



230 W. Monroe Street
Suite 2300
Chicago, IL 60606

312.578.0870 PHONE
312.578.0877 FAX

www.trcsolutions.com

June 24, 2016

Mr. Steve Faryan, On-Scene Coordinator
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard, SE-5J
Chicago, IL 60604

**Re: Monthly Progress Report –May 13, 2016 – June 22, 2016
Sangamon Street Right-of-Way (ROW)
Chicago, Cook County, Illinois
(C54R)**

Dear Mr. Faryan:

On behalf of BNSF Railway Company (BNSF), TRC Environmental Corporation (TRC) is submitting three copies of this progress report pursuant to Section 20 of the *Administrative Settlement Agreement and Order on Consent for Removal Action Docket No. V-W-16-C-007* (Order), dated March 16, 2016 for actions performed for the BNSF Sangamon ROW Site (Site). This progress report is completed for work dated May 13, 2016, through June 22, 2016.

Actions Performed:

- 1) On May 9, 2016, TRC conducted soil sampling at the three hazardous soil areas to obtain the soil required to conduct a treatability study to evaluate the ratio and mixture of triple superphosphate (TSP) required to stabilize the lead. The samples were submitted to the Applied Chemistry Laboratory at TRC's Madison, Wisconsin office for the study. Based on the treatability results, it was determined that soil in all three areas be treated with 2.5 percent (%) Free Flow (FF-100) to reduce the potential for lead leaching. Refer to **Attachment 1** for the *Summary of the Treatability Results*. Of note is that an additional six soil samples (two from each hazardous area) were analyzed for total and TCLP lead. Only one sample indicated a TCLP lead concentration above 5 mg/L. The soil sample with the highest lead concentration at 12,000 mg/kg only indicated a TCLP lead concentrations of 0.78 mg/L and 1.1 mg/L.
- 2) Completed the non-special waste documentation and profiling approval process. The non-special waste and railroad ties will be disposed of at Waste Management

(WM) Laraway in Joliet, Illinois. Refer to **Attachment 2** for the WM profiling information.

- 3) On May 24, 2016, a conference call was held with BNSF, TRC, Stiles, Inc. (Stiles) and US EPA to go over Site updates and project status.
- 4) On May 31, 2016, the U.S. Environmental Protection Agency (U.S. EPA) emailed a fact sheet to BNSF and TRC for comments.
- 5) On June 1, 2016, TRC emailed U.S. EPA the proof for the demarcation barrier language. U.S. EPA approved the proof on June 1, 2016 via return email.
- 6) On June 2, 2016, TRC emailed U.S. EPA the qualification information for the remediation contractor (Stiles). TRC and BNSF understand that the contractor qualifications were sufficient based on no protest from U.S. EPA.
- 7) On June 10, 2016, at the request of U.S. EPA, TRC emailed the Site-Specific Health and Safety Plan (HASP) to Mr. Andrew Kleist of Tetra Tech, Inc. (Tetra Tech) (U.S. EPA's oversight contractor). Also on June 10, 2016, TRC emailed Stiles' HASP to U.S. EPA.
- 8) On June 13 to 15, 2016, pre-remediation monitoring was completed to establish baseline ambient air concentrations prior to the start of removal activities as required in the *Air Monitoring Plan* (AMP), dated March 2016. Baseline conditions were developed for respirable particulate matter (PM_{2.5}) in ambient air using a real-time air monitoring and weather station over 3 days. On each day of the baseline monitoring, conditions were monitored for an 8-hour period similar to the planned work days at the Site (e.g., between 7 a.m. and 3 p.m.). The air monitoring was conducted using a TSI DustTrak II 8530 and Netronix Thiamis ISU 820 telemetry system. A dedicated weather station was stationed upwind from the monitoring equipment. During remediation, the weather station will be utilized to monitor wind direction so the upwind and downwind perimeter air monitoring stations may be relocated as appropriate.

A Condition 2 action level per the *National Ambient Air Quality Standards* for PM_{2.5} was established at 0.035 mg/m³. The Condition 1 action level was established at 75 percent (%) the Condition 2 action level at 0.026 mg/m³. These action levels were obtained from *Table 1: National Ambient Air Quality Standards Promulgated for MN 1971-2006 – Federal Register Vol. 78 No. 10, Tuesday, January 15, 2013*. Refer to the AMP for details on the Condition 1 and 2 action levels.

Based on the results of the background monitoring, the 75% action level (0.026 mg/m³ and the 100% action level 0.035 mg/m³) were exceeded at times each day depending on the time of day. These action levels were exceeded on June 14, 2016 three separate times over 15-minute periods of time. Specifically, on June 14, 2016, the action levels were exceeded for 22 minutes from 07:43 AM to 8:05 AM, for 3 hours and 5 minutes from 10:12 AM to 1:17 PM and for 2 hours and 22 minutes from 1:26 PM to 3:48 PM.



A summary spreadsheet and daily charts with the air monitoring results for each minute collected each day are included in **Attachment 3**. In reviewing the Air Monitoring Plan that was in place for the Loewenthal Metals cleanup action, an action level of 2.5 mg/m³ was utilized. Refer to page 6 of the Loewenthal Air Monitoring Plan. As such, TRC proposes to use the same action level as was used during the Loewenthal Metals cleanup action. A copy of the AMP for the Loewenthal Metals cleanup is also included in **Attachment 3**.

- 9) On Tuesday, June 14, 2016, TRC met Stiles and the professional surveyor at the Site to go over logistics, utilities, staking of boundaries, and plan for the removal work.
- 10) On Thursday, June 16, 2016, the Project Kick-off meeting was held at the Site. In attendance was Mr. Doug Stiles from Stiles, Mr. Steve Faryan from U.S. EPA, Mr. Andrew Kliest from Tetra Tech, and Mr. Brian Voss, Ms. Lisa Meagher, Mr. Tyler Gomoll, Mr. Jenu Thomas and Ms. Nicole DeRose from TRC. Details of the Site work were discussed. The Site was walked to discuss steps going forward for removal action.
- 11) A phone call was made and a message was left on a voice mail on June 16, 2016 to the managing company of the building located south of 19th Street, with the fence located on BNSF property. The message stated that the fence will be coming down and not replaced due to it being on BNSF property. A company called Seneca manages the property (312.347.2700) based on a sign mounted on the building.
- 12) On Monday June 20, 2016 a private utility locating service (Blood Hound, Inc.) was contracted to conduct a private utility inspection.
- 13) Stiles began mobilization activities on June 20, 2016.
- 14) The Chicago Department of Transportation (CDOT) and Department of Water permits were approved on June 20, 2016.
- 15) Prepared and submitted this monthly progress report.

Anticipated Actions and Schedule to be performed:

- 1) Stiles to begin pulling rail on June 21, 2016 and begin mixing of TSP to the three hazardous areas on June 22, 2016. On June 23, 2016 Stiles anticipates to begin the loading and transportation of material pending the City closing the sidewalks and when parking bans go in affect. Removal action will continue from the south to the north.
- 2) Prepare and submit the next monthly progress report.



Analytical Results:

- 1) Refer to Action Performed #1 and #8 above. Copies of the treatability report and background air monitoring results are provided in **Attachment 1 and 3**.

Problems Encountered and Planned Resolutions:

- 1) None

If you have any questions regarding this submittal, please contact me at (312) 578-0870, ext. 11917 or Greg Jeffries with BNSF at (763) 782-3490.

Sincerely,

A handwritten signature in blue ink that reads "Lisa Meagher".

Lisa Meagher, PG
Senior Project Manager

Attachment 1: Summary of the Treatability Results
Attachment 2: WM Profiling Information
Attachment 3: Background Air Sampling Spreadsheets / Charts and Loewenthal Air Monitoring Plan

cc: Dennis Reis, Briggs and Morgan P.A.
Greg Jeffries, BNSF
Brooke Gaede, BNSF

S:\PROJECTS\BNSF\Sangamon ROW Loewenthal Metals Chicago\Correspondence\US EPA\Monthly Status Letters



ATTACHMENT 1

Summary of the Treatability Results



BNSF Sangamon Treatability Study for Lead
Robert Stanforth, TRC Applied Chemistry Laboratory
May, 2016

Introduction

Soil from some areas along the BNSF-Sangamon right of way between Cullerton Avenue and W 18th Street, Chicago have had elevated leachable lead concentrations in toxicity characteristic leaching procedure (TCLP) testing on samples from the areas. Samples of soil from those areas were collected and sent to the TRC Applied Chemistry Laboratory for treatability testing to evaluate dosages of a phosphate-based reagent needed to bring leachable lead concentrations down to levels below the characteristically hazardous waste criterion (5 milligrams per liter - mg/L). The samples were collected on May 9, 2016. The sample collection notes and locations are given in the Attachment.

Methods

The samples were subjected both to compositional analysis using hot nitric acid and screening TCLP tests. Replicates were run for the digestion samples and most of the TCLP testing. Analysis of both the digests and leachates was done using inductively coupled plasma atomic emission spectrometry (ICP). The screening TCLP test is a variation of the United States Environmental Protection Agency's (US EPA's) TCLP test (SW846 Method 1311) with reduced amounts of solid and leaching solution used while keeping the key parameters of the test the same. The screening tests gives the same results as the standard test and is designed to facilitate treatability testing.

Results

The results of the compositional analysis are given in **Table 1**. Samples collected from areas / samples WC-02 and WC-03 had higher total lead concentrations than sample WC-01 (~2000 milligram per kilogram - mg/kg vs 600 mg/kg), while one of the WC-03 replicates had a notably higher total lead concentration than the other (12,000 mg/kg vs 2,100 mg/kg). Iron and phosphorus concentrations were also elevated in that replicate. The samples were homogenized prior to analysis, so the heterogeneity suggests that there may be particulates in the samples with elevated lead, iron and phosphorus concentrations.

Screening TCLP test results for both the untreated and treated samples are given in **Table 2**. Samples from the WC-01 area leached lead at well below 5 mg/L (around 0.40 mg/L), indicating that the soil is nonhazardous. The WC-03 samples also leached lead at below 5 mg/L (between 0.67 and 1.1 mg/L in the 4 replicates) despite the elevated lead concentration in one of the digestion replicates. Three of the four WC-02 replicates also had lead concentrations below 5.0 mg/L; however, one replicate leached lead at 8.4 mg/L, above the 5 mg/L criterion. The scatter in the results suggests that both WC-02 and WC-03 have heterogeneous lead distribution, most likely as small chunks of material with elevated lead content. There were small chunks of metal in both the WC-02 and WC-03 samples noticed during homogenization of the samples.

Treatment of samples WC-01 and WC-02 with FreeFlow 100 – FF-100 (a phosphate-based treatment reagent) reduced lead leaching, particularly at the 2.5% dose. Leaching from sample WC-01, which was nonhazardous to begin with, was reduced to below detection (<0.13 mg/L), while leaching from WC-02 soil was lowered to below 0.75 mg/L.

Recommendations

It is recommended that soil in all three areas be treated with 2.5% FF-100 to reduce the potential for lead leaching. The sample from the WC-01 area had low compositional and leachable lead in this testing; however, a previous sample from the area had a TCLP lead concentration above 5.0 mg/L. Further it is recommended that the treated samples be stockpiled while testing to demonstrate that they are treated, and if a sample fails the TCLP test that the stockpile from that area be retreated to further lower lead leaching.

FF-100 is available from Free Flow Technologies, Rockford, Illinois.

Table 1. Compositional Analysis

Parameter mg/kg	WC-01		WC-02		WC-03	
	Rep A	Rep B	Rep A	Rep B	Rep A	Rep B
Solids, %	0.91		0.85		0.82	
Aluminum	8,800	7,400	16,000	10,000	14,000	7,600
Arsenic	29	44	33	41	32	30
Calcium	44,000	50,000	37,000	25,000	22,000	20,000
Cadmium	5.0	5.8	9.3	9.9	9.3	7.0
Chromium	21	21	30	35	34	23
Copper	56	67	460	350	320	270
Iron	31,000	22,000	43,000	50,000	99,000	50,000
Magnesium	22,000	26,000	14,000	9,600	6,200	7,100
Manganese	340	340	400	490	440	420
Phosphorus	700	810	1,300	1,700	3,500	1,300
Lead	550	630	2,000	2,100	12,000	2,100
Zinc	450	680	1,800	2,000	1,700	1,500

Table 2. Screening TCLP Test Results

Sample		Screening TCLP Test Results			
ID	Additive	Rep A		Rep B	
		pH	Pb, mg/L	pH	Pb, mg/L
WC-01	Untreated 1	5.62	0.40	5.65	0.35
	Untreated 2	5.59	0.44	5.95	0.37
	+ 2.5% FF-100	5.61	<0.13	-	-
WC-02	Untreated 1	5.29	1.2	5.36	1.0
	Untreated 2	5.35	2.3	5.18	8.4
	+ 1% FF-100	5.35	1.8	5.28	2.4
		5.34	1.4	5.28	1.4
	+ 2.5% FF-100	5.54	0.57	5.43	0.74
		5.39	0.70	5.45	0.60
5.47		0.30	-	-	
WC-03	Untreated 1	5.34	0.78	5.31	0.67
	Untreated 2	5.20	1.1	5.15	0.72
Characteristic Hazardous Waste Criterion		-	5.0	-	5.0

Note: Bold and shaded sample is above characteristic hazardous waste criterion.



SUBJECT

Saugaman Haz Characterization

SHEET NO.

OF

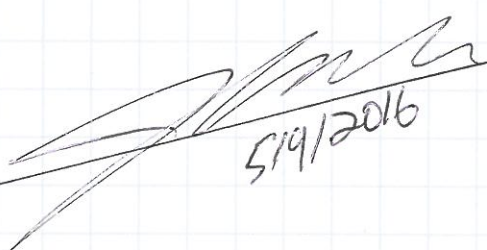
PROJECT NO. 256128 phase 3

DATE 5/9/2016

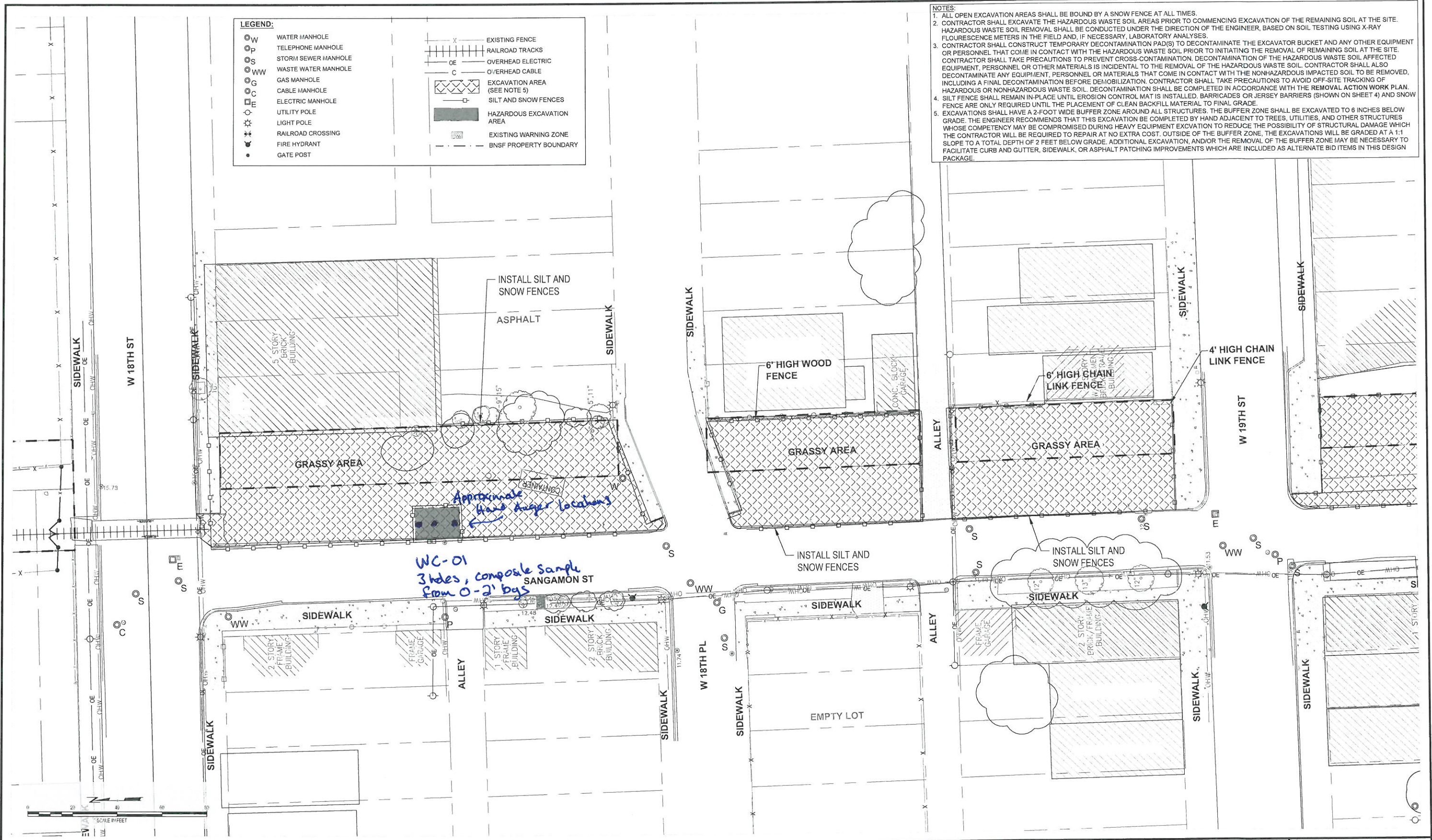
BY James Robinson

CHK'D

- 1130 Pick up rental car and mobilize to Saugaman Row
1150 Arrive at site
TRC Staff: James Robinson
Weather: Overcast, 57°F
Scope:
• Collect wash characterization samples from the 3- haz wash areas at site.
• Collect 3 1-gallon bags from 0-2' bgs interval from each haz area
- 1215 Collect WC-01 from northernmost haz area (between 18th St and 18th PL)
↳ 0-12" dark brown / gray silty SAND with gravel and cobbles, glass, trace organics
12-24" Red / tan with dark brown silty SAND, brick fragments, trace slag
↳ samples placed directly into bags with minimal homogenizing
- 1245 Collect WC-02 from mid haz area, in-line with elevated concrete between 19th St and the alley 1/2 block south of 19th St.
↳ 0-12" dark brown ^{black} silty SAND with organics, some ^{gold} filler
12-18" Black with reddish hue silty SAND w/ Slag; hard
18-24" SAA without Slag
- 1330 Collect WC-03 from southernmost haz area
↳ same soil characteristics as WC-02
↳ Note that all samples require additional homogenizing
↳ 3 Hand auger borings were completed at each zone from 0-2'
↳ all holes filled with adjacent loose gravel
- 1345 Collaborate notes and clean supplies, prepare to demobilize
1400 Demobilize


5/9/2016

File Location: S:\PROJECTS\BNSF\Sangamon ROW Loewental Metals Chicago\Excavation and Construction\For Permit Drawings\Update with Survey\230807-05(site).dwg
 Plotted: 3/25/2016 1:34:28 PM BY: ALBERTS, SCOTT



REV.	DATE	DESCRIPTION	BY	APP

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DESIGNED BY
J. ROBINSON
 DRAWN BY
S. ALBERTS
 CHECKED BY
B. VOSS
 APPROVED BY
L. MEAGHER
 DATE
NOVEMBER 2015



