 5 shows the statistically significant linear regression relationship between the natural log of XRF Lead values and their corresponding natural log of Laboratory values. Figures 6 and 7 demonstrate that the assumptions of regression were met. Figure 6 shows that the residuals were homoscedastic and none of the Studentized residuals were greater than 2.5. The White test also found that the variance of the residuals were homogenous (results not shown). Figure 7 shows that the residuals were normally distributed. Normality of residuals is required in order to test the hypothesis that "the slope coefficient ( $\beta_1$ ) is significantly different from zero" (Helsel and Hirsch, 1992). In other words, in order to demonstrate a linear relationship between the two variables, XRF and Laboratory, the slope coefficient must be significant. A visualization of the linear relationship between the natural log of Lead XRF and Laboratory values in soil is shown in Figure 8.

The parameters of the best linear fit equation for the relationship of the natural log of Lead XRF and Laboratory values in soil are:

Adjusted LN Lead = 0.37986 + (0.99751)\*(LN XRF Lead value)

However, as this equation is in natural log space, the antilog of the adjusted Lead value must be taken. For example, for an XRF Lead reading of 400ppm (5.99ppm in natural log space), the Adjusted LN XRF Lead value is 6.36ppm. The antilog of this value is 576ppm. Hence, an XRF

Lead reading in soil of 400 ppm is equivalent to an adjusted XRF Lead value of 576ppm in soil. For 800ppm, the adjusted value is 1,150ppm; for 1,200ppm, the adjusted value is 1,724ppm.

#### **References:**

Chen, X., Ender, P., Mitchell, M. and Wells, C. (2003). Regression with SAS, from http://www.ats.ucla.edu/stat/sas/webbooks/reg/default.htm

Helsel, D.R. and Hirsch R.M., <u>Statistical Methods in Water Resources</u>, Elsevier, Amsterdam, 1992.

Kleinbaum, D.G. and Kupper, L.L., <u>Applied Regression Analysis and Other Multivariate Methods</u>, Duxbury Press, Boston, Massachusetts, 1978.

Kleinbaum, D.G., Kupper, L.L., and Muller, K.E., <u>Applied Regression Analysis and Other Multivariate Methods</u>, Second Edition. PWS-Kent Publishing Company, Boston, Massachusetts, 1988.

SAS Institute Inc., <u>SAS/STAT<sup>®</sup> User's Guide, Version 8</u>, Cary, NC: SAS Institute Inc., 1999. (Chapter 55, The REG Procedure)

SAS Institute Inc., <u>SAS</u> <sup>®</sup> <u>System for Regression, Second Edition</u>, Cary, NC: SAS Institute Inc., 1991. 210pp.

#### **Contact:**

Please contact John Canar (canar.john@epa.gov or 312.886.6182) about this document.

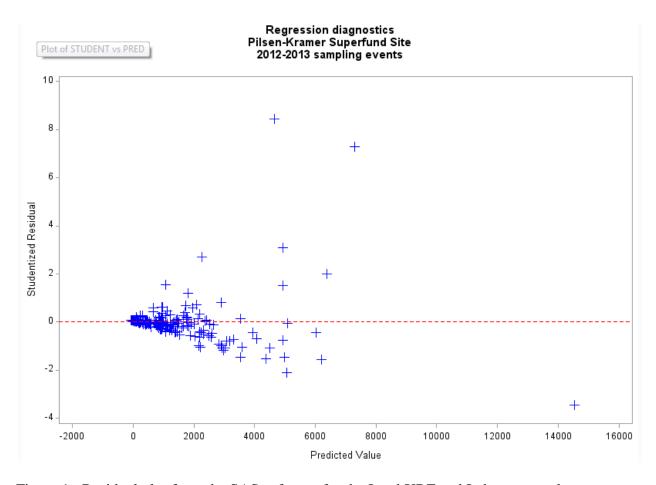


Figure 1: Residual plot from the SAS software for the Lead XRF and Laboratory values

Tests for Normality									
Test Statistic p Value									
Shapiro-Wilk	w	0.537364	Pr < W	<0.0001					
Kolmogorov-Smirnov	D	0.2823	Pr > D	<0.0100					
Cramer-von Mises	W-Sq	4.674063	Pr > W-Sq	<0.0050					
Anderson-Darling	A-Sq	23.65082	Pr > A-Sq	<0.0050					

Figure 2: Tests of Normality from the SAS software for residuals from the Lead XRF and Laboratory values  $\frac{1}{2}$ 

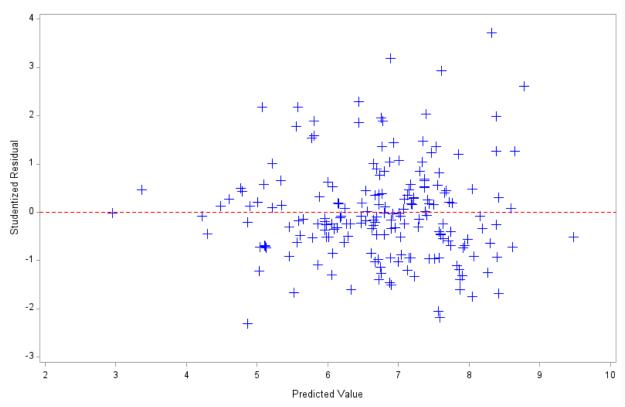


Figure 3: Residual plot from the SAS software for the natural log of Lead XRF and Laboratory values

Tests for Normality								
Test	Sta	atistic	p Value					
Shapiro-Wilk	w	0.965805	Pr < W	0.0001				
Kolmogorov-Smirnov	D	0.0841	Pr>D	<0.0100				
Cramer-von Mises	W-Sq	0.32038	Pr > W-Sq	<0.0050				
Anderson-Darling	A-Sq	1.860632	Pr > A-Sq	<0.0050				

Figure 4: Tests of Normality from the SAS software for residuals from the natural log of Lead XRF and Laboratory values

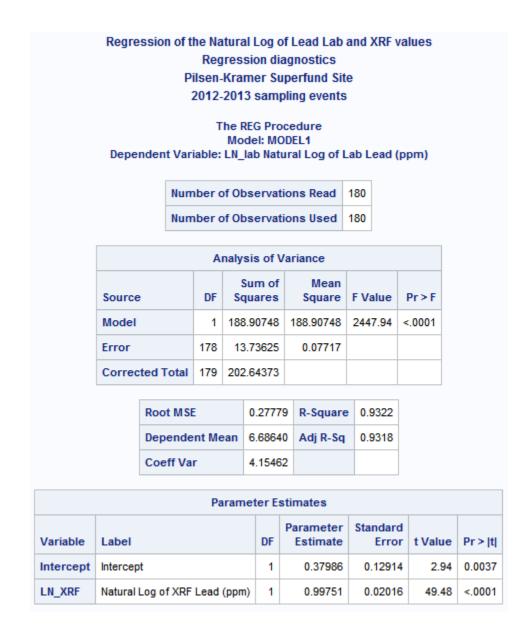


Figure 5: Simple linear regression output from the SAS software for the natural log of the Lead XRF and Laboratory values

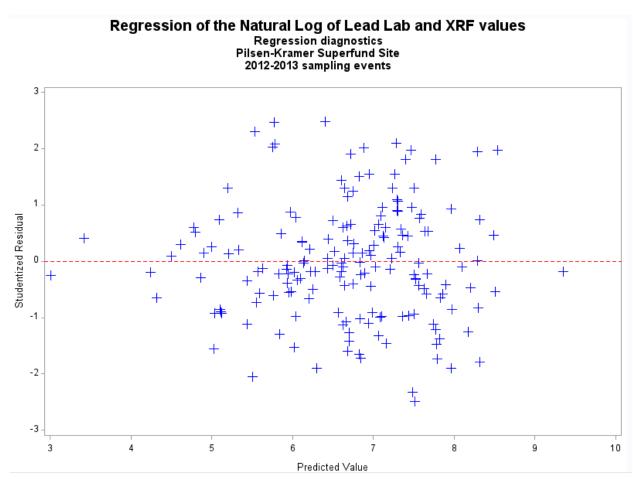


Figure 6: Residual plot from the SAS software for the natural log of Lead XRF and Laboratory values

Tests for Normality							
Test	Sta	atistic	p Value				
Shapiro-Wilk	w	0.990763	Pr < W	0.3000			
Kolmogorov-Smirnov	D	0.036768	Pr > D	>0.1500			
Cramer-von Mises	W-Sq	0.061628	Pr > W-Sq	>0.2500			
Anderson-Darling	A-Sq	0.439031	Pr > A-Sq	>0.2500			

Figure 7: Tests of Normality from the SAS software for residuals from the natural log of Lead XRF and Laboratory values

#### Regression of the Natural Log of Lead Lab and XRF values

Regression equation (y-intercept) and 50% CLM
Pilsen-Kramer Superfund Site
2012-2013 sampling events

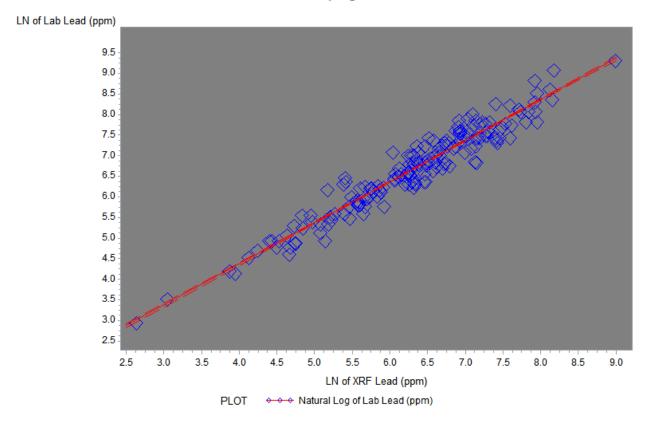


Figure 8: Best-fit linear regression line from the SAS software for the natural log of the Lead XRF and Laboratory values