230 WEST MONROE ST.
 SUITE 2300
 CHICAGO, IL 60605
 P 312.578.0870
 F 312.578.0877

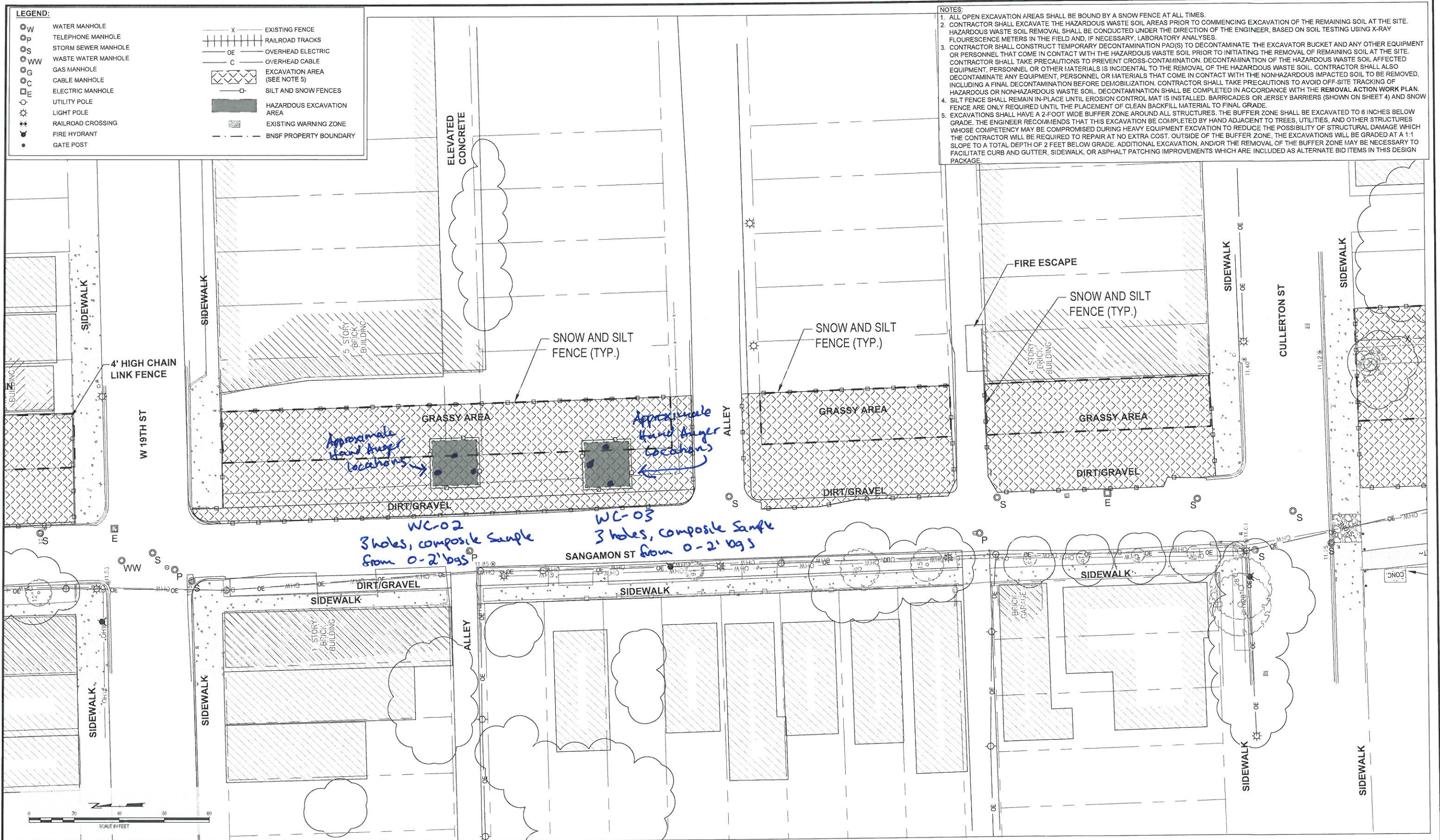
NOT FOR CONSTRUCTION

BNSF RAILWAY
 SANGAMON RIGHT OF WAY EXCAVATION
 CHICAGO, COOK COUNTY, ILLINOIS

EXCAVATION PLAN - AREA 3

CONTRACT NO.	
DRAWING NO.	230807-05(site).dwg
SHEET NO.	SHEET 13 OF 18
SCALE	AS NOTED

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DESIGNED BY
J. ROBINSON
 DRAWN BY
S. ALBERTS
 CHECKED BY
B. VOSS
 APPROVED BY
L. MEAGHER
 DATE
NOVEMBER 2015

BNSF RAILWAY

230 WEST MONROE ST.
 SUITE 2300
 CHICAGO, IL 60606
 P. 312.573.0670
 F. 312.578.0877

NOT FOR CONSTRUCTION

BNSF RAILWAY
SANGAMON RIGHT OF WAY EXCAVATION
 CHICAGO, COOK COUNTY, ILLINOIS

EXCAVATION PLAN - AREA 2

CONTRACT NO.	
DRAWING NO.	230807-05(site).dwg
SHEET NO.	SHEET 12 OF 18
SCALE	AS NOTED



ATTACHMENT 2

WM Profiling Information





Requested Facility: Laraway Unsure Profile Number: 615024IL
 Multiple Generator Locations (Attach Locations) Request Certificate of Disposal Renewal? Original Profile Number: _____

A. GENERATOR INFORMATION (MATERIAL ORIGIN)

1. Generator Name: BNSF Railway Company
2. Site Address: 1999 South Sangamon Street
(City, State, ZIP) Chicago IL 60608
3. County: Cook
4. Contact Name: GREG JEFFRIES
5. Email: GREGORY.JEFFRIES@BNSF.COM
6. Phone: 1-763-782-3490 7. Fax: -
8. Generator EPA ID: _____ N/A
9. State ID: _____ N/A

B. BILLING INFORMATION

SAME AS GENERATOR

1. Billing Name: Stiles Inc.
2. Billing Address: 2104 Charmer Drive
(City, State, ZIP) Loves Park IL 61111
3. Contact Name: Doug Stiles
4. Email: dstiles@stilesinc.net
5. Phone: (815) 966-6700 6. Fax: _____
7. WM Hauled? Yes No
8. P.O. Number: Not Applicable
9. Payment Method: Credit Account Cash Credit Card

C. MATERIAL INFORMATION

1. Common Name: Urban F111
Describe Process Generating Material: See Attached

Excavation of soil during construction activities.

2. Material Composition and Contaminants: See Attached

1. Soil	85 %
2. Debris	15 %
3.	
4.	
Total comp. must be equal to or greater than 100% <u>≥100%</u>	

3. State Waste Codes: _____ N/A
4. Color: Black
5. Physical State at 70°F: Solid Liquid Other: _____
6. Free Liquid Range Percentage: _____ to _____ N/A
7. pH: _____ to _____ N/A
8. Strong Odor: Yes No Describe: _____
9. Flash Point: <140°F 140°-199°F ≥200° N/A

E. ANALYTICAL AND OTHER REPRESENTATIVE INFORMATION

1. Analytical attached Yes
Please identify applicable samples and/or lab reports:

Phase Analytical # 60148006
49 Pages

2. Other information attached (such as MSDS)? Yes

D. REGULATORY INFORMATION

1. EPA Hazardous Waste? Yes* No
Code: _____
2. State Hazardous Waste? Yes No
Code: _____
3. Is this material non-hazardous due to Treatment, Delisting, or an Exclusion? Yes* No
4. Contains Underlying Hazardous Constituents? Yes* No
5. From an industry regulated under Benzene NESHAP? Yes* No
6. Facility remediation subject to 40 CFR 63 GGGGG? Yes* No
7. CERCLA or State-mandated clean-up? Yes* No
8. NRC or State-regulated radioactive or NORM waste? Yes* No
***If Yes, see Addendum (page 2) for additional questions and space.**
9. Contains PCBs? → If Yes, answer a, b and c. Yes No
a. Regulated by 40 CFR 761? Yes No
b. Remediation under 40 CFR 761.61 (a)? Yes No
c. Were PCB imported into the US? Yes No
10. Regulated and/or Untreated Medical/Infectious Waste? Yes No
11. Contains Asbestos? Yes No
→ If Yes: Non-Friable Non-Friable - Regulated Friable

F. SHIPPING AND DOT INFORMATION

1. One-Time Event Repeat Event/Ongoing Business
2. Estimated Quantity/Unit of Measure: 7000
 Tons Yards Drums Gallons Other: _____
3. Container Type and Size: Dump Truck
4. USDOT Proper Shipping Name: N/A

G. GENERATOR CERTIFICATION (PLEASE READ AND CERTIFY BY SIGNATURE)

By signing this EZ Profile™ form, I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this material, and that all relevant information necessary for proper material characterization and to identify known and suspected hazards has been provided. Any analytical data attached was derived from a sample that is representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. All changes occurring in the character of the material (i.e., changes in the process or new analytical) will be identified by the Generator and be disclosed to Waste Management prior to providing the material to Waste Management.

If I am an agent signing on behalf of the Generator, I have confirmed with the Generator that information contained in this Profile is accurate and complete.

Name (Print): Greg Jeffries Date: 5/21/2016
Title: Mgr. Env. Remediation
Company: BNSF Railway

Certification Signature
Greg Jeffries



Requested Facility: Laraway Unsure Profile Number: 615028IL
 Multiple Generator Locations (Attach Locations) Request Certificate of Disposal Renewal? Original Profile Number: _____

A. GENERATOR INFORMATION (MATERIAL ORIGIN)

1. Generator Name: BNSF Railway Company
2. Site Address: 1999 South Sangamon Street
(City, State, ZIP) Chicago IL 60608
3. County: Cook
4. Contact Name: GREG JEFFRIES
5. Email: GREGORY.JEFFRIES@BNSF.COM
6. Phone: 1-763-782-3490 7. Fax: -
8. Generator EPA ID: _____ N/A
9. State ID: _____ N/A

B. BILLING INFORMATION

SAME AS GENERATOR

1. Billing Name: Stiles Inc.
2. Billing Address: 2104 Chamar Drive
(City, State, ZIP) Loves Park IL 61111
3. Contact Name: Doug Stiles
4. Email: dstyles@stilesinc.net
5. Phone: (815) 966-6700 6. Fax: _____
7. WM Hauled? Yes No
8. P.O. Number: Not Applicable
9. Payment Method: Credit Account Cash Credit Card

C. MATERIAL INFORMATION

1. Common Name: Treated Wood - Weathered
Describe Process Generating Material: See Attached

Demolition/dismantling uncontaminated, weathered wood products with preservatives that are not RCRA Exempt (e.g. creosote, pentachlorophenol).

2. Material Composition and Contaminants: See Attached

1. <u>Wood (e.g. telephone poles, railroad ties)</u>	<u>100 %</u>
2.	
3.	
4.	

Total comp. must be equal to or greater than 100% ≥100%

3. State Waste Codes: _____ N/A
4. Color: Various
5. Physical State at 70°F: Solid Liquid Other: _____
6. Free Liquid Range Percentage: _____ to _____ N/A
7. pH: _____ to _____ N/A
8. Strong Odor: Yes No Describe: _____
9. Flash Point: <140°F 140°-199 F ≥200° N/A

D. REGULATORY INFORMATION

1. EPA Hazardous Waste? Yes* No
Code: _____
2. State Hazardous Waste? Yes No
Code: _____
3. Is this material non-hazardous due to Treatment, Delisting, or an Exclusion? Yes* No
4. Contains Underlying Hazardous Constituents? Yes* No
5. From an industry regulated under Benzene NESHAP? Yes* No
6. Facility remediation subject to 40 CFR 63 GGGGG? Yes* No
7. CERCLA or State-mandated clean-up? Yes* No
8. NRC or State-regulated radioactive or NORM waste? Yes* No
***If Yes, see Addendum (page 2) for additional questions and space.**
9. Contains PCBs? → If Yes, answer a, b and c. Yes No
a. Regulated by 40 CFR 761? Yes No
b. Remediation under 40 CFR 761.61 (a)? Yes No
c. Were PCB imported into the US? Yes No
10. Regulated and/or Untreated Medical/Infectious Waste? Yes No
11. Contains Asbestos? Yes No
→ If Yes: Non-Friable Non-Friable - Regulated Friable

E. ANALYTICAL AND OTHER REPRESENTATIVE INFORMATION

1. Analytical attached Yes
Please identify applicable samples and/or lab reports:

2. Other information attached (such as MSDS)? Yes

F. SHIPPING AND DOT INFORMATION

1. One-Time Event Repeat Event/Ongoing Business
2. Estimated Quantity/Unit of Measure: 400
 Tons Yards Drums Gallons Other: _____
3. Container Type and Size: Dump Truck
4. USDOT Proper Shipping Name: _____ N/A

G. GENERATOR CERTIFICATION (PLEASE READ AND CERTIFY BY SIGNATURE)

By signing this EZ Profile™ form, I hereby certify that all information submitted in this and all attached documents contain true and accurate descriptions of this material, and that all relevant information necessary for proper material characterization and to identify known and suspected hazards has been provided. Any analytical data attached was derived from a sample that is representative as defined in 40 CFR 261 - Appendix 1 or by using an equivalent method. All changes occurring in the character of the material (i.e., changes in the process or new analytical) will be identified by the Generator and be disclosed to Waste Management prior to providing the material to Waste Management.

If I am an agent signing on behalf of the Generator, I have confirmed with the Generator that information contained in this Profile is accurate and complete.

Name (Print): Greg Jeffries Date: 5/31/2016
Title: Mgr. Env. Remediation
Company: BNSF Railway

Certification Signature



Profile Addendum: State of Illinois
GENERATOR'S NON-SPECIAL WASTE CERTIFICATION

F. Additional Waste Stream Information

Profile Number: 615024IL

Generators Name: BNSF Railway Company

Generators SITE Address: 1999 South Sangamon Street Chicago IL 60608
(The location where the waste is generated)

Waste Name: Urban Fill

The Illinois Environmental Protection Act allows a Generator to certify that their pollution control waste or industrial process waste, is not an Illinois Special Waste (Section 3.45). By completing the following questionnaire, you may certify that the waste stream represented by the Waste Management Profile referenced above is not an Illinois Special Waste as defined in the Act.

Is the waste referenced above any of the following:

- 1. A Potentially Infectious Medical Waste (PIMW)? Yes No
- 2. A Hazardous Waste as defined in 40 CFR 261 or in 35 IAC 722.111? Yes No
- 3. A Liquid Waste (fails the paint filter test as defined in 35 IAC 811.107)? Yes No
- 4. A regulated PCB waste as defined in 40 CFR 761? Yes No
- 5. A NESHAP regulated asbestos waste other than waste from renovation or demolition? Yes No
- 6. A waste resulting from the shredding recyclable metals (auto fluff)? Yes No
- 7. A delisted Hazardous Waste or Treated Characteristic Hazardous Waste, subject to LDR requirements under 35 IAC 728.107? Yes No

In determining that this waste is not a liquid, I have used knowledge of the processes generating the waste and the attached supporting documentation: MSDS Analytical Other (explain below):

In determining that this waste is not RCRA hazardous, I have used knowledge of the processes generating the waste and the attached supporting documentation: MSDS Analytical Other (explain below):

8. Is the waste represented by this profile sheet subject to the Illinois Solid Waste Management Act fee? Yes No

By signing below, I certify my waste is NOT an Illinois Special Waste, and that I understand that a person who knowingly and falsely certifies that a waste is not special waste is subject to the penalties set forth in subdivision (6) of subsection (h) of section 44 of the Illinois Environmental Protection Act.

Name: (Print) Greg Jeffries

Title: Mgr Env. Remediation

Signature: Greg Jeffries

Date: 5/31/2016

July 09, 2013

LISA MEAGHER
TRC SOLUTIONS
230 W. Monroe St
Chicago, IL 60606

RE: Project: N of Loewenthal Metals 204997
Pace Project No.: 60148006

Dear LISA MEAGHER:

Enclosed are the analytical results for sample(s) received by the laboratory on June 29, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Angie Brown

Angie.Brown@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

Kansas Certification IDs

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148006001	SP-1	Solid	06/28/13 15:45	06/29/13 09:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148006001	SP-1	EPA 8082	NAW	9
		EPA 6010	JGP	7
		EPA 7470	TDS	1
		EPA 8270 by SIM	NAW	18
		EPA 8270	JMT	14
		EPA 8260	RAB	14
		EPA 8260	RAB	27
		ASTM D2974	DWC	1
		SW-846 7.3.4.2	AJM	1
		EPA 9045	NDL	1
		EPA 9095	AJM	1
		ASTM D92	DJR	1
		EPA 420.1 Modified	AJM	1
		SW-846 7.3.3.2	AJM	1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

Sample: SP-1 **Lab ID: 60148006001** Collected: 06/28/13 15:45 Received: 06/29/13 09:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB SW		Analytical Method: EPA 8082 Preparation Method: EPA 3546						
PCB-1016 (Aroclor 1016)	ND	ug/kg	38.9	1	07/02/13 00:00	07/03/13 14:30	12674-11-2	
PCB-1221 (Aroclor 1221)	ND	ug/kg	77.8	1	07/02/13 00:00	07/03/13 14:30	11104-28-2	
PCB-1232 (Aroclor 1232)	ND	ug/kg	38.9	1	07/02/13 00:00	07/03/13 14:30	11141-16-5	
PCB-1242 (Aroclor 1242)	ND	ug/kg	38.9	1	07/02/13 00:00	07/03/13 14:30	53469-21-9	
PCB-1248 (Aroclor 1248)	205	ug/kg	38.9	1	07/02/13 00:00	07/03/13 14:30	12672-29-6	M1,R1
PCB-1254 (Aroclor 1254)	ND	ug/kg	38.9	1	07/02/13 00:00	07/03/13 14:30	11097-69-1	
PCB-1260 (Aroclor 1260)	ND	ug/kg	38.9	1	07/02/13 00:00	07/03/13 14:30	11096-82-5	
Surrogates								
Tetrachloro-m-xylene (S)	75 %		34-132	1	07/02/13 00:00	07/03/13 14:30	877-09-8	
Decachlorobiphenyl (S)	67 %		36-131	1	07/02/13 00:00	07/03/13 14:30	2051-24-3	
6010 MET ICP, TCLP		Analytical Method: EPA 6010 Preparation Method: EPA 3010						
		Leachate Method/Date: EPA 1311; 07/02/13 00:00						
Arsenic	ND	mg/L	0.50	1	07/02/13 15:00	07/03/13 12:31	7440-38-2	
Barium	ND	mg/L	2.5	1	07/02/13 15:00	07/03/13 12:31	7440-39-3	
Cadmium	ND	mg/L	0.050	1	07/02/13 15:00	07/03/13 12:31	7440-43-9	
Chromium	ND	mg/L	0.10	1	07/02/13 15:00	07/03/13 12:31	7440-47-3	
Lead	ND	mg/L	0.50	1	07/02/13 15:00	07/03/13 12:31	7439-92-1	
Selenium	ND	mg/L	0.50	1	07/02/13 15:00	07/03/13 12:31	7782-49-2	
Silver	ND	mg/L	0.10	1	07/02/13 15:00	07/03/13 12:31	7440-22-4	
7470 Mercury, TCLP		Analytical Method: EPA 7470 Preparation Method: EPA 7470						
		Leachate Method/Date: EPA 1311; 07/02/13 00:00						
Mercury	ND	mg/L	0.0020	1	07/03/13 10:55	07/03/13 14:27	7439-97-6	
8270 MSSV PAH by SIM		Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546						
Acenaphthene	0.26	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	83-32-9	
Acenaphthylene	0.11	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	208-96-8	
Anthracene	0.43	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	120-12-7	
Benzo(a)anthracene	1.1	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	56-55-3	
Benzo(a)pyrene	1.1	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	50-32-8	
Benzo(b)fluoranthene	2.2	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	205-99-2	
Benzo(g,h,i)perylene	0.56	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	191-24-2	
Benzo(k)fluoranthene	ND	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	207-08-9	
Chrysene	1.2	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	218-01-9	
Dibenz(a,h)anthracene	0.13	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	53-70-3	
Fluoranthene	3.1	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	206-44-0	
Fluorene	0.19	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	86-73-7	
Indeno(1,2,3-cd)pyrene	0.48	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	193-39-5	
Naphthalene	0.51	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	91-20-3	
Phenanthrene	1.7	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	85-01-8	
Pyrene	2.1	mg/kg	0.019	1	07/01/13 00:00	07/02/13 18:50	129-00-0	
Surrogates								
2-Fluorobiphenyl (S)	71 %		40-120	1	07/01/13 00:00	07/02/13 18:50	321-60-8	P3
Terphenyl-d14 (S)	67 %		38-123	1	07/01/13 00:00	07/02/13 18:50	1718-51-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