24 February 2014

## Pilsen-Kramer Superfund Site Comparisons of Cadmium, Copper, Lead, Tin, and Zinc levels

### **USEPA FIELDS Group**

John Canar, Environmental Scientist Linda Jacobson, Research Associate Chuck Roth, Life Scientist

#### Introduction

Soil samples were collected by the USEPA and its contractor, Weston Solutions, near the H. Kramer property as well as at locations up to a mile and a half away from the property. These samples were analyzed for metals in an accredited laboratory. Additionally, split samples were performed on these samples in order to evaluate Lead levels for sieved samples (<250um). The metals focused on for this study were Cadmium, Copper, Lead, Tin, and Zinc because these metals are more indicative of the metals found on the H. Kramer site. The purpose of this analysis was to compare the Cadmium, Copper, Lead, Tin, and Zinc results in the Railroad/Alley area near the H. Kramer site, to the local reference area such as Little Italy, and to the USGS – Chicago Department of Environment surface metals sampling data (Kay et al., 2003). The USGS – Chicago Department of Environment samples were sieved (<180um).

#### **Methods**

The USEPA-Weston samples were taken at discrete locations in intervals of six inches to a foot below ground surface (bgs) to a maximum depth ranging from 6 to 48 inches bgs. The samples from the 0-6 inches bgs interval were used in this analysis. Samples were taken in front and back yards, alleys, and in soil areas with railroad tracks. The samples taken in gardens and drip zones were not used in this analysis due to garden soil being amended, mixed and often imported and drip zones being likely to contain Lead from Lead-based paint. The samples were separated into two areas called Railroad/Alley and Little Italy (see Figure 1). Little Italy is considered the local reference area. Little Italy was selected as it was mostly crosswind/upwind from the H. Kramer smelter and, compared to the Pilsen-Kramer area, had a more limited industrial past and

was similar in terms of age. Figure 2 is a representation of the historic wind rose for the Pilsen-Kramer area and environs. Note that "arms" in the figure represent the direction from which the wind blows; the lengths represent the proportion of the time the wind came from each direction (i.e., the frequency). Hence, for this wind rose, the predominant winds are from the west and the south.

The Railroad/Ally and Little Italy areas were compared for Cadmium, Copper, Lead, sieved Lead, Tin, and Zinc. Additionally, the same metals from the USGS – Chicago Department of Environment (USGS) sampling event were also compared. This comparison was phrased in the form of a question: Is there a difference in metal levels in the Railroad/Alley area compared to background data in the Little Italy area and for levels found in the Chicago area? If metal levels in the Railroad/Alley were higher than those in Little Italy or the Chicago area (the USGS – Chicago Department of Environment data), then this would indicate contamination. In order to answer this question, a statistical procedure called ANOVA (analysis of variance) is performed to test the hypothesis that the metal levels in each area are the same. Hence, one is testing whether Zinc levels, for instance, are the same for the Railroad/Alley data, the Little Italy data, and the Chicago area data. If that hypothesis is rejected, meaning that the levels of Zinc are not the same in these areas, then a multiple comparison procedure is performed. Since an ANOVA does not tell you which areas are different from each other, a multiple comparison procedure is performed to answer this question. The paragraph below explains how this is done using statistical software.

Since the data were not normally distributed for any of the metals (shown by the Shapiro-Wilk test; results not shown), and therefore violated the assumption of normality, the data were ranked to perform a nonparametric analysis. SAS® statistical software was used to compare the areas using one-way ANOVA on the ranked data with the general linear models (GLM) procedure. The Type III Sums of Squares result was used since the areas had an unbalanced number of samples. The Least Squares Means Tukey-Kramer Multiple Comparisons test was used to determine differences between the areas including the USGS dataset. The Least Squares Means Tukey-Kramer Multiple Comparisons test was selected because it accommodates unequal sample sizes and is the most robust test for pairwise comparisons (SAS, 2011).

#### **Results and Discussion**

There was a significant difference between the three areas for Cadmium, Copper, Lead, sieved Lead, Tin, and Zinc (shown by one-way ANOVA on ranked data; results not shown). The results of the Least Squares Means Tukey-Kramer Multiple Comparisons test are shown in Table 1. Boxplots of the Cadmium, Copper, Lead, sieved Lead, Tin, and Zinc data for each area are shown in Figures 3, 5, 7, 9, 11 and 13. Boxplots of the ranks of these metals are shown in Figure 4, 6, 8, 10, 12, and 14. (The boxplots of the ranks better display comparisons by area as the Railroad/Alley metal values have a tendency to obscure the differences due to the very high

#### metal concentrations.)

From Table 1, one can see that Copper, Lead, sieved Lead, and Zinc levels in the following areas were statistically different from each other: Little Italy & Railroad/Alley and Railroad/Alley & USGS. Specifically, Little Italy and the USGS dataset had lower levels of Copper, Lead, sieved Lead, and Zinc than those in the Railroad/Alley. Little Italy, the local reference area, was significantly lower than the other areas since it was farthest away from H. Kramer and was expected to not have been impacted by the power plant. This supports our expectation that Little Italy was not impacted by H. Kramer.

Little Italy and the USGS dataset did not have significantly different levels of Copper, Lead, sieved Lead, and Zinc. For Cadmium and Tin, Little Italy and Railroad/Alley were statistically different than the USGS dataset with the latter having lower metal levels. However, there were extremely high proportions of non-detects for these two metals (70% and 94%, respectively) in the USGS – Chicago Department of Environment dataset. Although the full detection limit was used for these non-detects, these values were extremely low, 2ppm and 50ppm, respectively. This likely led to a statistical difference for Tin that otherwise would not have been.

A cumulative representation of these statistical differences is shown in Figure 15. The colored ovals represent areas with metal values that are not statistically different from each other (as measured by the Tukey-Kramer multiple comparisons test). For example, the levels of Zinc are not significantly different for LI and USGS. (Where LI is Little Italy and USGS is the USGS dataset.) In contrast, LI and USGS have significantly lower Zinc levels than RR (Railroad/Alley). This pattern is repeated for Copper, Lead, and sieved Lead. These results also demonstrate that there were no statistical differences whether one evaluated the unsieved Lead results or the sieved Lead results. For Cadmium and Tin, the USGS dataset has lower metal levels than LI and RR. In general the figure demonstrates, when viewing from left to right, that the USGS dataset and Little Italy often have significantly lower metal levels than the RR areas. This is especially pronounced for three of the five metals: Copper, Lead, sieved Lead, and Zinc. As stated above, the significant proportion of non-detect values with very low detection limits in the USGS dataset likely led to the statistical differences with the LI and RR data for Tin.

#### References

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SAS Institute Inc., <u>SAS/STAT<sup>®</sup> User's Guide</u>, <u>Version 9.2</u>, Cary, NC: SAS Institute Inc., 2011.

(The GLM Procedure, Multiple Comparisons)

## Contact

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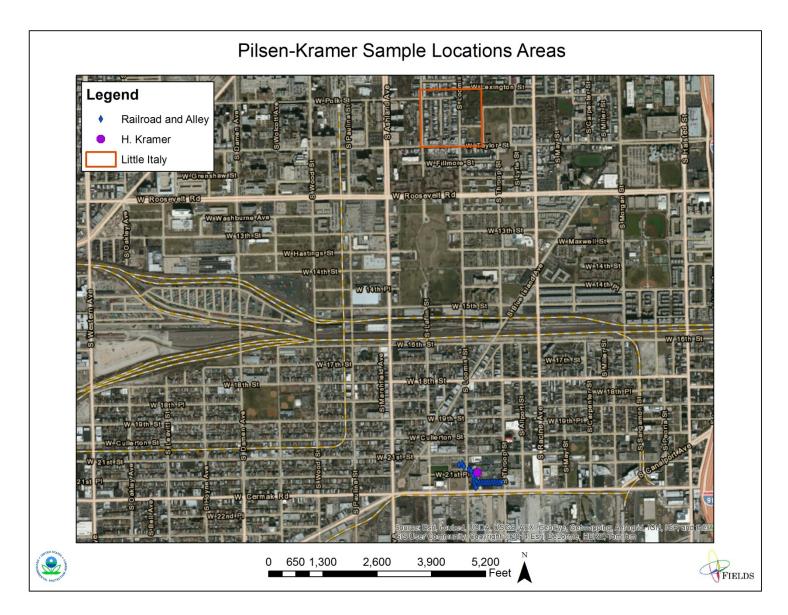