Sample: SP-1 **Lab ID: 60148006001** Collected: 06/28/13 15:45 Received: 06/29/13 09:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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8270 MSSV Semivolatiles

Analytical Method: EPA 8270 Preparation Method: EPA 3546

bis(2-Chloroethyl) ether	ND mg/kg		3.9	10	07/02/13 00:00	07/05/13 10:07	111-44-4	
1,2-Dichlorobenzene	ND mg/kg		3.9	10	07/02/13 00:00	07/05/13 10:07	95-50-1	
1,4-Dichlorobenzene	ND mg/kg		3.9	10	07/02/13 00:00	07/05/13 10:07	106-46-7	
bis(2-Ethylhexyl)phthalate	ND mg/kg		3.9	10	07/02/13 00:00	07/05/13 10:07	117-81-7	
Hexachlorocyclopentadiene	ND mg/kg		3.9	10	07/02/13 00:00	07/05/13 10:07	77-47-4	
N-Nitroso-di-n-propylamine	ND mg/kg		3.9	10	07/02/13 00:00	07/05/13 10:07	621-64-7	
N-Nitrosodiphenylamine	ND mg/kg		3.9	10	07/02/13 00:00	07/05/13 10:07	86-30-6	
1,2,4-Trichlorobenzene	ND mg/kg		3.9	10	07/02/13 00:00	07/05/13 10:07	120-82-1	
Surrogates								
Nitrobenzene-d5 (S)	0 %		21-145	10	07/02/13 00:00	07/05/13 10:07	4165-60-0	D3,S4
2-Fluorobiphenyl (S)	0 %		28-145	10	07/02/13 00:00	07/05/13 10:07	321-60-8	S4
Terphenyl-d14 (S)	0 %		29-158	10	07/02/13 00:00	07/05/13 10:07	1718-51-0	S4
Phenol-d6 (S)	0 %		43-120	10	07/02/13 00:00	07/05/13 10:07	13127-88-3	S4
2-Fluorophenol (S)	0 %		45-120	10	07/02/13 00:00	07/05/13 10:07	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		44-120	10	07/02/13 00:00	07/05/13 10:07	118-79-6	S4

Analytical Method: EPA 8270 Preparation Method: EPA 3510

Leachate Method/Date: EPA 1311; 07/02/13 00:00

1,4-Dichlorobenzene	ND ug/L		100	1	07/02/13 00:00	07/03/13 13:00	106-46-7	
2,4-Dinitrotoluene	ND ug/L		100	1	07/02/13 00:00	07/03/13 13:00	121-14-2	
Hexachloro-1,3-butadiene	ND ug/L		100	1	07/02/13 00:00	07/03/13 13:00	87-68-3	
Hexachlorobenzene	ND ug/L		100	1	07/02/13 00:00	07/03/13 13:00	118-74-1	
Hexachloroethane	ND ug/L		100	1	07/02/13 00:00	07/03/13 13:00	67-72-1	
2-Methylphenol(o-Cresol)	ND ug/L		100	1	07/02/13 00:00	07/03/13 13:00	95-48-7	
3&4-Methylphenol(m&p Cresol)	ND ug/L		200	1	07/02/13 00:00	07/03/13 13:00		
Nitrobenzene	ND ug/L		100	1	07/02/13 00:00	07/03/13 13:00	98-95-3	
Pentachlorophenol	ND ug/L		500	1	07/02/13 00:00	07/03/13 13:00	87-86-5	
Pyridine	ND ug/L		100	1	07/02/13 00:00	07/03/13 13:00	110-86-1	
2,4,5-Trichlorophenol	ND ug/L		500	1	07/02/13 00:00	07/03/13 13:00	95-95-4	
2,4,6-Trichlorophenol	ND ug/L		100	1	07/02/13 00:00	07/03/13 13:00	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	92 %		42-120	1	07/02/13 00:00	07/03/13 13:00	4165-60-0	
2-Fluorobiphenyl (S)	88 %		43-120	1	07/02/13 00:00	07/03/13 13:00	321-60-8	
Terphenyl-d14 (S)	98 %		38-120	1	07/02/13 00:00	07/03/13 13:00	1718-51-0	
Phenol-d6 (S)	77 %		41-120	1	07/02/13 00:00	07/03/13 13:00	13127-88-3	
2-Fluorophenol (S)	77 %		40-120	1	07/02/13 00:00	07/03/13 13:00	367-12-4	
2,4,6-Tribromophenol (S)	88 %		38-126	1	07/02/13 00:00	07/03/13 13:00	118-79-6	

8260 MSV TCLP

Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 07/02/13 00:00

Benzene	ND ug/L		50.0	1		07/03/13 12:26	71-43-2	
2-Butanone (MEK)	ND ug/L		1000	1		07/03/13 12:26	78-93-3	
Carbon tetrachloride	ND ug/L		50.0	1		07/03/13 12:26	56-23-5	
Chlorobenzene	ND ug/L		50.0	1		07/03/13 12:26	108-90-7	
Chloroform	ND ug/L		200	1		07/03/13 12:26	67-66-3	
1,2-Dichloroethane	ND ug/L		50.0	1		07/03/13 12:26	107-06-2	
1,1-Dichloroethene	ND ug/L		50.0	1		07/03/13 12:26	75-35-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

Sample: SP-1 **Lab ID: 60148006001** Collected: 06/28/13 15:45 Received: 06/29/13 09:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV TCLP Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 07/02/13 00:00								
Tetrachloroethene	ND	ug/L	50.0	1		07/03/13 12:26	127-18-4	
Trichloroethene	ND	ug/L	50.0	1		07/03/13 12:26	79-01-6	
Vinyl chloride	ND	ug/L	100	1		07/03/13 12:26	75-01-4	
Surrogates								
1,2-Dichloroethane-d4 (S)	97 %		80-120	1		07/03/13 12:26	17060-07-0	
Toluene-d8 (S)	97 %		80-120	1		07/03/13 12:26	2037-26-5	
4-Bromofluorobenzene (S)	96 %		80-120	1		07/03/13 12:26	460-00-4	
Dibromofluoromethane (S)	98 %		80-120	1		07/03/13 12:26	1868-53-7	
8260 MSV 5035A VOA Analytical Method: EPA 8260								
Benzene	ND	mg/kg	0.0064	1		07/03/13 11:55	71-43-2	
Bromodichloromethane	ND	mg/kg	0.0064	1		07/03/13 11:55	75-27-4	
Bromoform	ND	mg/kg	0.0064	1		07/03/13 11:55	75-25-2	
Carbon tetrachloride	ND	mg/kg	0.0064	1		07/03/13 11:55	56-23-5	
Chlorobenzene	ND	mg/kg	0.0064	1		07/03/13 11:55	108-90-7	
Chloroform	ND	mg/kg	0.0064	1		07/03/13 11:55	67-66-3	
1,2-Dichloroethane	ND	mg/kg	0.0064	1		07/03/13 11:55	107-06-2	
1,1-Dichloroethene	ND	mg/kg	0.0064	1		07/03/13 11:55	75-35-4	
cis-1,2-Dichloroethene	ND	mg/kg	0.0064	1		07/03/13 11:55	156-59-2	
trans-1,2-Dichloroethene	ND	mg/kg	0.0064	1		07/03/13 11:55	156-60-5	
1,2-Dichloropropane	ND	mg/kg	0.0064	1		07/03/13 11:55	78-87-5	
cis-1,3-Dichloropropene	ND	mg/kg	0.0064	1		07/03/13 11:55	10061-01-5	
trans-1,3-Dichloropropene	ND	mg/kg	0.0064	1		07/03/13 11:55	10061-02-6	
Ethylbenzene	ND	mg/kg	0.0064	1		07/03/13 11:55	100-41-4	
Methylene chloride	ND	mg/kg	0.0064	1		07/03/13 11:55	75-09-2	
Styrene	ND	mg/kg	0.0064	1		07/03/13 11:55	100-42-5	
Tetrachloroethene	ND	mg/kg	0.0064	1		07/03/13 11:55	127-18-4	
Toluene	ND	mg/kg	0.0064	1		07/03/13 11:55	108-88-3	
1,1,1-Trichloroethane	ND	mg/kg	0.0064	1		07/03/13 11:55	71-55-6	
1,1,2-Trichloroethane	ND	mg/kg	0.0064	1		07/03/13 11:55	79-00-5	
Trichloroethene	ND	mg/kg	0.0064	1		07/03/13 11:55	79-01-6	
Vinyl chloride	ND	mg/kg	0.0064	1		07/03/13 11:55	75-01-4	
Xylene (Total)	ND	mg/kg	0.0064	1		07/03/13 11:55	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	102 %		76-125	1		07/03/13 11:55	1868-53-7	IO
Toluene-d8 (S)	88 %		80-120	1		07/03/13 11:55	2037-26-5	
4-Bromofluorobenzene (S)	69 %		80-120	1		07/03/13 11:55	460-00-4	SO
1,2-Dichloroethane-d4 (S)	110 %		76-132	1		07/03/13 11:55	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974								
Percent Moisture	15.2 %		0.50	1		07/01/13 00:00		
Reactive Sulfide Analytical Method: SW-846 7.3.4.2								
Sulfide, Reactive	ND	mg/kg	100	1		07/03/13 15:30		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

Sample: SP-1 **Lab ID: 60148006001** Collected: 06/28/13 15:45 Received: 06/29/13 09:10 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9045 pH Soil	Analytical Method: EPA 9045							
pH at 25 Degrees C	8.6	Std. Units	0.10	1		07/01/13 16:04		H1
9095 Paint Filter Liquid Test	Analytical Method: EPA 9095							
Free Liquids	negative			1		07/02/13 09:30		
Flashpoint, Open Cup	Analytical Method: ASTM D92							
Flashpoint	>210	deg F		1		07/03/13 10:35		
Phenolics, Total Recoverable	Analytical Method: EPA 420.1 Modified							
Phenolics, Total Recoverable	ND	mg/kg	1.9	1		07/02/13 13:56		
733C S Reactive Cyanide	Analytical Method: SW-846 7.3.3.2							
Cyanide, Reactive	ND	mg/kg	0.025	1		07/03/13 15:07		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

QC Batch:	MERP/7480	Analysis Method:	EPA 7470
QC Batch Method:	EPA 7470	Analysis Description:	7470 Mercury TCLP
Associated Lab Samples:	60148006001		

METHOD BLANK: 1215237 Matrix: Water

Associated Lab Samples: 60148006001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	ND	0.0020	07/03/13 14:23	

LABORATORY CONTROL SAMPLE: 1215238

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.015	0.014	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1215239 1215240

Parameter	Units	60148006001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Mercury	mg/L	ND	.015	.015	0.016	0.017	106	112	75-125	5	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

QC Batch: MPRP/23343 Analysis Method: EPA 6010
 QC Batch Method: EPA 3010 Analysis Description: 6010 MET TCLP
 Associated Lab Samples: 60148006001

METHOD BLANK: 1214891 Matrix: Water

Associated Lab Samples: 60148006001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.50	07/03/13 12:28	
Barium	mg/L	ND	2.5	07/03/13 12:28	
Cadmium	mg/L	ND	0.050	07/03/13 12:28	
Chromium	mg/L	ND	0.10	07/03/13 12:28	
Lead	mg/L	ND	0.50	07/03/13 12:28	
Selenium	mg/L	ND	0.50	07/03/13 12:28	
Silver	mg/L	ND	0.10	07/03/13 12:28	

LABORATORY CONTROL SAMPLE: 1214892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	1	0.97	97	80-120	
Barium	mg/L	1	1.1	108	80-120	
Cadmium	mg/L	1	0.99	99	80-120	
Chromium	mg/L	1	1.0	102	80-120	
Lead	mg/L	1	1.0	102	80-120	
Selenium	mg/L	1	0.97	97	80-120	
Silver	mg/L	.5	0.49	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1214893 1214894

Parameter	Units	60148012001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	MSD Result					
Arsenic	mg/L	ND	10	10	10.0	10	100	100	75-125	1	20
Barium	mg/L	ND	10	10	10.4	10.3	104	103	75-125	1	20
Cadmium	mg/L	ND	10	10	10.1	10.0	101	100	75-125	1	20
Chromium	mg/L	ND	10	10	9.6	9.7	96	97	75-125	1	20
Lead	mg/L	ND	10	10	9.8	9.8	98	98	75-125	0	20
Selenium	mg/L	ND	10	10	10.2	10.1	102	101	75-125	1	20
Silver	mg/L	ND	5	5	4.9	4.9	98	98	75-125	0	20

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

QC Batch: MSV/54703 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 60148006001

METHOD BLANK: 1215137 Matrix: Water

Associated Lab Samples: 60148006001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	50.0	07/03/13 12:11	
1,2-Dichloroethane	ug/L	ND	50.0	07/03/13 12:11	
2-Butanone (MEK)	ug/L	ND	1000	07/03/13 12:11	
Benzene	ug/L	ND	50.0	07/03/13 12:11	
Carbon tetrachloride	ug/L	ND	50.0	07/03/13 12:11	
Chlorobenzene	ug/L	ND	50.0	07/03/13 12:11	
Chloroform	ug/L	ND	200	07/03/13 12:11	
Tetrachloroethene	ug/L	ND	50.0	07/03/13 12:11	
Trichloroethene	ug/L	ND	50.0	07/03/13 12:11	
Vinyl chloride	ug/L	ND	100	07/03/13 12:11	
1,2-Dichloroethane-d4 (S)	%	99	80-120	07/03/13 12:11	
4-Bromofluorobenzene (S)	%	97	80-120	07/03/13 12:11	
Dibromofluoromethane (S)	%	101	80-120	07/03/13 12:11	
Toluene-d8 (S)	%	100	80-120	07/03/13 12:11	

LABORATORY CONTROL SAMPLE: 1215138

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	1000	1030	103	70-127	
1,2-Dichloroethane	ug/L	1000	1040	104	72-122	
2-Butanone (MEK)	ug/L	5000	4670	93	69-124	
Benzene	ug/L	1000	1010	101	73-122	
Carbon tetrachloride	ug/L	1000	1080	108	73-125	
Chlorobenzene	ug/L	1000	1020	102	80-120	
Chloroform	ug/L	1000	932	93	76-120	
Tetrachloroethene	ug/L	1000	983	98	79-122	
Trichloroethene	ug/L	1000	1000	100	76-120	
Vinyl chloride	ug/L	1000	984	98	57-140	
1,2-Dichloroethane-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Dibromofluoromethane (S)	%			102	80-120	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE SAMPLE: 1215139

Parameter	Units	60148006001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	ND	1000	886	89	66-142	
1,2-Dichloroethane	ug/L	ND	1000	1000	100	53-144	
2-Butanone (MEK)	ug/L	ND	5000	4360	86	54-127	
Benzene	ug/L	ND	1000	947	95	48-150	

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

MATRIX SPIKE SAMPLE:		1215139					
Parameter	Units	60148006001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	ND	1000	1010	101	68-145	
Chlorobenzene	ug/L	ND	1000	984	98	68-131	
Chloroform	ug/L	ND	1000	904	90	69-126	
Tetrachloroethene	ug/L	ND	1000	950	95	66-139	
Trichloroethene	ug/L	ND	1000	966	97	67-130	
Vinyl chloride	ug/L	ND	1000	682	68	47-159	
1,2-Dichloroethane-d4 (S)	%				100	80-120	
4-Bromofluorobenzene (S)	%				102	80-120	
Dibromofluoromethane (S)	%				99	80-120	
Toluene-d8 (S)	%				100	80-120	

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

QC Batch:	MSV/54705	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV 5035A Volatile Organics
Associated Lab Samples:	60148006001		

METHOD BLANK: 1215142 Matrix: Solid

Associated Lab Samples: 60148006001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	mg/kg	ND	0.0050	07/03/13 11:40	
1,1,2-Trichloroethane	mg/kg	ND	0.0050	07/03/13 11:40	
1,1-Dichloroethene	mg/kg	ND	0.0050	07/03/13 11:40	
1,2-Dichloroethane	mg/kg	ND	0.0050	07/03/13 11:40	
1,2-Dichloropropane	mg/kg	ND	0.0050	07/03/13 11:40	
Benzene	mg/kg	ND	0.0050	07/03/13 11:40	
Bromodichloromethane	mg/kg	ND	0.0050	07/03/13 11:40	
Bromoform	mg/kg	ND	0.0050	07/03/13 11:40	
Carbon tetrachloride	mg/kg	ND	0.0050	07/03/13 11:40	
Chlorobenzene	mg/kg	ND	0.0050	07/03/13 11:40	
Chloroform	mg/kg	ND	0.0050	07/03/13 11:40	
cis-1,2-Dichloroethene	mg/kg	ND	0.0050	07/03/13 11:40	
cis-1,3-Dichloropropene	mg/kg	ND	0.0050	07/03/13 11:40	
Ethylbenzene	mg/kg	ND	0.0050	07/03/13 11:40	
Methylene chloride	mg/kg	ND	0.0050	07/03/13 11:40	
Styrene	mg/kg	ND	0.0050	07/03/13 11:40	
Tetrachloroethene	mg/kg	ND	0.0050	07/03/13 11:40	
Toluene	mg/kg	ND	0.0050	07/03/13 11:40	
trans-1,2-Dichloroethene	mg/kg	ND	0.0050	07/03/13 11:40	
trans-1,3-Dichloropropene	mg/kg	ND	0.0050	07/03/13 11:40	
Trichloroethene	mg/kg	ND	0.0050	07/03/13 11:40	
Vinyl chloride	mg/kg	ND	0.0050	07/03/13 11:40	
Xylene (Total)	mg/kg	ND	0.0050	07/03/13 11:40	
1,2-Dichloroethane-d4 (S)	%	100	76-132	07/03/13 11:40	
4-Bromofluorobenzene (S)	%	95	80-120	07/03/13 11:40	
Dibromofluoromethane (S)	%	100	76-125	07/03/13 11:40	
Toluene-d8 (S)	%	101	80-120	07/03/13 11:40	

LABORATORY CONTROL SAMPLE: 1215143

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	mg/kg	.1	0.096	96	75-128	
1,1,2-Trichloroethane	mg/kg	.1	0.094	94	73-120	
1,1-Dichloroethene	mg/kg	.1	0.10	103	75-128	
1,2-Dichloroethane	mg/kg	.1	0.10	104	76-120	
1,2-Dichloropropane	mg/kg	.1	0.10	103	80-120	
Benzene	mg/kg	.1	0.10	101	77-120	
Bromodichloromethane	mg/kg	.1	0.10	102	78-120	
Bromoform	mg/kg	.1	0.090	90	68-123	
Carbon tetrachloride	mg/kg	.1	0.11	108	74-136	
Chlorobenzene	mg/kg	.1	0.10	102	80-120	

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

LABORATORY CONTROL SAMPLE: 1215143

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloroform	mg/kg	.1	0.093	93	67-120	
cis-1,2-Dichloroethene	mg/kg	.1	0.10	101	71-120	
cis-1,3-Dichloropropene	mg/kg	.1	0.10	103	80-120	
Ethylbenzene	mg/kg	.1	0.10	100	76-120	
Methylene chloride	mg/kg	.1	0.11	106	70-123	
Styrene	mg/kg	.1	0.098	98	78-120	
Tetrachloroethene	mg/kg	.1	0.098	98	72-125	
Toluene	mg/kg	.1	0.099	99	74-120	
trans-1,2-Dichloroethene	mg/kg	.1	0.090	90	77-128	
trans-1,3-Dichloropropene	mg/kg	.1	0.11	107	80-120	
Trichloroethene	mg/kg	.1	0.10	100	76-120	
Vinyl chloride	mg/kg	.1	0.098	98	65-145	
Xylene (Total)	mg/kg	.3	0.30	99	75-120	
1,2-Dichloroethane-d4 (S)	%			102	76-132	
4-Bromofluorobenzene (S)	%			101	80-120	
Dibromofluoromethane (S)	%			102	76-125	
Toluene-d8 (S)	%			101	80-120	

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

QC Batch:	OEXT/39121	Analysis Method:	EPA 8082
QC Batch Method:	EPA 3546	Analysis Description:	8082 GCS PCB
Associated Lab Samples:	60148006001		