Figure 1: USEPA Sample locations and area

## CHICAGO/MIDWAY 86-year summary: 1928 - 2013

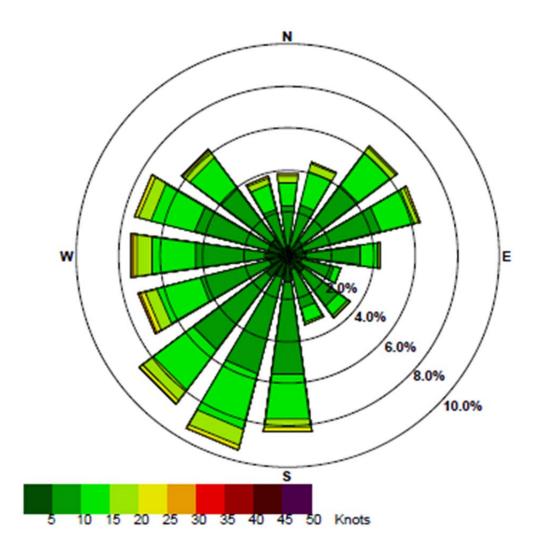


Figure 2: Windrose for the Pilsen-Kramer area and environs. Note that "arms" in the figure represent the direction from which the wind blows; the lengths represent the proportion of the time the wind came from each direction (i.e., the frequency). Hence, for this wind rose, the predominant winds are from the west and the south.

	Significant Difference (p-value < 0.05)						
Areas	Cadmium	Copper	Lead	Lead (250um)	Tin	Zinc	
Little Italy & Railroad/Alley	Yes	Yes	Yes	Yes	Yes	Yes	
Little Italy & USGS	Yes	No	No	No	Yes	No	
Railroad/Alley & USGS	Yes	Yes	Yes	Yes	Yes	Yes	

Table 1: Least Squares Means Tukey-Kramer Multiple Comparisons test significant differences results.

# Boxplots of Cadmium Values by Area Pilsen-Kramer Superfund Site USEPA sampling (2012-2013) and all USGS-Chicago Department of Environment background data

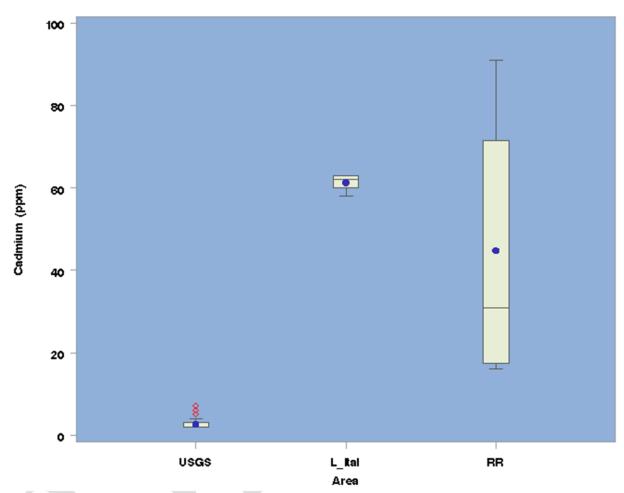


Figure 3: Boxplots of Cadmium for each area (red diamonds are extreme values, blue circle is the mean, and middle horizontal line is the median). Note: about 70% of the USGS—City of Chicago Cadmium values were at or below the limit of detection, 2ppm.

### Boxplots of Ranked Cadmium Values by Area Pilsen-Kramer Superfund Site

USEPA sampling (2012-2013) and all USGS-Chicago Department of Environment background data

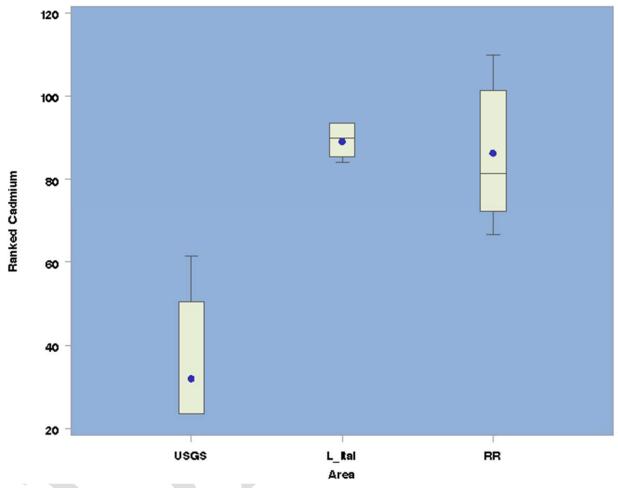


Figure 4: Boxplots of ranked Cadmium levels for each area (red diamonds are extreme values, blue circle is the mean rank, and middle horizontal line is the median rank).

# Boxplots of Copper Values by Area Pilsen-Kramer Superfund Site USEPA sampling (2012–2013) and USGS-Chicago Department of Environment background data

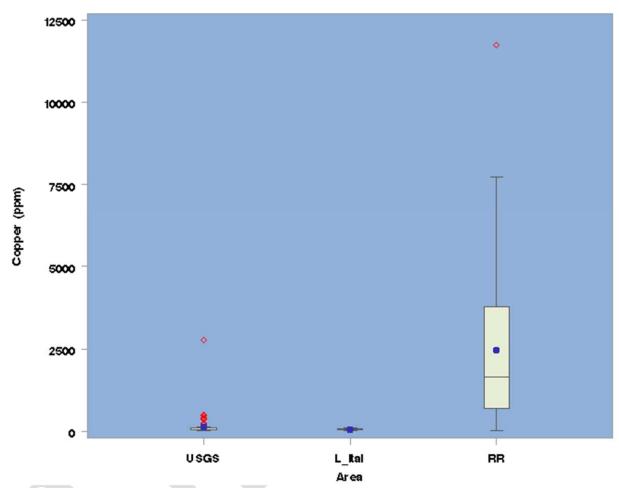


Figure 5: Boxplots of Copper for each area (red diamonds are extreme values, blue circle is the mean, and middle horizontal line is the median).

# Boxplots of Ranked Copper Values by Area Pilsen-Kramer Superfund Site USEPA sampling (2012-2013) and USGS-Chicago Department of Environment background data

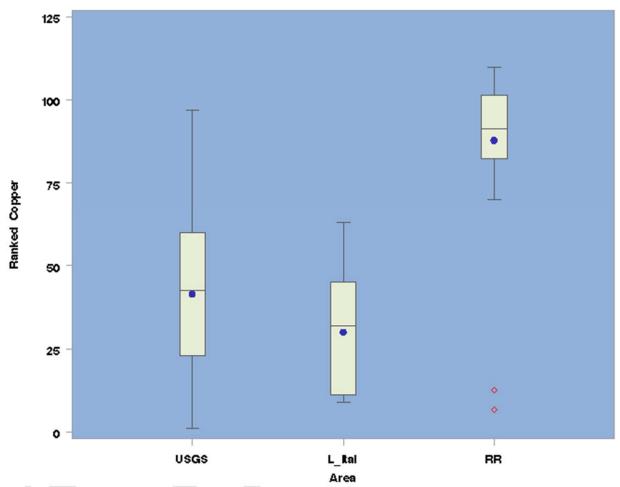


Figure 6: Boxplots of ranked Copper levels for each area (red diamonds are extreme values, blue circle is the mean rank, and middle horizontal line is the median rank).

# Boxplots of Lead Values by Area Pilsen-Kramer Superfund Site USEPA sampling (2012-2013) and USGS-Chicago Department of Environment background data

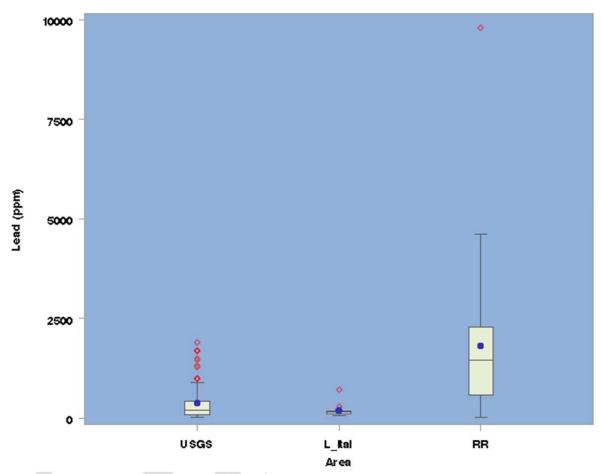


Figure 7: Boxplots of Lead for each area (red diamonds are extreme values, blue circle is the mean, and middle horizontal line is the median).

# Boxplots of Ranked Lead Values by Area Pilsen-Kramer Superfund Site USEPA sampling (2012-2013) and USGS-Chicago Department of Environment background data

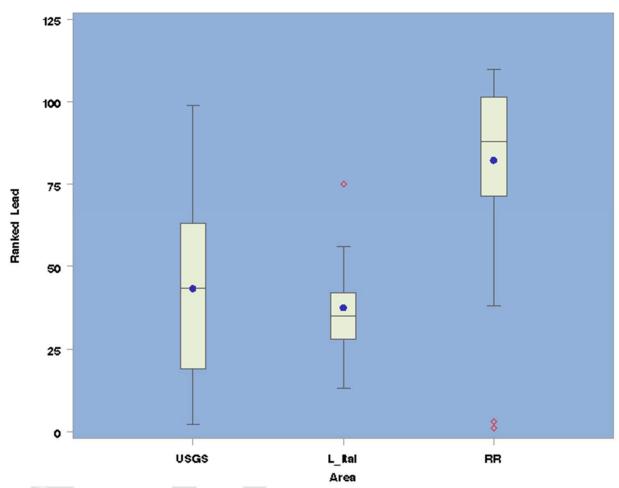


Figure 8: Boxplots of ranked Lead levels for each area (red diamonds are extreme values, blue circle is the mean rank, and middle horizontal line is the median rank).