METHOD BLANK: 1214349 Matrix: Solid

Associated Lab Samples: 60148006001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	ND	32.7	07/03/13 13:21	
PCB-1221 (Aroclor 1221)	ug/kg	ND	65.5	07/03/13 13:21	
PCB-1232 (Aroclor 1232)	ug/kg	ND	32.7	07/03/13 13:21	
PCB-1242 (Aroclor 1242)	ug/kg	ND	32.7	07/03/13 13:21	
PCB-1248 (Aroclor 1248)	ug/kg	ND	32.7	07/03/13 13:21	
PCB-1254 (Aroclor 1254)	ug/kg	ND	32.7	07/03/13 13:21	
PCB-1260 (Aroclor 1260)	ug/kg	ND	32.7	07/03/13 13:21	
Decachlorobiphenyl (S)	%	79	36-131	07/03/13 13:21	
Tetrachloro-m-xylene (S)	%	86	34-132	07/03/13 13:21	

LABORATORY CONTROL SAMPLE: 1214350

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1248 (Aroclor 1248)	ug/kg	165	166	100	62-129	
Decachlorobiphenyl (S)	%			81	36-131	
Tetrachloro-m-xylene (S)	%			88	34-132	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1214351 1214352

Parameter	Units	60148006001		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
PCB-1248 (Aroclor 1248)	ug/kg	205	196	195	242	57.3	19	-76	41-144	123	31	M1,R1
Decachlorobiphenyl (S)	%						69	70	36-131			
Tetrachloro-m-xylene (S)	%						81	78	34-132			

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

QC Batch:	OEXT/39108	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3546	Analysis Description:	8270/3546 MSSV PAH by SIM
Associated Lab Samples:	60148006001		

METHOD BLANK: 1213958 Matrix: Solid

Associated Lab Samples: 60148006001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	mg/kg	ND	0.0033	07/02/13 18:00	
Acenaphthylene	mg/kg	ND	0.0033	07/02/13 18:00	
Anthracene	mg/kg	ND	0.0033	07/02/13 18:00	
Benzo(a)anthracene	mg/kg	ND	0.0033	07/02/13 18:00	
Benzo(a)pyrene	mg/kg	ND	0.0033	07/02/13 18:00	
Benzo(b)fluoranthene	mg/kg	ND	0.0033	07/02/13 18:00	
Benzo(g,h,i)perylene	mg/kg	ND	0.0033	07/02/13 18:00	
Benzo(k)fluoranthene	mg/kg	ND	0.0033	07/02/13 18:00	
Chrysene	mg/kg	ND	0.0033	07/02/13 18:00	
Dibenz(a,h)anthracene	mg/kg	ND	0.0033	07/02/13 18:00	
Fluoranthene	mg/kg	ND	0.0033	07/02/13 18:00	
Fluorene	mg/kg	ND	0.0033	07/02/13 18:00	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.0033	07/02/13 18:00	
Naphthalene	mg/kg	ND	0.0033	07/02/13 18:00	
Phenanthrene	mg/kg	ND	0.0033	07/02/13 18:00	
Pyrene	mg/kg	ND	0.0033	07/02/13 18:00	
2-Fluorobiphenyl (S)	%	84	40-120	07/02/13 18:00	
Terphenyl-d14 (S)	%	90	38-123	07/02/13 18:00	

LABORATORY CONTROL SAMPLE: 1213959

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	mg/kg	.033	0.032	95	58-120	
Acenaphthylene	mg/kg	.033	0.031	95	56-120	
Anthracene	mg/kg	.033	0.031	94	56-120	
Benzo(a)anthracene	mg/kg	.033	0.033	100	56-120	
Benzo(a)pyrene	mg/kg	.033	0.032	98	55-120	
Benzo(b)fluoranthene	mg/kg	.033	0.032	98	54-120	
Benzo(g,h,i)perylene	mg/kg	.033	0.033	100	42-120	
Benzo(k)fluoranthene	mg/kg	.033	0.035	106	53-120	
Chrysene	mg/kg	.033	0.033	99	48-120	
Dibenz(a,h)anthracene	mg/kg	.033	0.031	94	44-120	
Fluoranthene	mg/kg	.033	0.032	95	58-120	
Fluorene	mg/kg	.033	0.032	97	59-120	
Indeno(1,2,3-cd)pyrene	mg/kg	.033	0.032	96	45-120	
Naphthalene	mg/kg	.033	0.033	99	58-120	
Phenanthrene	mg/kg	.033	0.032	97	57-120	
Pyrene	mg/kg	.033	0.034	104	55-120	
2-Fluorobiphenyl (S)	%			93	40-120	M4
Terphenyl-d14 (S)	%			101	38-123	

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997
Pace Project No.: 60148006

QC Batch: OEXT/39122 Analysis Method: EPA 8270
QC Batch Method: EPA 3546 Analysis Description: 8270 Solid MSSV Microwave
Associated Lab Samples: 60148006001

METHOD BLANK: 1214353 Matrix: Solid
Associated Lab Samples: 60148006001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	mg/kg	ND	0.33	07/05/13 11:33	
1,2-Dichlorobenzene	mg/kg	ND	0.33	07/05/13 11:33	
1,4-Dichlorobenzene	mg/kg	ND	0.33	07/05/13 11:33	
bis(2-Chloroethyl) ether	mg/kg	ND	0.33	07/05/13 11:33	
bis(2-Ethylhexyl)phthalate	mg/kg	ND	0.33	07/05/13 11:33	
Hexachlorocyclopentadiene	mg/kg	ND	0.33	07/05/13 11:33	
N-Nitroso-di-n-propylamine	mg/kg	ND	0.33	07/05/13 11:33	
N-Nitrosodiphenylamine	mg/kg	ND	0.33	07/05/13 11:33	
2,4,6-Tribromophenol (S)	%	104	44-120	07/05/13 11:33	
2-Fluorobiphenyl (S)	%	109	28-145	07/05/13 11:33	
2-Fluorophenol (S)	%	107	45-120	07/05/13 11:33	
Nitrobenzene-d5 (S)	%	109	21-145	07/05/13 11:33	
Phenol-d6 (S)	%	108	43-120	07/05/13 11:33	
Terphenyl-d14 (S)	%	122	29-158	07/05/13 11:33	

LABORATORY CONTROL SAMPLE: 1214354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	mg/kg	1.7	1.5	93	56-120	
1,2-Dichlorobenzene	mg/kg	1.7	1.5	92	56-120	
1,4-Dichlorobenzene	mg/kg	1.7	1.5	91	55-120	
bis(2-Chloroethyl) ether	mg/kg	1.7	1.6	94	57-120	
bis(2-Ethylhexyl)phthalate	mg/kg	1.7	1.8	108	62-120	
Hexachlorocyclopentadiene	mg/kg	3.3	2.2	67	40-120	
N-Nitroso-di-n-propylamine	mg/kg	1.7	1.6	98	57-120	
N-Nitrosodiphenylamine	mg/kg	1.7	1.6	94	60-120	
2,4,6-Tribromophenol (S)	%			102	44-120	
2-Fluorobiphenyl (S)	%			97	28-145	
2-Fluorophenol (S)	%			94	45-120	
Nitrobenzene-d5 (S)	%			99	21-145	
Phenol-d6 (S)	%			93	43-120	
Terphenyl-d14 (S)	%			107	29-158	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1214699 1214700

Parameter	Units	60147804003 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
			Spike Conc.	MS Result	MSD Spike Conc.	MSD Result					
1,2,4-Trichlorobenzene	mg/kg	ND	2.1	2.3	2.1	2.1	96	94	42-120	1	24
1,2-Dichlorobenzene	mg/kg	ND	2.1	2.3	1.9	1.9	87	87	41-120	1	24
1,4-Dichlorobenzene	mg/kg	ND	2.1	2.3	1.9	1.9	86	86	40-120	1	24

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

Parameter	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1214699			1214700			MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
	60147804003 Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
bis(2-Chloroethyl) ether	mg/kg	ND	2.1	2.3	2.1	2.1	94	94	43-120	1	31	
bis(2-Ethylhexyl)phthalate	mg/kg	ND	2.1	2.3	2.5	2.5	112	112	36-140	1	30	
Hexachlorocyclopentadiene	mg/kg	ND	4.4	4.4	0.69	0.64	16	14	10-120	8	49	
N-Nitroso-di-n-propylamine	mg/kg	ND	2.1	2.3	2.2	2.2	99	99	39-120	1	26	
N-Nitrosodiphenylamine	mg/kg	ND	2.1	2.3	3.4	3.3	154	148	31-132	3	26	M1
2,4,6-Tribromophenol (S)	%						96	93	44-120			
2-Fluorobiphenyl (S)	%						98	96	28-145			
2-Fluorophenol (S)	%						87	88	45-120			
Nitrobenzene-d5 (S)	%						99	100	21-145			
Phenol-d6 (S)	%						88	89	43-120			
Terphenyl-d14 (S)	%						111	113	29-158			

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

QC Batch: OEXT/39137 Analysis Method: EPA 8270
QC Batch Method: EPA 3510 Analysis Description: 8270 TCLP MSSV
Associated Lab Samples: 60148006001

METHOD BLANK: 1214897 Matrix: Water

Associated Lab Samples: 60148006001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	ND	100	07/03/13 11:57	
2,4,5-Trichlorophenol	ug/L	ND	500	07/03/13 11:57	
2,4,6-Trichlorophenol	ug/L	ND	100	07/03/13 11:57	
2,4-Dinitrotoluene	ug/L	ND	100	07/03/13 11:57	
2-Methylphenol(o-Cresol)	ug/L	ND	100	07/03/13 11:57	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	200	07/03/13 11:57	
Hexachloro-1,3-butadiene	ug/L	ND	100	07/03/13 11:57	
Hexachlorobenzene	ug/L	ND	100	07/03/13 11:57	
Hexachloroethane	ug/L	ND	100	07/03/13 11:57	
Nitrobenzene	ug/L	ND	100	07/03/13 11:57	
Pentachlorophenol	ug/L	ND	500	07/03/13 11:57	
Pyridine	ug/L	ND	100	07/03/13 11:57	
2,4,6-Tribromophenol (S)	%	85	38-126	07/03/13 11:57	
2-Fluorobiphenyl (S)	%	87	43-120	07/03/13 11:57	
2-Fluorophenol (S)	%	73	40-120	07/03/13 11:57	
Nitrobenzene-d5 (S)	%	89	42-120	07/03/13 11:57	
Phenol-d6 (S)	%	73	41-120	07/03/13 11:57	
Terphenyl-d14 (S)	%	91	38-120	07/03/13 11:57	

LABORATORY CONTROL SAMPLE: 1214898

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	500	389	78	42-120	
2,4,5-Trichlorophenol	ug/L	500	439J	88	51-120	
2,4,6-Trichlorophenol	ug/L	500	418	84	50-120	
2,4-Dinitrotoluene	ug/L	500	398	80	53-120	
2-Methylphenol(o-Cresol)	ug/L	500	392	78	46-120	
3&4-Methylphenol(m&p Cresol)	ug/L	1000	778	78	35-120	
Hexachloro-1,3-butadiene	ug/L	500	404	81	43-120	
Hexachlorobenzene	ug/L	500	452	90	51-120	
Hexachloroethane	ug/L	500	378	76	38-120	
Nitrobenzene	ug/L	500	341	68	47-120	
Pentachlorophenol	ug/L	500	404J	81	39-123	
Pyridine	ug/L	500	405	81	1-120	
2,4,6-Tribromophenol (S)	%			87	38-126	
2-Fluorobiphenyl (S)	%			85	43-120	
2-Fluorophenol (S)	%			75	40-120	
Nitrobenzene-d5 (S)	%			88	42-120	
Phenol-d6 (S)	%			74	41-120	
Terphenyl-d14 (S)	%			91	38-120	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

MATRIX SPIKE SAMPLE:		1214899						
Parameter	Units	60148006001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
1,4-Dichlorobenzene	ug/L	ND	500	401	80	46-120		
2,4,5-Trichlorophenol	ug/L	ND	500	452J	90	38-120		
2,4,6-Trichlorophenol	ug/L	ND	500	427	85	42-120		
2,4-Dinitrotoluene	ug/L	ND	500	423	85	45-120		
2-Methylphenol(o-Cresol)	ug/L	ND	500	401	80	42-120		
3&4-Methylphenol(m&p Cresol)	ug/L	ND	1000	788	79	20-125		
Hexachloro-1,3-butadiene	ug/L	ND	500	431	86	47-120		
Hexachlorobenzene	ug/L	ND	500	460	92	49-120		
Hexachloroethane	ug/L	ND	500	406	81	39-120		
Nitrobenzene	ug/L	ND	500	349	70	29-127		
Pentachlorophenol	ug/L	ND	500	421J	84	36-130		
Pyridine	ug/L	ND	500	277	55	1-120		
2,4,6-Tribromophenol (S)	%				89	38-126		
2-Fluorobiphenyl (S)	%				86	43-120		
2-Fluorophenol (S)	%				73	40-120		
Nitrobenzene-d5 (S)	%				88	42-120		
Phenol-d6 (S)	%				74	41-120		
Terphenyl-d14 (S)	%				92	38-120		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

QC Batch: PMST/8689

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60148006001

METHOD BLANK: 1214185

Matrix: Solid

Associated Lab Samples: 60148006001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	07/01/13 00:00	

SAMPLE DUPLICATE: 1214189

Parameter	Units	4080363001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	23.3	23.4	0	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

QC Batch:	WET/42183	Analysis Method:	SW-846 7.3.4.2
QC Batch Method:	SW-846 7.3.4.2	Analysis Description:	Reactive Sulfide
Associated Lab Samples:	60148006001		

METHOD BLANK: 1215053 Matrix: Solid

Associated Lab Samples: 60148006001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide, Reactive	mg/kg	ND	100	07/03/13 15:30	

LABORATORY CONTROL SAMPLE: 1215054

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	200	183	92	77-110	

MATRIX SPIKE SAMPLE: 1215058

Parameter	Units	60148006001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfide, Reactive	mg/kg	ND	500	448	88	67-116	

SAMPLE DUPLICATE: 1215059

Parameter	Units	4080372001 Result	Dup Result	RPD	Max RPD	Qualifiers
Sulfide, Reactive	mg/kg	10.4J	ND		30	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

QC Batch: WET/42145 Analysis Method: EPA 9045

QC Batch Method: EPA 9045 Analysis Description: 9045 pH

Associated Lab Samples: 60148006001

SAMPLE DUPLICATE: 1214097

Parameter	Units	60147855008 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.8	6.8	0	3	H1

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

QC Batch: WETA/25312 Analysis Method: EPA 420.1 Modified
 QC Batch Method: EPA 420.1 Modified Analysis Description: 420.1 Phenolics
 Associated Lab Samples: 60148006001

METHOD BLANK: 1214429 Matrix: Solid

Associated Lab Samples: 60148006001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phenolics, Total Recoverable	mg/kg	ND	1.5	07/02/13 13:53	

LABORATORY CONTROL SAMPLE: 1214430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	mg/kg	15	15.2	102	90-110	

MATRIX SPIKE SAMPLE: 1214431

Parameter	Units	60147671001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	mg/kg	<20.9	228	224	93	90-110	

SAMPLE DUPLICATE: 1214432

Parameter	Units	60148006001 Result	Dup Result	RPD	Max RPD	Qualifiers
Phenolics, Total Recoverable	mg/kg	ND	ND		20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

QC Batch:	WETA/25329	Analysis Method:	SW-846 7.3.3.2
QC Batch Method:	SW-846 7.3.3.2	Analysis Description:	733C Reactive Cyanide
Associated Lab Samples:	60148006001		

METHOD BLANK: 1215085 Matrix: Solid
Associated Lab Samples: 60148006001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide, Reactive	mg/kg	ND	0.025	07/03/13 15:03	

LABORATORY CONTROL SAMPLE: 1215086

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	.5	0.54	107	71-123	

MATRIX SPIKE SAMPLE: 1215087

Parameter	Units	60148006001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide, Reactive	mg/kg	ND	.5	0.52	103	57-132	

SAMPLE DUPLICATE: 1215088

Parameter	Units	4080372002 Result	Dup Result	RPD	Max RPD	Qualifiers
Cyanide, Reactive	mg/kg	<0.0052	ND		23	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: MSV/54705

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H1 Analysis conducted outside the EPA method holding time.

IO The internal standard response was outside the laboratory acceptance limits confirmed by reanalysis. The results reported are from the most QC compliant analysis.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M4 A matrix spike/matrix spike duplicate was not performed for this batch due to sample dilution.

P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

R1 RPD value was outside control limits.

S0 Surrogate recovery outside laboratory control limits.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: N of Loewenthal Metals 204997

Pace Project No.: 60148006

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148006001	SP-1	EPA 3546	OEXT/39121	EPA 8082	GCSV/14882
60148006001	SP-1	EPA 3010	MPRP/23343	EPA 6010	ICP/18381
60148006001	SP-1	EPA 7470	MERP/7480	EPA 7470	MERC/7437
60148006001	SP-1	EPA 3546	OEXT/39108	EPA 8270 by SIM	MSSV/12378
60148006001	SP-1	EPA 3546	OEXT/39122	EPA 8270	MSSV/12389
60148006001	SP-1	EPA 8260	MSV/54703		
60148006001	SP-1	EPA 8260	MSV/54705		
60148006001	SP-1	ASTM D2974	PMST/8689		
60148006001	SP-1	SW-846 7.3.4.2	WET/42183		
60148006001	SP-1	EPA 9045	WET/42145		
60148006001	SP-1	EPA 9095	WET/42156		
60148006001	SP-1	ASTM D92	WET/42190		
60148006001	SP-1	EPA 420.1 Modified	WETA/25312		
60148006001	SP-1	SW-846 7.3.3.2	WETA/25329		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

July 08, 2013

Angie Brown
Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219

RE: Project 20156102
Project ID: 60148006 / BNSF

Dear Angie Brown:

Enclosed are the analytical results for sample(s) received by the laboratory on June 29, 2013. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Karen Brown". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Karen Brown
karen.brown@pacelabs.com



REPORT OF LABORATORY ANALYSIS

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Laboratory Certifications

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20156102

Client: PASI Kansas

Project ID: 60148006 / BNSF

Washington Department of Ecology C2078
Oregon Environmental Laboratory Accreditation - LA200001
U.S. Dept. of Agriculture Foreign Soil Import P330-10-00119
Pennsylvania Dept. of Env Protection (NELAC) 68-04202
Texas Commission on Env. Quality (NELAC) T104704405-09-TX
Kansas Department of Health and Environment (NELAC) E-10266
Florida Department of Health (NELAC) E87595
Oklahoma Department of Environmental Quality - 2010-139
Illinois Environmental Protection Agency - 0025721
California Env. Lab Accreditation Program Branch - 11277CA
Louisiana Dept. of Environmental Quality (NELAC/LELAP) 02006





Sample Cross Reference

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20156102

Client: PASI Kansas

Project ID: 60148006 / BNSF

Client Sample ID	Lab ID	Matrix	Collection Date/Time	Received Date/Time
SP-1	201103434	Soil	28-Jun-13 15:45	29-Jun-13 10:00



Project Narrative

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20156102

Sample Receipt Condition:

All samples were received in accordance with EPA protocol.

Holding Times:

All holding times were met.

Blanks:

All blank results were below reporting limits.

Laboratory Control Samples:

LCS recoveries outside of QC limits are qualified in the Report of Quality Control section.

Matrix Spikes and Duplicates:

All MS/MSD recoveries or duplicate RPDs were within QC limits.

Surrogates:

All surrogate recoveries were within QC limits.



QC Cross Reference

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20156102

Analytical Method	Batch	Sample used for QC
EPA 8081	211772	Project sample SP-1
EPA 8151	211773	Project sample SP-1

Narrative1 7/8/2013 17:56:05

For the sample used as the original for the DUP or MS/MSD for the batch:

Project sample means a sample from this project was used.

Client sample means a sample from the same client but in a different project was used.

Batch sample means a sample from a different client was used.



Sample Results

Pace Analytical Services, Inc.
 1000 Riverbend Blvd. Suite F
 St. Rose, LA 70087
 (504) 469-0333

Client: PASI Kansas

Client ID: SP-1

Project: 20156102

Project ID: 60148006 / BNSF

Site: None

Lab ID: 201103434 (TCLP)

Matrix: Soil

% Moisture: 0 Not Corrected

Description: None

Prep Level: TCLP

Batch: 211772

Method: EPA 8081 (TCLP)
8081 Pests TCLP

Collected: 28-Jun-13

Received: 29-Jun-13

Prepared: 03-Jul-13

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis
58-89-9	gamma-BHC (Lindane)	1	ND		0.000500	0.400	03-Jul-13 16:52 SLF
57-74-9	Chlordane	1	ND		0.00500	0.0300	03-Jul-13 16:52 SLF
72-20-8	Endrin	1	ND		0.00100	0.0200	03-Jul-13 16:52 SLF
76-44-8	Heptachlor	1	ND		0.000500	0.00800	03-Jul-13 16:52 SLF
1024-57-3	Heptachlor epoxide	1	ND		0.000500	0.00800	03-Jul-13 16:52 SLF
72-43-5	Methoxychlor	1	ND		0.00500	10.0	03-Jul-13 16:52 SLF
8001-35-2	Toxaphene	1	ND		0.0200	0.500	03-Jul-13 16:52 SLF

7 compound(s) reported

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.

Protocol 7/8/2013 17:56:07
 Limits are corrected for sample size, dilution and moisture content if applicable.
 Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
 Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.



Sample Results

Pace Analytical Services, Inc.
 1000 Riverbend Blvd. Suite F
 St. Rose, LA 70087
 (504) 469-0333

Client: PASI Kansas

Client ID: SP-1

Project: 20156102

Project ID: 60148006 / BNSF

Site: None

Lab ID: 201103434 (TCLP)

Matrix: Soil

% Moisture: 0 Not Corrected

Description: None

Prep Level: TCLP

Batch: 211773

Method: EPA 8151 (TCLP)

8151 Herbs TCLP

Collected: 28-Jun-13

Received: 29-Jun-13

Prepared: 03-Jul-13

Units: mg/L

CAS No.	Analyte	Dilution	Result	Qu	Reporting Limit	Reg Limit	Analysis
94-75-7	2,4-D	1	ND		0.0200	10.0	05-Jul-13 13:58 SNP1
93-72-1	2,4,5-TP (Silvex)	1	ND		0.0200	1.00	05-Jul-13 13:58 SNP1

2 compound(s) reported

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.

Protocol 7/8/2013 17:56:07
 Limits are corrected for sample size, dilution and moisture content if applicable.
 Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
 Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.



Surrogate Recovery

Pace Analytical Services, Inc.
 1000 Riverbend Blvd. Suite F
 St. Rose, LA 70087
 (504) 469-0333

Batch: 211772

Project: 20156102

Method: TCLP GC Semivolatile Organics

Lab ID	Sample ID	Qu	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
201103441	211772 BLANK 1		81	92	31	44				
201103442	211772 LCS 1		79	86	50	43				
201103434	SP-1		74	82	53	42				
201103443	SP-1 MS 1		90	99	49	43				
201103444	SP-1 MSD 1		91	100	50	46				
QC limits:			10-137	10-137	18-119	18-119				

Sur 1: Decachlorobiphenyl (Conf)(S)
 Sur 2: Decachlorobiphenyl (S)
 Sur 3: Tetrachloro-m-xylene (Conf)(S)
 Sur 4: Tetrachloro-m-xylene (S)

* denotes surrogate recovery outside of QC limits.

D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.



Surrogate Recovery

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Batch: 211773

Project: 20156102

Method: TCLP GC Semivolatile Organics

Lab ID	Sample ID	Qu	Sur 1 %Rec	Sur 2 %Rec	Sur 3 %Rec	Sur 4 %Rec	Sur 5 %Rec	Sur 6 %Rec	Sur 7 %Rec	Sur 8 %Rec
201103445	211773 BLANK 1		57	56						
201103446	211773 LCS 1		73	66						
201103434	SP-1		53	53						
201103447	SP-1 MS 1		65	58						
201103448	SP-1 MSD 1		53	50						
QC limits:			10-166	10-166						
Sur 1: 2,4-DCPA (Conf)(S)										
Sur 2: 2,4-DCPA (S)										

* denotes surrogate recovery outside of QC limits.

D denotes surrogate recovery is outside of QC limits due to sample dilution, and is not considered an excursion.



Blank Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Blank ID: 211772 BLANK 1

Project: 20156102

Lab ID: 201103441

Prep Level: TCLP

Batch: 211772

Method: TCLP GC Semivolatile Organics

Prepared: 03-Jul-13

CAS Numb	Analyte	Dilution	Result	Qu	Units: mg/L Reporting Limit	Analysis
58-89-9	gamma-BHC (Lindane)	1	ND		0.000500	03-Jul-13 16:27 SLF
57-74-9	Chlordane	1	ND		0.00500	03-Jul-13 16:27 SLF
72-20-8	Endrin	1	ND		0.00100	03-Jul-13 16:27 SLF
76-44-8	Heptachlor	1	ND		0.000500	03-Jul-13 16:27 SLF
1024-57-3	Heptachlor epoxide	1	ND		0.000500	03-Jul-13 16:27 SLF
72-43-5	Methoxychlor	1	ND		0.00500	03-Jul-13 16:27 SLF
8001-35-2	Toxaphene	1	ND		0.0200	03-Jul-13 16:27 SLF

7 compound(s) reported

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated. Limits are corrected for sample size, dilution and moisture content if applicable. Qu lists qualifiers. Specific qualifiers are defined at the end of the report. Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.



Blank Results

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Blank ID: 211773 BLANK 1

Project: 20156102

Lab ID: 201103445

Prep Level: TCLP

Batch: 211773

Method: TCLP GC Semivolatile Organics

Prepared: 03-Jul-13

CAS Numb	Analyte	Dilution	Result	Qu	Units: <u>mg/L</u> Reporting Limit	Analysis
94-75-7	2,4-D	1	ND		0.0200	05-Jul-13 13:26 SNP1
93-72-1	2,4,5-TP (Silvex)	1	ND		0.0200	05-Jul-13 13:26 SNP1
2 compound(s) reported						

ND denotes the analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.

Protocol Blank 7/8/2013 17:56:13
Limits are corrected for sample size, dilution and moisture content if applicable.
Qu lists qualifiers. Specific qualifiers are defined at the end of the report.
Regulatory limit may denote an actual regulatory limit or a client-requested notification limit.



Definitions/Qualifiers

Pace Analytical Services, Inc.
1000 Riverbend Blvd. Suite F
St. Rose, LA 70087
(504) 469-0333

Project: 20156102

Value	Description
Q10	The spike recovery was above the laboratory QC limits, however, the data are reported without qualification since the target analyte was not detected in the corresponding samples.
J	This estimated value for the analyte is below the adjusted reporting limit but above the instrument reporting limit.
U	The analyte was analyzed for but not detected at the reporting limit or method detection limit indicated.
B	This analyte was detected in the method blank.
E	The sample concentration is above the linear calibrated range of the analysis.
LCS	Laboratory Control Sample.
MS(D)	Matrix Spike (Duplicate).
DUP	Sample Duplicate.
RPD	Relative Percent Difference.

Chains of Custody

Chain of Custody

20156102 PASI-KANS



analytical
www.pacelabs.com

Workorder: 60148006 **Workorder Name:** N of Loewenthal Metals 204997 **Owner Received Date:** 6/29/2013 **Results Requested By:** 7/3/2013

Report To:
 Angie Brown
 Pace Analytical Services, Inc.
 9608 Loiret Blvd.
 Lenexa, KS 66219
 Phone (913)599-5665
 Fax (913)599-1759

Subcontract To:
 Pace Analytical New Orleans
 1000 Riverbend Blvd
 Suite F
 St. Rose, LA 70087
 Phone (504)469-0333

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers	Requested Analysis	LAB USE ONLY
1	SP-1	PS	6/28/2013 15:45	60148006001	Solid	2	TCLP Herbicide EPA 8151	X
2							TCLP Pesticides EPA 8081	X
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	<i>[Signature]</i>	7/13 7:00	<i>[Signature]</i>	7/13 9:00
2	<i>[Signature]</i>	7/13 9:00	<i>[Signature]</i>	7/13 9:00
3				

Cooler Temperature on Receipt: 4.3°C Custody Seal: Y N Received on Ice: Y N Samples Intact: Y N

This is leachate *[Signature]*



Sample Condit



1000 Riverbend Blvd., Suite F
St. Rose, LA 70087

Courier: Pace Courier Hired Courier Fed X UPS DHL USPS Customer Other

Custody Seal on Cooler/Box Present: [see COC]

Custody Seals intact: Yes No

Thermometer Used: Therm Fisher IR 5
 Therm Fisher IR 6
 Therm Fisher IR 7

Type of Ice: Wet Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: [Signature]

Temp must be measured from Temperature blank when present

Comments:

Temperature Blank Present?"	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1	
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2	
Chain of Custody Complete:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3	
Chain of Custody Relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4	
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	5	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6	ROSA
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7	TCP-leachate + Blank
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8	
Filtered vol. Rec. for Diss. tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	9	
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10	
All containers received within manufacture's precautionary and/or expiration dates.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11	
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12	
All containers preservation checked found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13	If No, was preservative added? <input type="checkbox"/> Yes <input type="checkbox"/> No If added record lot no.: HNO3 _____ H2SO4 _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14	
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15	

Client Notification/ Resolution:

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____



**Sample Condition Upon Receipt
ESI Tech Spec Client**

WO# : 60148006

60148006

Client Name: BNSF

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: 8000 5534 3591 Pace Shipping Label Used? Yes No

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Foam None Other

Thermometer Used: T-112 / T-194 Type of Ice: Water Blue None Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 6.0
 Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:
Date and initials of person examining contents: <u>pu 6/29/17</u>

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>3 Day</u>
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>SL</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y N Field Data Required? Y N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [Signature] Date: 6/29/17

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.	
Start: <u>1015</u>	Start:
End: <u>1020</u>	End:
Temp:	Temp:



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 2

Section A
 Required Client Information:
 Company: BNSF RAILWAYS CO_TRC
 Address: 230 W. Monroe St.
 Chicago, IL 60606
 Email To: *Imaginer@trcrevolutions*
 Phone: (312) 578-0870 Fax
 Requested Due Date/TAT: 3-5 days

Section B
 Required Project Information:
 Report To: *Lisa Neagher*
 Copy To:
 Purchase Order No.:
 Project Name: BNSF
 Project Number: 200206

Section C
 Invoice Information:
 Attention:
 Company Name:
 Address:
 Pace Quote Reference:
 Pace Project Manager:
 Pace Profile #:

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location: IL
 STATE: IL

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WASTE WATER WW PRODUCT P SOIL/SOLID SL OIL OL WIPE WP AIR AR OTHER OT TISSUE TS	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	# OF CONTAINERS	Preservatives	Requested Analysis Filtered (Y/N)	Pace Project No./ Lab I.D.
			COMPOSITE START	COMPOSITE END/GRAB						
1	SP-1		DATE: 6/28/13	TIME: 1540	C	SL	9	Unpreserved	Y	PAHs EPA 8270 SIM EPA 8260 VOCs Freshpoint 90458 Paint Filter Total Phenol Reactive Sulfide Reactive Cyanide PCBs TCF Acetate TCF Hex/Plat TCF Organic Residual Chlorine (Y/N)
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										

ACCEPTED BY / AFFILIATION
 DATE: 6/28/13
 TIME: 1700
 SIGNATURE: *Fadi Kabro*

RELINQUISHED BY / AFFILIATION
 DATE: 6/28/13
 TIME: 1545
 SIGNATURE: *Fadi Kabro*

ADDITIONAL COMMENTS
 Fadi Kabro / TRC

SAMPLE CONDITIONS
 Received on Ice (Y/N):
 Custody Sealed Cooler (Y/N):
 Temp in °C: 6.0
 Y N 7

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: FADI KABRO
 SIGNATURE of SAMPLER: *Fadi Kabro*
 DATE Signed (MM/DD/YY): 6-28-2013

Complete List -- Parameters:

pH (ASTM D4982-89 [Method A])

Flashpoint (Method 9045B)

Paint Filter

Total Phenol

Reactive Sulfide

Reactive Cyanide

PCBs

TCLP Metals

TCLP Herbicides/Pesticides or Generator Certification on profile sheet

TCLP Organics

PAHs

Volatiles

Base/Neutrals

BTEX

The breakdown for the PAHs, Volatiles, and Base/Neutrals (along with pre-acceptance limits in parenthesis) are as follows:

PAHs

Acenaphthene (2,800 mg/kg)✓

Acenaphthylene (75 mg/kg)✓

Anthracene (60,000 mg/kg)✓

Benzo(a)anthracene (8 mg/kg)✓

Benzo(a)pyrene (8 mg/kg)✓

Benzo(b)fluoranthene (8 mg/kg)✓

Benzo(g,h,i) perylene (61,000 mg/kg)✓

Benzo(k)fluoranthene (78 mg/kg)✓

Chrysene (78 mg/kg)✓

Dibenzo(a,h)anthracene (8 mg/kg)✓

Fluoranthene (21,000 mg/kg)✓

Fluorene (2,800 mg/kg)✓

Indeno(1,2,3-c,d)pyrene (8 mg/kg)✓

Naphthalene (130 mg/kg)✓

Phenanthrene (700 mg/kg)✓

Pyrene (21,000 mg/kg)✓

Volatile Constituents

Bromoform (4 mg/kg)✓

Carbon Tetrachloride (0.35 mg/kg)✓

Chlorobenzene (1.3 mg/kg)✓

Chloroform (0.54 mg/kg)✓

1,2-Dichloroethane (0.1 mg/kg)✓

1,1-Dichloroethene (110 mg/kg)✓

cis-1,2-Dichloroethene (1.1 mg/kg)✓

trans-1,2-Dichloroethene (3.5 mg/kg)✓

Dichlorobromomethane (0.2 mg/kg) ✓
Dichloromethane (methylene chloride) (0.2 mg/kg) ✓
1,2-Dichloropropane (1.5 mg/kg) ✓
1,3-Dichloropropene (0.02 mg/kg) ✓
Styrene (20 mg/kg) ✓
Tetrachloroethene (0.3 mg/kg) ✓
1,1,1-Trichloroethane (10 mg/kg) ✓
1,1,2-Trichloroethane (0.2 mg/kg) ✓
Trichloroethene (0.3 mg/kg) ✓
Vinyl Chloride (0.05 mg/kg) ✓

Base / Neutral Constituents

N-Nitrosodiphenylamine (1 mg/kg) ✓
N-Nitrosodi-n-propylamine (0.00005 mg/kg) ✓
Bis (2-chloroethyl) ether (0.0003 mg/kg) ✓
Bis (2-ethylhexyl) phthalate (410 mg/kg) ✓
1,2-Dichlorobenzene (85 mg/kg) ✓
1,4-dichlorobenzene (10 mg/kg) ✓
Hexachlorocyclopentadiene (1.1 mg/kg) ✓
1,2,4-Trichlorobenzene (50 mg/kg) ✓

BTEX

Benzene (0.15 mg/kg) ✓
Toluene (30.0 mg/kg) ✓
Ethylbenzene (19.0 mg/kg) ✓
Xylene (190.0 mg/kg) ✓

Notes:

Analysis must be performed within the last 12 months and conducted using SW-846 test methods.

A copy of the lab analysis must be on lab letterhead and signed by lab (e.g., lab manager).

ATTACHMENT 3

*Background Air Sampling Spreadsheets / Charts and Loewenthal
Air Monitoring Plan*



SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/16/2016 11:20	0.024	0.005	41.8555	-87.6498
6/16/2016 11:19	0.024	0.005	41.8555	-87.6498
6/16/2016 11:18	0.032	0.005	41.8555	-87.6498
6/16/2016 11:17	0.024	0.005	41.8555	-87.6498
6/16/2016 11:16	0.024	0.005	41.8555	-87.6498
6/16/2016 11:15	0.024	0.005	41.8555	-87.6498
6/16/2016 11:14	0.023	0.005	41.8555	-87.6498
6/16/2016 11:13	0.023	0.005	41.8554	-87.6498
6/16/2016 11:12	0.023	0.005	41.8554	-87.6499
6/16/2016 11:11	0.022	0.005	41.8554	-87.6498
6/16/2016 11:10	0.023	0.005	41.8555	-87.6498
6/16/2016 11:09	0.023	0.005	41.8555	-87.6498
6/16/2016 11:08	0.022	0.005	41.8555	-87.6498
6/16/2016 11:07	0.024	0.005	41.8555	-87.6498
6/16/2016 11:06	0.023	0.005	41.8555	-87.6498
6/16/2016 11:05	0.022	0.005	41.8554	-87.6498
6/16/2016 11:04	0.022	0.005	41.8554	-87.6498
6/16/2016 11:03	0.022	0.005	41.8554	-87.6498
6/16/2016 11:02	0.023	0.005	41.8554	-87.6498
6/16/2016 11:01	0.023	0.005	41.8554	-87.6498
6/16/2016 11:00	0.022	0.005	41.8554	-87.6498
6/16/2016 10:59	0.022	0.005	41.8554	-87.6498
6/16/2016 10:58	0.021	0.005	41.8554	-87.6498
6/16/2016 10:57	0.022	0.005	41.8554	-87.6498
6/16/2016 10:56	0.023	0.004	41.8554	-87.6498
6/16/2016 10:55	0.023	0.004	41.8554	-87.6498
6/16/2016 10:54	0.023	0.004	41.8554	-87.6498
6/16/2016 10:53	0.025	0.004	41.8554	-87.6498
6/16/2016 10:52	0.025	0.004	41.8554	-87.6498
6/16/2016 10:51	0.023	0.004	41.8554	-87.6498
6/16/2016 10:50	0.025	0.004	41.8554	-87.6498
6/16/2016 10:49	0.024	0.004	41.8554	-87.6498
6/16/2016 10:48	0.025	0.004	41.8554	-87.6498
6/16/2016 10:47	0.026	0.004	41.8554	-87.6499
6/16/2016 10:46	0.025	0.004	41.8554	-87.6498
6/16/2016 10:45	0.025	0.004	41.8554	-87.6499
6/16/2016 10:44	0.024	0.004	41.8553	-87.65
6/16/2016 10:43	0.023	0.004	41.8553	-87.65
6/16/2016 10:42	0.023	0.004	41.8554	-87.6499
6/16/2016 10:41	0.021	0.003	41.8554	-87.6499
6/16/2016 10:40	0.021	0.003	41.8554	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/16/2016 10:39	0.02	0.003	41.8554	-87.6499
6/16/2016 10:38	0.02	0.003	41.8554	-87.6498
6/16/2016 10:37	0.02	0.003	41.8554	-87.6498
6/16/2016 10:36	0.02	0.003	41.8554	-87.6498
6/16/2016 10:35	0.02	0.003	41.8554	-87.6498
6/16/2016 10:34	0.019	0.003	41.8553	-87.6498
6/16/2016 10:33	0.02	0.003	41.8553	-87.6498
6/16/2016 10:32	0.021	0.003	41.8553	-87.6498
6/16/2016 10:31	0.02	0.003	41.8554	-87.6498
6/16/2016 10:30	0.021	0.003	41.8554	-87.6498
6/16/2016 10:29	0.02	0.003	41.8554	-87.6498
6/16/2016 10:28	0.021	0.003	41.8554	-87.6498
6/16/2016 10:27	0.021	0.003	41.8554	-87.6498
6/16/2016 10:26	0.021	0.003	41.8554	-87.6498
6/16/2016 10:25	0.023	0.003	41.8554	-87.6498
6/16/2016 10:24	0.022	0.003	41.8554	-87.6498
6/16/2016 10:23	0.021	0.003	41.8554	-87.6499
6/16/2016 10:22	0.021	0.003	41.8554	-87.6498
6/16/2016 10:21	0.021	0.003	41.8554	-87.6498
6/16/2016 10:20	0.022	0.003	41.8554	-87.6498
6/16/2016 10:19	0.021	0.003	41.8554	-87.6498
6/16/2016 10:18	0.02	0.003	41.8554	-87.6498
6/16/2016 10:17	0.02	0.003	41.8554	-87.6498
6/16/2016 10:16	0.021	0.003	41.8554	-87.6498
6/16/2016 10:15	0.02	0.003	41.8554	-87.6498
6/16/2016 10:14	0.021	0.003	41.8554	-87.6498
6/16/2016 10:13	0.02	0.003	41.8554	-87.6498
6/16/2016 10:12	0.02	0.003	41.8554	-87.6498
6/16/2016 10:11	0.021	0.002	41.8554	-87.6497
6/16/2016 10:10	0.02	0.002	41.8554	-87.6497
6/16/2016 10:09	0.02	0.002	41.8554	-87.6497
6/16/2016 10:08	0.02	0.002	41.8554	-87.6497
6/16/2016 10:07	0.019	0.002	41.8554	-87.6497
6/16/2016 10:06	0.019	0.002	41.8554	-87.6497
6/16/2016 10:05	0.019	0.002	41.8554	-87.6497
6/16/2016 10:04	0.019	0.002	41.8554	-87.6497
6/16/2016 10:03	0.019	0.002	41.8554	-87.6498
6/16/2016 10:02	0.019	0.002	41.8554	-87.6498
6/16/2016 10:01	0.019	0.002	41.8554	-87.6498
6/16/2016 10:00	0.018	0.002	41.8554	-87.6498
6/16/2016 9:59	0.02	0.002	41.8554	-87.6497