# Boxplots of Sieved Lead Values by Area Pilsen-Kramer Superfund Site USEPA sampling (2012-2013) and USGS-Chicago Department of Environment background data

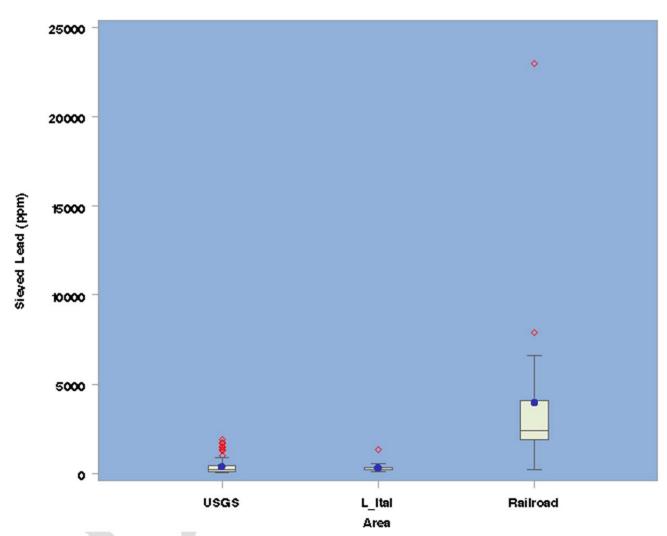


Figure 9: Boxplots of sieved Lead for each area (red diamonds are extreme values, blue circle is the mean, and middle horizontal line is the median).

# Boxplots of Ranked Sieved Lead Values by Area Pilsen-Kramer Superfund Site USEPA sampling (2012-2013) and USGS-Chicago Department of Environment background data

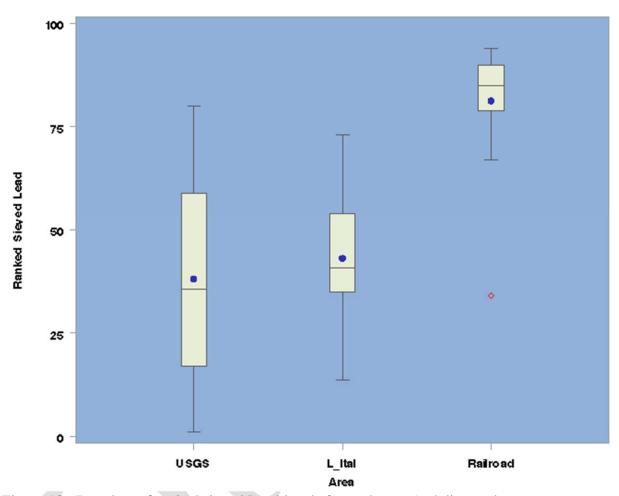


Figure 10: Boxplots of ranked sieved Lead levels for each area (red diamonds are extreme values, blue circle is the mean rank, and middle horizontal line is the median rank).

## Boxplots of Tin Values by Area Pilsen-Kramer Superfund Site USEPA sampling (2012–2013) and USGS-Chicago Department of Environment background data

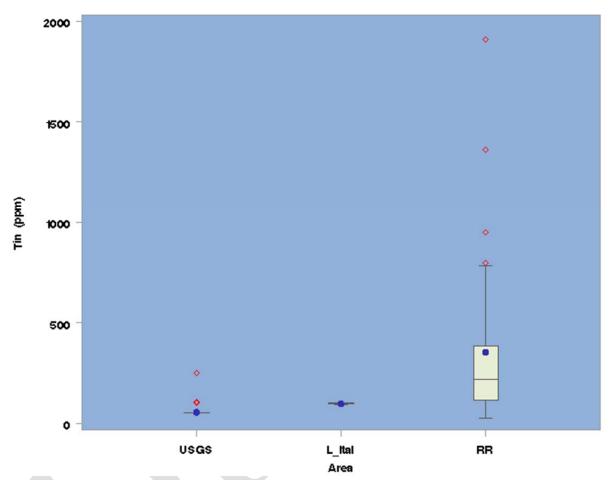


Figure 11: Boxplots of Tin for each area (red diamonds are extreme values, blue circle is the mean, and middle horizontal line is the median). Note: about 94% of the USGS—City of Chicago Tin values were at or below the limit of detection, 50ppm.

# Boxplots of Ranked Tin Values by Area Pilsen-Kramer Superfund Site USEPA sampling (2012–2013) and USGS-Chicago Department of Environment background data

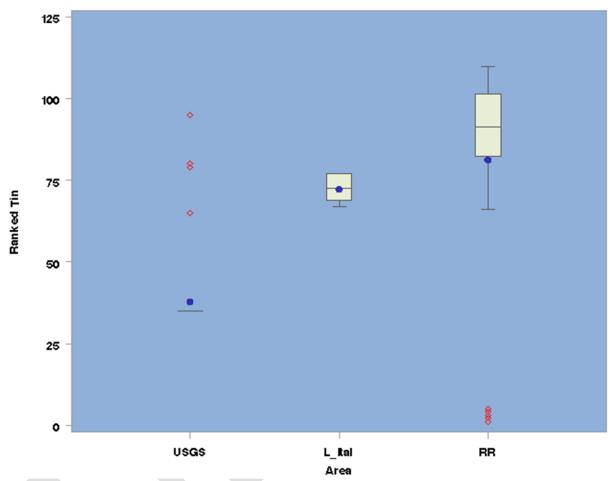


Figure 12: Boxplots of ranked Tin levels for each area (red diamonds are extreme values, blue circle is the mean rank, and middle horizontal line is the median rank). Note: about 94% of the USGS—City of Chicago Tin values were at or below the limit of detection, 50ppm.