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/16/2016 9:58	0.019	0.002	41.8554	-87.6497
6/16/2016 9:57	0.019	0.002	41.8554	-87.6497
6/16/2016 9:56	0.019	0.001	41.8554	-87.6497
6/16/2016 9:55	0.018	0.001	41.8554	-87.6497
6/16/2016 9:54	0.019	0.001	41.8554	-87.6497
6/16/2016 9:53	0.019	0.001	41.8554	-87.6497
6/16/2016 9:52	0.018	0.001	41.8554	-87.6497
6/16/2016 9:51	0.019	0.001	41.8554	-87.6497
6/16/2016 9:50	0.019	0.001	41.8554	-87.6497
6/16/2016 9:49	0.018	0.001	41.8554	-87.6497
6/16/2016 9:48	0.019	0.001	41.8554	-87.6498
6/16/2016 9:47	0.018	0.001	41.8554	-87.6497
6/16/2016 9:46	0.019	0.001	41.8554	-87.6497
6/16/2016 9:45	0.018	0.001	41.8554	-87.6497
6/16/2016 9:44	0.017	0.001	41.8554	-87.6497
6/16/2016 9:43	0.018	0.001	41.8554	-87.6498
6/16/2016 9:42	0.016	0.001	41.8554	-87.6498
6/16/2016 9:41	0.015	0.001	41.8554	-87.6498
6/16/2016 9:40	0.012	0.001	41.8554	-87.6498
6/16/2016 9:39	0.012	0.001	41.8553	-87.6498
6/16/2016 9:38	0.011	0.001	41.8553	-87.6498
6/16/2016 9:37	0.012	0.001	41.8554	-87.6498
6/16/2016 9:36	0.012	0.001	41.8554	-87.6498
6/16/2016 9:35	0.012	0.001	41.8554	-87.6498
6/16/2016 9:34	0.013	0.001	41.8554	-87.6498
6/16/2016 9:33	0.012	0.001	41.8553	-87.6498
6/16/2016 9:32	0.013	0.001	41.8553	-87.6498
6/16/2016 9:31	0.011	0.001	41.8553	-87.6498
6/16/2016 9:30	0.012	0.001	41.8553	-87.6498
6/16/2016 9:29	0.012	0.001	41.8553	-87.6498
6/16/2016 9:28	0.012	0.001	41.8553	-87.6498
6/16/2016 9:27	0.012	0.001	41.8553	-87.6499
6/16/2016 9:26	0.012	0.001	41.8553	-87.6499
6/16/2016 9:25	0.012	0.001	41.8553	-87.6498
6/16/2016 9:24	0.011	0.001	41.8553	-87.6498
6/16/2016 9:23	0.012	0.001	41.8553	-87.6498
6/16/2016 9:22	0.012	0.001	41.8553	-87.6499
6/16/2016 9:21	0.012	0.001	41.8553	-87.6499
6/16/2016 9:20	0.012	0.001	41.8553	-87.65
6/16/2016 9:19	0.012	0.001	41.8553	-87.6498
6/16/2016 9:18	0.012	0.001	41.8553	-87.6498

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/16/2016 9:17	0.012	0.001	41.8553	-87.6498
6/16/2016 9:16	0.012	0.001	41.8554	-87.6498
6/16/2016 9:15	0.012	0.001	41.8553	-87.6498
6/16/2016 9:14	0.012	0.001	41.8553	-87.6499
6/16/2016 9:13	0.012	0.001	41.8553	-87.6498
6/16/2016 9:12	0.011	0.001	41.8553	-87.6498
6/16/2016 9:11	0.012	0	41.8554	-87.6498
6/16/2016 9:10	0.012	0	41.8554	-87.6498
6/16/2016 9:09	0.012	0	41.8554	-87.6498
6/16/2016 9:08	0.012	0	41.8554	-87.6498
6/16/2016 9:07	0.012	0	41.8554	-87.6498
6/16/2016 9:06	0.011	0	41.8554	-87.6498
6/16/2016 9:05	0.012	0	41.8554	-87.6498
6/16/2016 9:04	0.011	0	41.8554	-87.6498
6/16/2016 9:03	0.011	0	41.8554	-87.6498
6/16/2016 9:02	0.011	0	41.8554	-87.6498
6/16/2016 9:01	0.011	0	41.8553	-87.6499
6/16/2016 9:00	0.011	0	41.8553	-87.6499
6/16/2016 8:59	0.011	0	41.8553	-87.65
6/16/2016 8:58	0.011	0	41.8554	-87.6499
6/16/2016 8:57	0.012	0	41.8553	-87.6499
6/16/2016 8:56	0.013	0	41.8554	-87.6498
6/16/2016 8:55	0.011	0	41.8554	-87.6498
6/16/2016 8:54	0.015	0	41.8554	-87.6498
6/16/2016 8:53	0.014	0	41.8554	-87.65
6/16/2016 8:52	0.012	0	41.8554	-87.6499
6/16/2016 8:51	0.011	0	41.8554	-87.6499
6/16/2016 8:50	0.012	0	41.8554	-87.6499
6/16/2016 8:49	0.011	0	41.8554	-87.6499
6/16/2016 8:48	0.011	0	41.8554	-87.6499
6/16/2016 8:47	0.011	0	41.8554	-87.6499
6/16/2016 8:46	0.015	0	41.8554	-87.6499
6/16/2016 8:45	0.013	0	41.8554	-87.6499
6/16/2016 8:44	0.011	0	41.8554	-87.6499
6/16/2016 8:43	0.01	0	41.8554	-87.6499
6/16/2016 8:42	0.107	0	41.8555	-87.6499
Minimum	0.00	0.00	NA	NA
Average	0.0178	0.0021	NA	NA
Maximum	0.107	0.005	NA	NA
95% UCL	0.0194	NA	NA	NA
6/15/2016 16:01	0.022	0.018	41.8578	-87.65

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/15/2016 16:00	0.021	0.018	41.8578	-87.65
6/15/2016 15:59	0.022	0.018	41.8578	-87.65
6/15/2016 15:58	0.02	0.018	41.8578	-87.6499
6/15/2016 15:57	0.022	0.018	41.8578	-87.6499
6/15/2016 15:56	0.025	0.018	41.8578	-87.6499
6/15/2016 15:55	0.024	0.018	41.8578	-87.6499
6/15/2016 15:54	0.027	0.018	41.8578	-87.6499
6/15/2016 15:53	0.025	0.018	41.8578	-87.6499
6/15/2016 15:52	0.027	0.018	41.8578	-87.6499
6/15/2016 15:51	0.03	0.018	41.8578	-87.6499
6/15/2016 15:50	0.022	0.018	41.8577	-87.6499
6/15/2016 15:49	0.031	0.017	41.8577	-87.6499
6/15/2016 15:48	0.022	0.017	41.8577	-87.6499
6/15/2016 15:47	0.022	0.017	41.8577	-87.6499
6/15/2016 15:46	0.023	0.017	41.8577	-87.6499
6/15/2016 15:45	0.024	0.017	41.8577	-87.6499
6/15/2016 15:44	0.023	0.017	41.8577	-87.6499
6/15/2016 15:43	0.023	0.017	41.8578	-87.6499
6/15/2016 15:42	0.025	0.017	41.8578	-87.6499
6/15/2016 15:41	0.025	0.017	41.8578	-87.6499
6/15/2016 15:40	0.025	0.017	41.8578	-87.6499
6/15/2016 15:39	0.026	0.017	41.8578	-87.6499
6/15/2016 15:38	0.028	0.017	41.8578	-87.6499
6/15/2016 15:37	0.027	0.017	41.8578	-87.6499
6/15/2016 15:35	0.027	0.017	41.8578	-87.6498
6/15/2016 15:34	0.026	0.016	41.8578	-87.6498
6/15/2016 15:33	0.031	0.016	41.8578	-87.6498
6/15/2016 15:32	0.031	0.016	41.8578	-87.6498
6/15/2016 15:31	0.032	0.016	41.8578	-87.6498
6/15/2016 15:30	0.029	0.016	41.8578	-87.6498
6/15/2016 15:29	0.029	0.016	41.8578	-87.6498
6/15/2016 15:28	0.037	0.016	41.8578	-87.6498
6/15/2016 15:27	0.041	0.016	41.8578	-87.6498
6/15/2016 15:26	0.034	0.016	41.8578	-87.6498
6/15/2016 15:25	0.023	0.016	41.8578	-87.6498
6/15/2016 15:24	0.025	0.016	41.8578	-87.6498
6/15/2016 15:23	0.025	0.016	41.8578	-87.6498
6/15/2016 15:22	0.027	0.016	41.8578	-87.6498
6/15/2016 15:21	0.028	0.016	41.8578	-87.6499
6/15/2016 15:20	0.027	0.016	41.8578	-87.6499
6/15/2016 15:19	0.025	0.015	41.8578	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/15/2016 15:18	0.024	0.015	41.8578	-87.6499
6/15/2016 15:17	0.026	0.015	41.8578	-87.6499
6/15/2016 15:16	0.029	0.015	41.8578	-87.6499
6/15/2016 15:15	0.036	0.015	41.8578	-87.6499
6/15/2016 15:14	0.033	0.015	41.8578	-87.6499
6/15/2016 15:13	0.031	0.015	41.8578	-87.6499
6/15/2016 15:12	0.034	0.015	41.8578	-87.6498
6/15/2016 15:11	0.034	0.015	41.8578	-87.6499
6/15/2016 15:10	0.035	0.015	41.8578	-87.6498
6/15/2016 15:09	0.029	0.015	41.8578	-87.6498
6/15/2016 15:08	0.03	0.015	41.8578	-87.6499
6/15/2016 15:07	0.026	0.015	41.8578	-87.6498
6/15/2016 15:06	0.024	0.015	41.8578	-87.6498
6/15/2016 15:05	0.017	0.015	41.8578	-87.6498
6/15/2016 15:04	0.017	0.015	41.8578	-87.6498
6/15/2016 15:03	0.018	0.015	41.8578	-87.6498
6/15/2016 15:02	0.018	0.015	41.8578	-87.6498
6/15/2016 15:01	0.017	0.015	41.8578	-87.6498
6/15/2016 15:00	0.021	0.015	41.8578	-87.6499
6/15/2016 14:59	0.016	0.015	41.8578	-87.6499
6/15/2016 14:58	0.017	0.015	41.8577	-87.65
6/15/2016 14:57	0.016	0.015	41.8578	-87.65
6/15/2016 14:56	0.017	0.015	41.8578	-87.6498
6/15/2016 14:55	0.017	0.015	41.8579	-87.6498
6/15/2016 14:54	0.018	0.015	41.8578	-87.6498
6/15/2016 14:53	0.017	0.015	41.8578	-87.6499
6/15/2016 14:52	0.017	0.015	41.8578	-87.6498
6/15/2016 14:51	0.017	0.015	41.8578	-87.6498
6/15/2016 14:50	0.016	0.015	41.8578	-87.6498
6/15/2016 14:49	0.017	0.014	41.8578	-87.6498
6/15/2016 14:48	0.018	0.014	41.8579	-87.6498
6/15/2016 14:47	0.017	0.014	41.8579	-87.6498
6/15/2016 14:46	0.018	0.014	41.8579	-87.6498
6/15/2016 14:45	0.018	0.014	41.8578	-87.6498
6/15/2016 14:44	0.016	0.014	41.8578	-87.6499
6/15/2016 14:43	0.017	0.014	41.8578	-87.6499
6/15/2016 14:42	0.016	0.014	41.8578	-87.6499
6/15/2016 14:41	0.016	0.014	41.8579	-87.6499
6/15/2016 14:40	0.017	0.014	41.8578	-87.6499
6/15/2016 14:39	0.016	0.014	41.8578	-87.6499
6/15/2016 14:38	0.017	0.014	41.8578	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/15/2016 14:37	0.017	0.014	41.8578	-87.65
6/15/2016 14:36	0.016	0.014	41.8578	-87.65
6/15/2016 14:35	0.015	0.014	41.8578	-87.6499
6/15/2016 14:34	0.015	0.014	41.8578	-87.6498
6/15/2016 14:33	0.016	0.014	41.8578	-87.6498
6/15/2016 14:32	0.016	0.014	41.8579	-87.6499
6/15/2016 14:31	0.016	0.014	41.8579	-87.6499
6/15/2016 14:30	0.017	0.014	41.8578	-87.6499
6/15/2016 14:29	0.017	0.014	41.8578	-87.6499
6/15/2016 14:28	0.016	0.014	41.8578	-87.65
6/15/2016 14:27	0.018	0.014	41.8578	-87.6499
6/15/2016 14:26	0.016	0.014	41.8578	-87.6499
6/15/2016 14:25	0.018	0.014	41.8578	-87.6499
6/15/2016 14:24	0.018	0.014	41.8578	-87.6499
6/15/2016 14:23	0.016	0.014	41.8578	-87.6499
6/15/2016 14:22	0.017	0.014	41.8578	-87.6499
6/15/2016 14:21	0.017	0.014	41.8578	-87.6499
6/15/2016 14:20	0.018	0.014	41.8578	-87.6499
6/15/2016 14:19	0.019	0.013	41.8579	-87.6499
6/15/2016 14:18	0.019	0.013	41.8579	-87.6499
6/15/2016 14:17	0.019	0.013	41.8578	-87.6499
6/15/2016 14:16	0.018	0.013	41.8578	-87.6499
6/15/2016 14:15	0.021	0.013	41.8578	-87.6499
6/15/2016 14:14	0.018	0.013	41.8578	-87.6499
6/15/2016 14:13	0.018	0.013	41.8578	-87.65
6/15/2016 14:12	0.017	0.013	41.8578	-87.6499
6/15/2016 14:11	0.016	0.013	41.8578	-87.6499
6/15/2016 14:10	0.016	0.013	41.8578	-87.65
6/15/2016 14:09	0.017	0.013	41.8578	-87.65
6/15/2016 14:08	0.017	0.013	41.8578	-87.65
6/15/2016 14:07	0.018	0.013	41.8579	-87.6498
6/15/2016 14:06	0.02	0.013	41.8579	-87.6499
6/15/2016 14:05	0.018	0.013	41.8579	-87.6499
6/15/2016 14:04	0.018	0.012	41.8578	-87.65
6/15/2016 14:03	0.018	0.012	41.8578	-87.65
6/15/2016 14:02	0.017	0.012	41.8578	-87.6499
6/15/2016 14:01	0.018	0.012	41.8579	-87.6499
6/15/2016 14:00	0.018	0.012	41.8578	-87.6499
6/15/2016 13:59	0.017	0.012	41.8578	-87.6499
6/15/2016 13:58	0.017	0.012	41.8578	-87.6499
6/15/2016 13:57	0.016	0.012	41.8578	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/15/2016 13:56	0.016	0.012	41.8578	-87.6498
6/15/2016 13:55	0.017	0.012	41.8578	-87.6498
6/15/2016 13:54	0.018	0.012	41.8578	-87.6498
6/15/2016 13:53	0.018	0.012	41.8578	-87.6498
6/15/2016 13:52	0.017	0.012	41.8578	-87.6499
6/15/2016 13:51	0.017	0.012	41.8578	-87.6499
6/15/2016 13:50	0.017	0.012	41.8579	-87.6499
6/15/2016 13:49	0.019	0.012	41.8578	-87.65
6/15/2016 13:48	0.019	0.012	41.8578	-87.65
6/15/2016 13:47	0.018	0.012	41.8578	-87.6499
6/15/2016 13:46	0.019	0.012	41.8578	-87.6499
6/15/2016 13:45	0.02	0.012	41.8578	-87.65
6/15/2016 13:44	0.018	0.012	41.8578	-87.65
6/15/2016 13:43	0.018	0.012	41.8577	-87.65
6/15/2016 13:42	0.018	0.012	41.8577	-87.65
6/15/2016 13:41	0.017	0.012	41.8577	-87.65
6/15/2016 13:40	0.018	0.012	41.8577	-87.65
6/15/2016 13:39	0.018	0.012	41.8577	-87.65
6/15/2016 13:38	0.018	0.012	41.8577	-87.65
6/15/2016 13:36	0.018	0.012	41.8578	-87.65
6/15/2016 13:35	0.019	0.012	41.8578	-87.65
6/15/2016 13:34	0.019	0.011	41.8578	-87.6499
6/15/2016 13:33	0.018	0.011	41.8578	-87.6499
6/15/2016 13:32	0.021	0.011	41.8578	-87.6499
6/15/2016 13:31	0.019	0.011	41.8578	-87.6499
6/15/2016 13:30	0.018	0.011	41.8578	-87.6499
6/15/2016 13:29	0.018	0.011	41.8578	-87.6499
6/15/2016 13:28	0.018	0.011	41.8578	-87.6499
6/15/2016 13:27	0.019	0.011	41.8578	-87.6499
6/15/2016 13:26	0.018	0.011	41.8578	-87.6499
6/15/2016 13:25	0.019	0.011	41.8578	-87.6499
6/15/2016 13:24	0.019	0.011	41.8577	-87.6499
6/15/2016 13:23	0.019	0.011	41.8578	-87.6499
6/15/2016 13:22	0.019	0.011	41.8578	-87.6499
6/15/2016 13:21	0.018	0.011	41.8578	-87.6499
6/15/2016 13:20	0.019	0.011	41.8578	-87.65
6/15/2016 13:19	0.02	0.011	41.8578	-87.65
6/15/2016 13:18	0.018	0.011	41.8578	-87.6499
6/15/2016 13:17	0.018	0.011	41.8578	-87.6498
6/15/2016 13:16	0.02	0.011	41.8578	-87.6498
6/15/2016 13:15	0.019	0.011	41.8578	-87.6498