# Boxplots of Zinc Values by Area Pilsen-Kramer Superfund Site USEPA sampling (2012–2013) and USGS-Chicago Department of Environment background data

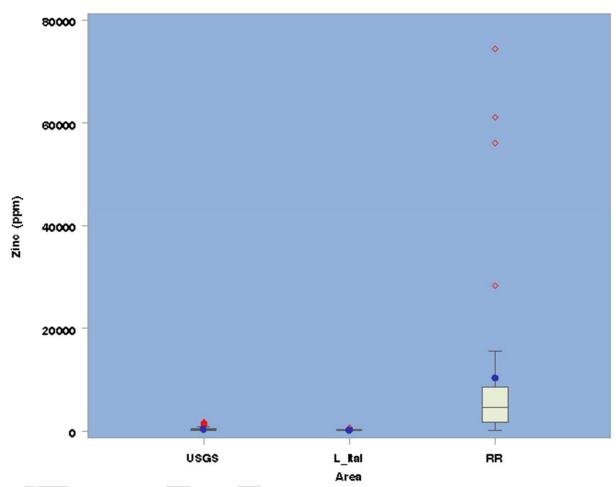


Figure 13: Boxplots of Zinc for each area (red diamonds are extreme values, blue circle is the mean, and middle horizontal line is the median).

# Boxplots of Ranked Zinc Values by Area Pilsen-Kramer Superfund Site USEPA sampling (2012–2013) and USGS-Chicago Department of Environment background data

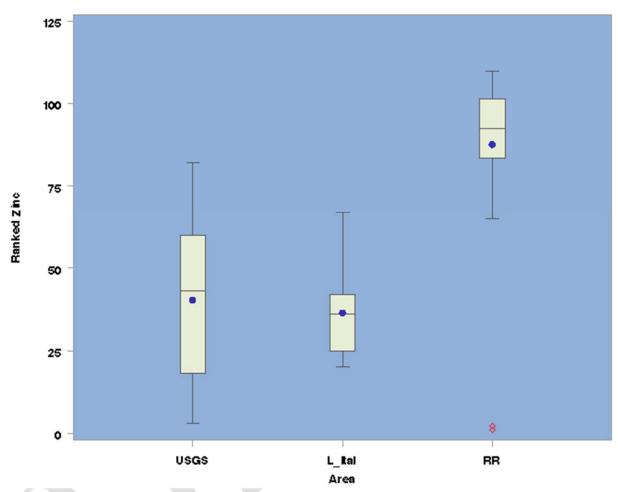


Figure 14: Boxplots of ranked Zinc levels for each area (red diamonds are extreme values, blue circle is the mean rank, and middle horizontal line is the median rank).

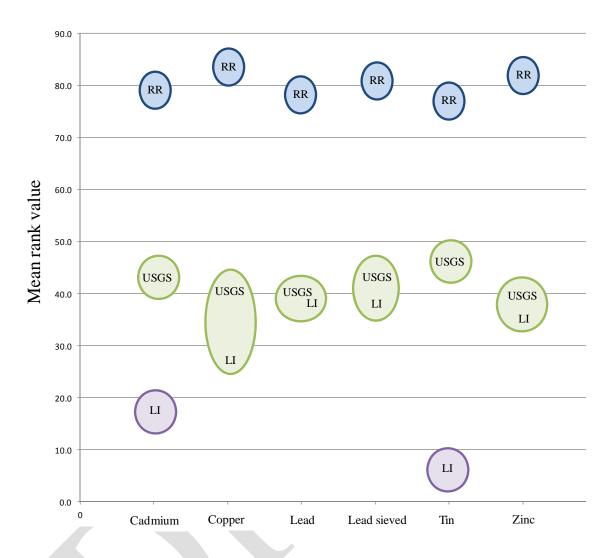


Figure 15: Cumulative schematic of the multiple comparisons by area and metal. Where LI is Little Italy, RR is Railroad/Alley, and USGS is the USGS – Chicago Department of Environment dataset. Where the Y-axis is the "Ismeans" value for each metal and dataset and is essentially the mean of the ranks. Areas in the same colored ovals are not statistically different from each other; areas in different colored ovals are statistically different from each other.