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/15/2016 13:14	0.018	0.011	41.8578	-87.6499
6/15/2016 13:13	0.019	0.011	41.8578	-87.6499
6/15/2016 13:12	0.019	0.011	41.8578	-87.6499
6/15/2016 13:11	0.019	0.011	41.8578	-87.6499
6/15/2016 13:10	0.019	0.011	41.8578	-87.6499
6/15/2016 13:09	0.019	0.011	41.8578	-87.6499
6/15/2016 13:08	0.019	0.011	41.8578	-87.6499
6/15/2016 13:07	0.019	0.011	41.8577	-87.65
6/15/2016 13:06	0.021	0.011	41.8577	-87.6499
6/15/2016 13:05	0.02	0.011	41.8578	-87.65
6/15/2016 13:04	0.02	0.01	41.8578	-87.65
6/15/2016 13:03	0.019	0.01	41.8578	-87.6499
6/15/2016 13:02	0.02	0.01	41.8578	-87.6499
6/15/2016 13:01	0.021	0.01	41.8578	-87.6499
6/15/2016 13:00	0.022	0.01	41.8578	-87.6499
6/15/2016 12:59	0.021	0.01	41.8578	-87.6499
6/15/2016 12:58	0.02	0.01	41.8578	-87.6499
6/15/2016 12:57	0.023	0.01	41.8578	-87.6499
6/15/2016 12:56	0.019	0.01	41.8578	-87.6499
6/15/2016 12:55	0.021	0.01	41.8578	-87.65
6/15/2016 12:54	0.021	0.01	41.8578	-87.65
6/15/2016 12:53	0.019	0.01	41.8578	-87.65
6/15/2016 12:52	0.018	0.01	41.8578	-87.6499
6/15/2016 12:51	0.018	0.01	41.8578	-87.65
6/15/2016 12:50	0.019	0.01	41.8578	-87.65
6/15/2016 12:49	0.019	0.009	41.8578	-87.6499
6/15/2016 12:48	0.019	0.009	41.8578	-87.6499
6/15/2016 12:47	0.018	0.009	41.8578	-87.6499
6/15/2016 12:46	0.021	0.009	41.8578	-87.6499
6/15/2016 12:45	0.02	0.009	41.8578	-87.6499
6/15/2016 12:44	0.02	0.009	41.8578	-87.6499
6/15/2016 12:43	0.02	0.009	41.8578	-87.65
6/15/2016 12:42	0.019	0.009	41.8578	-87.6499
6/15/2016 12:41	0.019	0.009	41.8578	-87.6499
6/15/2016 12:40	0.024	0.009	41.8578	-87.6498
6/15/2016 12:39	0.023	0.009	41.8579	-87.6498
6/15/2016 12:38	0.019	0.009	41.8579	-87.6498
6/15/2016 12:37	0.018	0.009	41.8579	-87.65
6/15/2016 12:36	0.019	0.009	41.8578	-87.65
6/15/2016 12:35	0.019	0.009	41.8578	-87.6499
6/15/2016 12:34	0.02	0.009	41.8578	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/15/2016 12:33	0.022	0.009	41.8578	-87.6499
6/15/2016 12:32	0.024	0.009	41.8578	-87.6499
6/15/2016 12:31	0.023	0.009	41.8578	-87.6499
6/15/2016 12:30	0.019	0.009	41.8578	-87.6499
6/15/2016 12:29	0.019	0.009	41.8578	-87.6498
6/15/2016 12:28	0.018	0.009	41.8578	-87.6499
6/15/2016 12:27	0.019	0.009	41.8578	-87.6499
6/15/2016 12:26	0.019	0.009	41.8578	-87.6499
6/15/2016 12:25	0.018	0.009	41.8578	-87.6499
6/15/2016 12:24	0.019	0.009	41.8578	-87.65
6/15/2016 12:23	0.018	0.009	41.8578	-87.6499
6/15/2016 12:22	0.021	0.009	41.8578	-87.6499
6/15/2016 12:21	0.02	0.009	41.8578	-87.6499
6/15/2016 12:19	0.022	0.008	41.8578	-87.6498
6/15/2016 12:18	0.021	0.008	41.8578	-87.6499
6/15/2016 12:17	0.022	0.008	41.8578	-87.6499
6/15/2016 12:16	0.019	0.008	41.8578	-87.6498
6/15/2016 12:15	0.018	0.008	41.8578	-87.6498
6/15/2016 12:14	0.018	0.008	41.8578	-87.6498
6/15/2016 12:13	0.018	0.008	41.8578	-87.6498
6/15/2016 12:12	0.018	0.008	41.8577	-87.6499
6/15/2016 12:11	0.017	0.008	41.8577	-87.6499
6/15/2016 12:10	0.018	0.008	41.8577	-87.6499
6/15/2016 12:09	0.017	0.008	41.8577	-87.6499
6/15/2016 12:08	0.017	0.008	41.8577	-87.65
6/15/2016 12:07	0.017	0.008	41.8577	-87.65
6/15/2016 12:06	0.017	0.008	41.8577	-87.6499
6/15/2016 12:05	0.017	0.008	41.8578	-87.6498
6/15/2016 12:04	0.017	0.008	41.8578	-87.6499
6/15/2016 12:03	0.018	0.008	41.8578	-87.6499
6/15/2016 12:02	0.017	0.008	41.8577	-87.6499
6/15/2016 12:01	0.018	0.008	41.8577	-87.6499
6/15/2016 12:00	0.018	0.008	41.8578	-87.6498
6/15/2016 11:59	0.018	0.008	41.8578	-87.6499
6/15/2016 11:58	0.018	0.008	41.8578	-87.6499
6/15/2016 11:57	0.017	0.008	41.8577	-87.6499
6/15/2016 11:56	0.018	0.008	41.8577	-87.6499
6/15/2016 11:55	0.017	0.008	41.8577	-87.6499
6/15/2016 11:54	0.02	0.008	41.8577	-87.6499
6/15/2016 11:53	0.02	0.008	41.8577	-87.6499
6/15/2016 11:52	0.018	0.008	41.8577	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/15/2016 11:51	0.018	0.008	41.8578	-87.6499
6/15/2016 11:50	0.019	0.008	41.8578	-87.6499
6/15/2016 11:49	0.019	0.007	41.8578	-87.6499
6/15/2016 11:48	0.02	0.007	41.8578	-87.6499
6/15/2016 11:47	0.022	0.007	41.8578	-87.6498
6/15/2016 11:46	0.017	0.007	41.8578	-87.6498
6/15/2016 11:45	0.017	0.007	41.8578	-87.6499
6/15/2016 11:44	0.017	0.007	41.8578	-87.6499
6/15/2016 11:43	0.017	0.007	41.8578	-87.6499
6/15/2016 11:42	0.017	0.007	41.8578	-87.6498
6/15/2016 11:41	0.017	0.007	41.8578	-87.6498
6/15/2016 11:40	0.016	0.007	41.8579	-87.6498
6/15/2016 11:39	0.017	0.007	41.8579	-87.6498
6/15/2016 11:38	0.016	0.007	41.8579	-87.6498
6/15/2016 11:37	0.016	0.007	41.8579	-87.6498
6/15/2016 11:36	0.016	0.007	41.8579	-87.6498
6/15/2016 11:35	0.015	0.007	41.8578	-87.6498
6/15/2016 11:34	0.015	0.007	41.8578	-87.6498
6/15/2016 11:33	0.016	0.007	41.8578	-87.6498
6/15/2016 11:32	0.018	0.007	41.8578	-87.6498
6/15/2016 11:31	0.017	0.007	41.8578	-87.6498
6/15/2016 11:30	0.018	0.007	41.8579	-87.6498
6/15/2016 11:29	0.018	0.007	41.8579	-87.6498
6/15/2016 11:28	0.017	0.007	41.8578	-87.6498
6/15/2016 11:27	0.016	0.007	41.8578	-87.6498
6/15/2016 11:26	0.016	0.007	41.8578	-87.6498
6/15/2016 11:25	0.019	0.007	41.8578	-87.6498
6/15/2016 11:24	0.017	0.007	41.8579	-87.6498
6/15/2016 11:23	0.018	0.007	41.8579	-87.6499
6/15/2016 11:22	0.019	0.007	41.8579	-87.6499
6/15/2016 11:21	0.017	0.007	41.8579	-87.6499
6/15/2016 11:20	0.018	0.007	41.8579	-87.6499
6/15/2016 11:19	0.018	0.006	41.8579	-87.6499
6/15/2016 11:18	0.019	0.006	41.8579	-87.6499
6/15/2016 11:17	0.018	0.006	41.8579	-87.6499
6/15/2016 11:16	0.018	0.006	41.8579	-87.6498
6/15/2016 11:15	0.019	0.006	41.8578	-87.6498
6/15/2016 11:14	0.019	0.006	41.8578	-87.6499
6/15/2016 11:13	0.018	0.006	41.8578	-87.6499
6/15/2016 11:12	0.017	0.006	41.8578	-87.6499
6/15/2016 11:11	0.018	0.006	41.8578	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/15/2016 11:10	0.017	0.006	41.8578	-87.6499
6/15/2016 11:09	0.017	0.006	41.8578	-87.6499
6/15/2016 11:08	0.016	0.006	41.8578	-87.6499
6/15/2016 11:07	0.016	0.006	41.8578	-87.6499
6/15/2016 11:06	0.015	0.006	41.8578	-87.6499
6/15/2016 11:05	0.016	0.006	41.8578	-87.6499
6/15/2016 11:04	0.014	0.006	41.8578	-87.6499
6/15/2016 11:03	0.015	0.006	41.8578	-87.6499
6/15/2016 11:02	0.016	0.006	41.8578	-87.6499
6/15/2016 11:01	0.016	0.006	41.8578	-87.6499
6/15/2016 11:00	0.017	0.006	41.8578	-87.6499
6/15/2016 10:59	0.017	0.006	41.8578	-87.6498
6/15/2016 10:58	0.016	0.006	41.8578	-87.6498
6/15/2016 10:57	0.016	0.006	41.8578	-87.6498
6/15/2016 10:56	0.016	0.006	41.8578	-87.6499
6/15/2016 10:55	0.015	0.006	41.8578	-87.6499
6/15/2016 10:54	0.017	0.006	41.8578	-87.6499
6/15/2016 10:53	0.016	0.006	41.8578	-87.6499
6/15/2016 10:52	0.019	0.006	41.8578	-87.6499
6/15/2016 10:51	0.019	0.006	41.8578	-87.6499
6/15/2016 10:50	0.018	0.006	41.8578	-87.6499
6/15/2016 10:49	0.019	0.005	41.8578	-87.6499
6/15/2016 10:48	0.018	0.005	41.8578	-87.6499
6/15/2016 10:47	0.016	0.005	41.8578	-87.6499
6/15/2016 10:46	0.016	0.005	41.8577	-87.6499
6/15/2016 10:45	0.018	0.005	41.8577	-87.6499
6/15/2016 10:44	0.018	0.005	41.8577	-87.6499
6/15/2016 10:43	0.019	0.005	41.8577	-87.6499
6/15/2016 10:42	0.018	0.005	41.8577	-87.65
6/15/2016 10:41	0.018	0.005	41.8577	-87.65
6/15/2016 10:40	0.019	0.005	41.8577	-87.65
6/15/2016 10:39	0.018	0.005	41.8577	-87.65
6/15/2016 10:38	0.019	0.005	41.8577	-87.65
6/15/2016 10:37	0.019	0.005	41.8578	-87.6499
6/15/2016 10:36	0.019	0.005	41.8578	-87.6499
6/15/2016 10:35	0.019	0.005	41.8578	-87.6499
6/15/2016 10:34	0.019	0.005	41.8578	-87.6499
6/15/2016 10:33	0.02	0.005	41.8577	-87.6499
6/15/2016 10:32	0.019	0.005	41.8577	-87.65
6/15/2016 10:31	0.017	0.005	41.8577	-87.65
6/15/2016 10:30	0.017	0.005	41.8577	-87.65

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/15/2016 10:29	0.017	0.005	41.8577	-87.65
6/15/2016 10:28	0.016	0.005	41.8578	-87.6499
6/15/2016 10:27	0.019	0.005	41.8578	-87.6499
6/15/2016 10:26	0.017	0.005	41.8578	-87.6499
6/15/2016 10:25	0.015	0.005	41.8578	-87.6499
6/15/2016 10:24	0.015	0.005	41.8578	-87.6499
6/15/2016 10:23	0.014	0.005	41.8578	-87.6498
6/15/2016 10:22	0.016	0.005	41.8578	-87.6498
6/15/2016 10:21	0.015	0.005	41.8578	-87.6498
6/15/2016 10:18	0.019	0.004	41.8578	-87.6498
6/15/2016 10:17	0.018	0.004	41.8578	-87.6498
6/15/2016 10:16	0.018	0.004	41.8578	-87.6498
6/15/2016 10:15	0.017	0.004	41.8578	-87.6498
6/15/2016 10:14	0.018	0.004	41.8578	-87.6498
6/15/2016 10:13	0.017	0.004	41.8578	-87.6498
6/15/2016 10:12	0.018	0.004	41.8578	-87.6498
6/15/2016 10:11	0.019	0.004	41.8578	-87.6498
6/15/2016 10:10	0.018	0.004	41.8578	-87.6498
6/15/2016 10:09	0.017	0.004	41.8578	-87.6498
6/15/2016 10:08	0.018	0.004	41.8578	-87.6498
6/15/2016 10:07	0.018	0.004	41.8578	-87.6498
6/15/2016 10:06	0.018	0.004	41.8578	-87.6498
6/15/2016 10:05	0.02	0.004	41.8578	-87.6498
6/15/2016 10:04	0.026	0.003	41.8578	-87.6498
6/15/2016 10:03	0.023	0.003	41.8578	-87.6498
6/15/2016 10:02	0.024	0.003	41.8578	-87.6498
6/15/2016 10:01	0.024	0.003	41.8578	-87.6498
6/15/2016 10:00	0.024	0.003	41.8578	-87.6498
6/15/2016 9:59	0.022	0.003	41.8578	-87.6498
6/15/2016 9:58	0.023	0.003	41.8578	-87.6498
6/15/2016 9:57	0.022	0.003	41.8578	-87.6498
6/15/2016 9:56	0.021	0.003	41.8578	-87.6498
6/15/2016 9:55	0.021	0.003	41.8578	-87.6498
6/15/2016 9:54	0.022	0.003	41.8578	-87.6498
6/15/2016 9:53	0.022	0.003	41.8578	-87.6498
6/15/2016 9:52	0.021	0.003	41.8578	-87.6498
6/15/2016 9:51	0.021	0.003	41.8578	-87.6498
6/15/2016 9:50	0.022	0.003	41.8578	-87.6498
6/15/2016 9:49	0.027	0.003	41.8578	-87.6498
6/15/2016 9:48	0.022	0.003	41.8578	-87.6499
6/15/2016 9:47	0.022	0.003	41.8578	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/15/2016 9:46	0.021	0.003	41.8578	-87.6499
6/15/2016 9:45	0.021	0.003	41.8578	-87.6499
6/15/2016 9:44	0.021	0.003	41.8578	-87.6499
6/15/2016 9:43	0.022	0.003	41.8578	-87.65
6/15/2016 9:42	0.021	0.003	41.8578	-87.65
6/15/2016 9:41	0.02	0.003	41.8578	-87.65
6/15/2016 9:40	0.021	0.003	41.8578	-87.65
6/15/2016 9:39	0.022	0.003	41.8578	-87.6499
6/15/2016 9:38	0.02	0.003	41.8578	-87.6498
6/15/2016 9:37	0.02	0.003	41.8578	-87.6498
6/15/2016 9:36	0.021	0.003	41.8578	-87.6498
6/15/2016 9:35	0.022	0.003	41.8578	-87.6498
6/15/2016 9:34	0.023	0.002	41.8578	-87.6498
6/15/2016 9:33	0.022	0.002	41.8578	-87.6498
6/15/2016 9:32	0.024	0.002	41.8578	-87.6498
6/15/2016 9:31	0.024	0.002	41.8578	-87.6498
6/15/2016 9:30	0.024	0.002	41.8577	-87.6499
6/15/2016 9:29	0.021	0.002	41.8578	-87.6498
6/15/2016 9:28	0.019	0.002	41.8577	-87.6499
6/15/2016 9:27	0.023	0.002	41.8578	-87.6498
6/15/2016 9:26	0.02	0.002	41.8577	-87.6499
6/15/2016 9:25	0.021	0.002	41.8578	-87.6499
6/15/2016 9:24	0.021	0.002	41.8578	-87.6499
6/15/2016 9:23	0.021	0.002	41.8578	-87.6499
6/15/2016 9:22	0.021	0.002	41.8577	-87.65
6/15/2016 9:21	0.022	0.002	41.8578	-87.6499
6/15/2016 9:20	0.024	0.002	41.8578	-87.6499
6/15/2016 9:19	0.023	0.001	41.8577	-87.6499
6/15/2016 9:18	0.023	0.001	41.8578	-87.6499
6/15/2016 9:17	0.022	0.001	41.8577	-87.6499
6/15/2016 9:16	0.02	0.001	41.8578	-87.6499
6/15/2016 9:15	0.019	0.001	41.8578	-87.6498
6/15/2016 9:14	0.019	0.001	41.8578	-87.6498
6/15/2016 9:13	0.018	0.001	41.8578	-87.6498
6/15/2016 9:12	0.02	0.001	41.8578	-87.6499
6/15/2016 9:11	0.021	0.001	41.8578	-87.6498
6/15/2016 9:10	0.018	0.001	41.8578	-87.6498
6/15/2016 9:09	0.018	0.001	41.8578	-87.6498
6/15/2016 9:08	0.017	0.001	41.8578	-87.6499
6/15/2016 9:07	0.016	0.001	41.8578	-87.6499
6/15/2016 9:06	0.017	0.001	41.8577	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/15/2016 9:05	0.016	0.001	41.8577	-87.65
6/15/2016 9:04	0.017	0.001	41.8578	-87.65
6/15/2016 9:03	0.018	0.001	41.8577	-87.65
6/15/2016 9:02	0.017	0.001	41.8577	-87.65
6/15/2016 9:01	0.016	0.001	41.8578	-87.6499
6/15/2016 9:00	0.019	0.001	41.8578	-87.6499
6/15/2016 8:59	0.016	0.001	41.8578	-87.6499
6/15/2016 8:58	0.017	0.001	41.8578	-87.6499
6/15/2016 8:57	0.015	0.001	41.8578	-87.6499
6/15/2016 8:56	0.015	0.001	41.8578	-87.6499
6/15/2016 8:55	0.015	0.001	41.8578	-87.6499
6/15/2016 8:54	0.014	0.001	41.8578	-87.6499
6/15/2016 8:53	0.014	0.001	41.8578	-87.6499
6/15/2016 8:52	0.014	0.001	41.8578	-87.6499
6/15/2016 8:51	0.015	0.001	41.8578	-87.6498
6/15/2016 8:50	0.015	0.001	41.8578	-87.6499
6/15/2016 8:49	0.016	0	41.8578	-87.65
6/15/2016 8:48	0.016	0	41.8578	-87.65
6/15/2016 8:47	0.016	0	41.8578	-87.65
6/15/2016 8:46	0.015	0	41.8578	-87.65
6/15/2016 8:45	0.013	0	41.8578	-87.65
6/15/2016 8:44	0.014	0	41.8578	-87.6499
6/15/2016 8:43	0.015	0	41.8578	-87.6499
6/15/2016 8:42	0.014	0	41.8578	-87.65
6/15/2016 8:41	0.014	0	41.8578	-87.6499
6/15/2016 8:40	0.012	0	41.8578	-87.65
6/15/2016 8:39	0.011	0	41.8578	-87.6499
6/15/2016 8:38	0.012	0	41.8578	-87.6499
6/15/2016 8:37	0.011	0	41.8578	-87.6499
6/15/2016 8:36	0.011	0	41.8578	-87.65
6/15/2016 8:35	0.011	0	41.8578	-87.65
6/15/2016 8:34	0.012	0	41.8578	-87.65
6/15/2016 8:33	0.012	0	41.8578	-87.6499
6/15/2016 8:32	0.01	0	41.8578	-87.6499
6/15/2016 8:31	0.01	0	41.8579	-87.6499
6/15/2016 8:30	0.013	0	41.8579	-87.6499
6/15/2016 8:29	0.014	0	41.8579	-87.6499
6/15/2016 8:28	0.013	0	41.8579	-87.6499
6/15/2016 8:27	0.011	0	41.8579	-87.6499
6/15/2016 8:26	0.012	0	41.8579	-87.6499
6/15/2016 8:25	0.012	0	41.8578	-87.65

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/15/2016 8:24	0.011	0	41.8578	-87.65
6/15/2016 8:23	0.013	0	41.8578	-87.65
6/15/2016 8:22	0.014	0	41.8578	-87.65
6/15/2016 8:21	0.015	0	41.8579	-87.65
6/15/2016 8:20	0.019	0	41.8579	-87.65
Minimum	0.00	0.00	NA	NA
Average	0.0184	0.008	NA	NA
Maximum	0.041	0.018	NA	NA
95% UCL	0.0195	NA	NA	NA
6/14/2016 15:48	0.027	0.029	41.8575	-87.65
6/14/2016 15:47	0.03	0.029	41.8575	-87.65
6/14/2016 15:46	0.028	0.029	41.8575	-87.65
6/14/2016 15:45	0.029	0.029	41.8575	-87.65
6/14/2016 15:44	0.028	0.029	41.8576	-87.6499
6/14/2016 15:43	0.028	0.029	41.8576	-87.6499
6/14/2016 15:42	0.03	0.028	41.8576	-87.6499
6/14/2016 15:41	0.029	0.028	41.8576	-87.6499
6/14/2016 15:40	0.029	0.028	41.8576	-87.6499
6/14/2016 15:39	0.029	0.028	41.8576	-87.6499
6/14/2016 15:38	0.032	0.028	41.8576	-87.6498
6/14/2016 15:37	0.029	0.028	41.8576	-87.6499
6/14/2016 15:36	0.029	0.028	41.8576	-87.6498
6/14/2016 15:35	0.029	0.028	41.8576	-87.6498
6/14/2016 15:34	0.03	0.028	41.8576	-87.6498
6/14/2016 15:33	0.03	0.028	41.8576	-87.6498
6/14/2016 15:32	0.029	0.028	41.8576	-87.6498
6/14/2016 15:31	0.029	0.028	41.8577	-87.6498
6/14/2016 15:30	0.029	0.028	41.8577	-87.6498
6/14/2016 15:29	0.028	0.028	41.8576	-87.6498
6/14/2016 15:28	0.031	0.028	41.8576	-87.6499
6/14/2016 15:27	0.027	0.027	41.8576	-87.6498
6/14/2016 15:26	0.028	0.027	41.8576	-87.6498
6/14/2016 15:25	0.027	0.027	41.8576	-87.6498
6/14/2016 15:24	0.028	0.027	41.8576	-87.6498
6/14/2016 15:23	0.028	0.027	41.8576	-87.6498
6/14/2016 15:22	0.029	0.027	41.8576	-87.6498
6/14/2016 15:21	0.028	0.027	41.8576	-87.6498
6/14/2016 15:20	0.028	0.027	41.8576	-87.6498
6/14/2016 15:19	0.027	0.027	41.8576	-87.6498
6/14/2016 15:18	0.028	0.027	41.8577	-87.6498
6/14/2016 15:17	0.028	0.027	41.8577	-87.6498

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/14/2016 15:16	0.027	0.027	41.8576	-87.6498
6/14/2016 15:15	0.028	0.027	41.8576	-87.6498
6/14/2016 15:14	0.029	0.027	41.8576	-87.6498
6/14/2016 15:13	0.03	0.027	41.8576	-87.6498
6/14/2016 15:12	0.03	0.027	41.8576	-87.6498
6/14/2016 15:11	0.028	0.027	41.8577	-87.6498
6/14/2016 15:10	0.029	0.027	41.8577	-87.6498
6/14/2016 15:09	0.03	0.027	41.8577	-87.6498
6/14/2016 15:08	0.029	0.027	41.8577	-87.6498
6/14/2016 15:07	0.029	0.027	41.8577	-87.6498
6/14/2016 15:06	0.029	0.027	41.8577	-87.6498
6/14/2016 15:05	0.029	0.027	41.8577	-87.6498
6/14/2016 15:04	0.03	0.027	41.8577	-87.6498
6/14/2016 15:03	0.027	0.027	41.8576	-87.6498
6/14/2016 15:02	0.03	0.027	41.8577	-87.6498
6/14/2016 15:01	0.029	0.027	41.8576	-87.6499
6/14/2016 15:00	0.029	0.027	41.8577	-87.6498
6/14/2016 14:59	0.029	0.027	41.8576	-87.6498
6/14/2016 14:58	0.031	0.027	41.8576	-87.6498
6/14/2016 14:57	0.029	0.026	41.8577	-87.6498
6/14/2016 14:56	0.029	0.026	41.8577	-87.6498
6/14/2016 14:55	0.029	0.026	41.8576	-87.6498
6/14/2016 14:54	0.029	0.026	41.8577	-87.6498
6/14/2016 14:53	0.03	0.026	41.8576	-87.6498
6/14/2016 14:52	0.03	0.026	41.8576	-87.6498
6/14/2016 14:51	0.03	0.026	41.8577	-87.6499
6/14/2016 14:50	0.032	0.026	41.8576	-87.6499
6/14/2016 14:49	0.028	0.026	41.8576	-87.6499
6/14/2016 14:48	0.029	0.026	41.8576	-87.6498
6/14/2016 14:47	0.03	0.026	41.8576	-87.6499
6/14/2016 14:46	0.028	0.026	41.8576	-87.6498
6/14/2016 14:45	0.028	0.026	41.8576	-87.6499
6/14/2016 14:44	0.029	0.026	41.8576	-87.6499
6/14/2016 14:43	0.03	0.026	41.8576	-87.6498
6/14/2016 14:42	0.03	0.025	41.8576	-87.6498
6/14/2016 14:41	0.03	0.025	41.8576	-87.6498
6/14/2016 14:40	0.028	0.025	41.8576	-87.6498
6/14/2016 14:39	0.03	0.025	41.8577	-87.6498
6/14/2016 14:38	0.032	0.025	41.8576	-87.6498
6/14/2016 14:37	0.032	0.025	41.8577	-87.6498
6/14/2016 14:36	0.028	0.025	41.8576	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/14/2016 14:35	0.028	0.025	41.8576	-87.6499
6/14/2016 14:34	0.03	0.025	41.8576	-87.6499
6/14/2016 14:33	0.03	0.025	41.8576	-87.6498
6/14/2016 14:32	0.029	0.025	41.8576	-87.6498
6/14/2016 14:31	0.029	0.025	41.8576	-87.6498
6/14/2016 14:30	0.029	0.025	41.8576	-87.6498
6/14/2016 14:29	0.03	0.025	41.8576	-87.6498
6/14/2016 14:28	0.03	0.025	41.8576	-87.6499
6/14/2016 14:27	0.031	0.024	41.8576	-87.6498
6/14/2016 14:26	0.032	0.024	41.8577	-87.6498
6/14/2016 14:25	0.03	0.024	41.8576	-87.6498
6/14/2016 14:24	0.031	0.024	41.8576	-87.6498
6/14/2016 14:23	0.031	0.024	41.8576	-87.6498
6/14/2016 14:22	0.033	0.024	41.8576	-87.6498
6/14/2016 14:21	0.031	0.024	41.8576	-87.6498
6/14/2016 14:20	0.031	0.024	41.8576	-87.6498
6/14/2016 14:19	0.031	0.024	41.8577	-87.6498
6/14/2016 14:18	0.032	0.024	41.8577	-87.6498
6/14/2016 14:17	0.034	0.024	41.8577	-87.6498
6/14/2016 14:16	0.033	0.024	41.8577	-87.6498
6/14/2016 14:15	0.03	0.024	41.8576	-87.6498
6/14/2016 14:14	0.028	0.024	41.8576	-87.6498
6/14/2016 14:13	0.03	0.024	41.8577	-87.6498
6/14/2016 14:12	0.031	0.023	41.8576	-87.6498
6/14/2016 14:11	0.031	0.023	41.8576	-87.6498
6/14/2016 14:10	0.029	0.023	41.8576	-87.6498
6/14/2016 14:09	0.031	0.023	41.8576	-87.6498
6/14/2016 14:08	0.029	0.023	41.8576	-87.6498
6/14/2016 14:07	0.03	0.023	41.8576	-87.6498
6/14/2016 14:06	0.028	0.023	41.8576	-87.6498
6/14/2016 14:05	0.031	0.023	41.8576	-87.6498
6/14/2016 14:04	0.029	0.023	41.8576	-87.6498
6/14/2016 14:03	0.03	0.023	41.8576	-87.6498
6/14/2016 14:02	0.031	0.023	41.8576	-87.6498
6/14/2016 14:01	0.031	0.023	41.8576	-87.6498
6/14/2016 14:00	0.032	0.023	41.8576	-87.6498
6/14/2016 13:59	0.032	0.023	41.8576	-87.6498
6/14/2016 13:58	0.032	0.023	41.8576	-87.6498
6/14/2016 13:57	0.031	0.022	41.8576	-87.6498
6/14/2016 13:56	0.031	0.022	41.8576	-87.6498
6/14/2016 13:55	0.031	0.022	41.8576	-87.6498

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/14/2016 13:54	0.033	0.022	41.8576	-87.6498
6/14/2016 13:53	0.03	0.022	41.8576	-87.6498
6/14/2016 13:52	0.032	0.022	41.8576	-87.6498
6/14/2016 13:51	0.031	0.022	41.8576	-87.6498
6/14/2016 13:50	0.033	0.022	41.8576	-87.6498
6/14/2016 13:49	0.028	0.022	41.8576	-87.6498
6/14/2016 13:48	0.03	0.022	41.8576	-87.6498
6/14/2016 13:47	0.029	0.022	41.8576	-87.6498
6/14/2016 13:46	0.031	0.022	41.8576	-87.6498
6/14/2016 13:45	0.03	0.022	41.8576	-87.6498
6/14/2016 13:44	0.031	0.022	41.8576	-87.6498
6/14/2016 13:43	0.029	0.022	41.8576	-87.6498
6/14/2016 13:42	0.029	0.021	41.8576	-87.6498
6/14/2016 13:41	0.031	0.021	41.8576	-87.6498
6/14/2016 13:40	0.027	0.021	41.8576	-87.6498
6/14/2016 13:38	0.029	0.021	41.8576	-87.6498
6/14/2016 13:37	0.028	0.021	41.8576	-87.6498
6/14/2016 13:36	0.027	0.021	41.8576	-87.6498
6/14/2016 13:35	0.028	0.021	41.8576	-87.6498
6/14/2016 13:34	0.028	0.021	41.8576	-87.6498
6/14/2016 13:33	0.029	0.021	41.8576	-87.6498
6/14/2016 13:32	0.029	0.021	41.8576	-87.6498
6/14/2016 13:31	0.028	0.021	41.8576	-87.6498
6/14/2016 13:30	0.028	0.021	41.8576	-87.6498
6/14/2016 13:29	0.029	0.021	41.8576	-87.6499
6/14/2016 13:28	0.027	0.021	41.8576	-87.6499
6/14/2016 13:27	0.028	0.02	41.8576	-87.6498
6/14/2016 13:26	0.027	0.02	41.8576	-87.6498
6/14/2016 13:25	0.026	0.02	41.8576	-87.6498
6/14/2016 13:24	0.028	0.02	41.8576	-87.6498
6/14/2016 13:23	0.028	0.02	41.8576	-87.6498
6/14/2016 13:22	0.028	0.02	41.8576	-87.6498
6/14/2016 13:21	0.026	0.02	41.8576	-87.6499
6/14/2016 13:20	0.028	0.02	41.8576	-87.6499
6/14/2016 13:19	0.026	0.02	41.8576	-87.6498
6/14/2016 13:18	0.026	0.02	41.8576	-87.6498
6/14/2016 13:17	0.027	0.02	41.8576	-87.6498
6/14/2016 13:16	0.029	0.02	41.8576	-87.6499
6/14/2016 13:15	0.028	0.02	41.8576	-87.6499
6/14/2016 13:14	0.029	0.02	41.8576	-87.6499
6/14/2016 13:13	0.029	0.02	41.8576	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/14/2016 13:12	0.027	0.019	41.8576	-87.6499
6/14/2016 13:11	0.027	0.019	41.8577	-87.6498
6/14/2016 13:10	0.03	0.019	41.8577	-87.6498
6/14/2016 13:09	0.027	0.019	41.8577	-87.6498
6/14/2016 13:08	0.027	0.019	41.8576	-87.6498
6/14/2016 13:07	0.028	0.019	41.8576	-87.6498
6/14/2016 13:06	0.028	0.019	41.8577	-87.6498
6/14/2016 13:05	0.028	0.019	41.8576	-87.6498
6/14/2016 13:04	0.027	0.019	41.8576	-87.6498
6/14/2016 13:03	0.031	0.019	41.8577	-87.6498
6/14/2016 13:02	0.031	0.019	41.8576	-87.6499
6/14/2016 13:01	0.032	0.019	41.8576	-87.6499
6/14/2016 13:00	0.029	0.019	41.8576	-87.6498
6/14/2016 12:59	0.033	0.019	41.8576	-87.6498
6/14/2016 12:58	0.033	0.019	41.8576	-87.6498
6/14/2016 12:57	0.032	0.018	41.8577	-87.6498
6/14/2016 12:56	0.032	0.018	41.8576	-87.6498
6/14/2016 12:55	0.031	0.018	41.8577	-87.6498
6/14/2016 12:54	0.032	0.018	41.8576	-87.6498
6/14/2016 12:53	0.031	0.018	41.8576	-87.6499
6/14/2016 12:52	0.032	0.018	41.8576	-87.6498
6/14/2016 12:51	0.031	0.018	41.8576	-87.6498
6/14/2016 12:50	0.03	0.018	41.8576	-87.6498
6/14/2016 12:49	0.029	0.018	41.8576	-87.6499
6/14/2016 12:48	0.032	0.018	41.8576	-87.6498
6/14/2016 12:47	0.031	0.018	41.8576	-87.6499
6/14/2016 12:46	0.03	0.018	41.8576	-87.6499
6/14/2016 12:45	0.03	0.018	41.8576	-87.6499
6/14/2016 12:44	0.03	0.018	41.8575	-87.6499
6/14/2016 12:43	0.032	0.018	41.8576	-87.6498
6/14/2016 12:42	0.028	0.017	41.8576	-87.6498
6/14/2016 12:41	0.03	0.017	41.8576	-87.6498
6/14/2016 12:40	0.031	0.017	41.8576	-87.6499
6/14/2016 12:39	0.031	0.017	41.8576	-87.6499
6/14/2016 12:38	0.033	0.017	41.8576	-87.6498
6/14/2016 12:37	0.032	0.017	41.8576	-87.6498
6/14/2016 12:36	0.03	0.017	41.8576	-87.6499
6/14/2016 12:35	0.031	0.017	41.8575	-87.6499
6/14/2016 12:34	0.03	0.017	41.8576	-87.6499
6/14/2016 12:33	0.032	0.017	41.8576	-87.6498
6/14/2016 12:32	0.033	0.017	41.8576	-87.6498

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/14/2016 12:31	0.031	0.017	41.8576	-87.6498
6/14/2016 12:30	0.032	0.017	41.8576	-87.6498
6/14/2016 12:29	0.031	0.017	41.8576	-87.6499
6/14/2016 12:28	0.032	0.017	41.8575	-87.6499
6/14/2016 12:27	0.032	0.016	41.8575	-87.6499
6/14/2016 12:26	0.033	0.016	41.8576	-87.6499
6/14/2016 12:25	0.034	0.016	41.8576	-87.6499
6/14/2016 12:24	0.033	0.016	41.8576	-87.6499
6/14/2016 12:23	0.033	0.016	41.8576	-87.6499
6/14/2016 12:20	0.033	0.016	41.8576	-87.6499
6/14/2016 12:19	0.032	0.016	41.8576	-87.6499
6/14/2016 12:18	0.034	0.016	41.8575	-87.6499
6/14/2016 12:17	0.038	0.016	41.8576	-87.6499
6/14/2016 12:16	0.037	0.016	41.8575	-87.6499
6/14/2016 12:15	0.032	0.016	41.8575	-87.65
6/14/2016 12:14	0.032	0.016	41.8575	-87.65
6/14/2016 12:13	0.032	0.016	41.8575	-87.65
6/14/2016 12:12	0.03	0.015	41.8575	-87.6499
6/14/2016 12:11	0.032	0.015	41.8576	-87.6499
6/14/2016 12:10	0.031	0.015	41.8575	-87.6499
6/14/2016 12:09	0.033	0.015	41.8575	-87.6499
6/14/2016 12:08	0.032	0.015	41.8575	-87.6499
6/14/2016 12:07	0.032	0.015	41.8575	-87.6499
6/14/2016 12:06	0.034	0.015	41.8576	-87.6499
6/14/2016 12:05	0.033	0.015	41.8576	-87.6499
6/14/2016 12:04	0.033	0.015	41.8576	-87.6499
6/14/2016 12:03	0.033	0.015	41.8575	-87.6499
6/14/2016 12:02	0.032	0.015	41.8575	-87.6499
6/14/2016 12:01	0.033	0.015	41.8576	-87.6499
6/14/2016 12:00	0.033	0.015	41.8576	-87.6499
6/14/2016 11:59	0.03	0.015	41.8576	-87.6499
6/14/2016 11:58	0.029	0.015	41.8575	-87.6499
6/14/2016 11:57	0.035	0.014	41.8575	-87.6499
6/14/2016 11:56	0.031	0.014	41.8575	-87.6499
6/14/2016 11:55	0.029	0.014	41.8576	-87.6499
6/14/2016 11:54	0.033	0.014	41.8576	-87.6498
6/14/2016 11:53	0.031	0.014	41.8576	-87.6498
6/14/2016 11:52	0.032	0.014	41.8576	-87.6498
6/14/2016 11:51	0.031	0.014	41.8576	-87.6498
6/14/2016 11:50	0.032	0.014	41.8576	-87.6499
6/14/2016 11:49	0.035	0.014	41.8577	-87.6498

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/14/2016 11:48	0.031	0.014	41.8576	-87.6498
6/14/2016 11:47	0.032	0.014	41.8576	-87.6499
6/14/2016 11:46	0.032	0.014	41.8576	-87.6498
6/14/2016 11:45	0.033	0.014	41.8576	-87.6498
6/14/2016 11:44	0.034	0.014	41.8576	-87.6499
6/14/2016 11:43	0.03	0.014	41.8576	-87.6499
6/14/2016 11:42	0.034	0.013	41.8576	-87.6498
6/14/2016 11:41	0.033	0.013	41.8576	-87.6498
6/14/2016 11:40	0.034	0.013	41.8576	-87.6498
6/14/2016 11:39	0.034	0.013	41.8576	-87.6498
6/14/2016 11:38	0.034	0.013	41.8576	-87.6498
6/14/2016 11:37	0.034	0.013	41.8576	-87.6498
6/14/2016 11:36	0.032	0.013	41.8577	-87.6498
6/14/2016 11:35	0.031	0.013	41.8576	-87.6498
6/14/2016 11:34	0.035	0.013	41.8576	-87.6499
6/14/2016 11:33	0.029	0.013	41.8576	-87.6497
6/14/2016 11:32	0.03	0.013	41.8576	-87.6498
6/14/2016 11:31	0.033	0.013	41.8576	-87.6498
6/14/2016 11:30	0.032	0.013	41.8577	-87.6499
6/14/2016 11:29	0.033	0.013	41.8577	-87.6498
6/14/2016 11:28	0.032	0.013	41.8576	-87.6498
6/14/2016 11:27	0.029	0.012	41.8576	-87.6498
6/14/2016 11:26	0.031	0.012	41.8576	-87.6498
6/14/2016 11:25	0.032	0.012	41.8576	-87.6498
6/14/2016 11:24	0.031	0.012	41.8577	-87.6498
6/14/2016 11:23	0.033	0.012	41.8577	-87.6498
6/14/2016 11:22	0.029	0.012	41.8577	-87.6499
6/14/2016 11:17	0.03	0.012	41.8577	-87.6498
6/14/2016 11:16	0.03	0.012	41.8577	-87.6498
6/14/2016 11:15	0.032	0.012	41.8577	-87.6498
6/14/2016 11:14	0.03	0.012	41.8576	-87.6498
6/14/2016 11:13	0.031	0.012	41.8576	-87.6498
6/14/2016 11:12	0.032	0.011	41.8576	-87.6498
6/14/2016 11:11	0.03	0.011	41.8576	-87.6498
6/14/2016 11:10	0.03	0.011	41.8576	-87.6498
6/14/2016 11:09	0.031	0.011	41.8576	-87.6498
6/14/2016 11:08	0.029	0.011	41.8576	-87.6499
6/14/2016 11:07	0.031	0.011	41.8576	-87.6498
6/14/2016 11:06	0.031	0.011	41.8576	-87.6498
6/14/2016 11:05	0.033	0.011	41.8576	-87.6499
6/14/2016 11:04	0.032	0.011	41.8576	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/14/2016 11:03	0.031	0.011	41.8576	-87.6499
6/14/2016 11:02	0.029	0.011	41.8576	-87.6499
6/14/2016 11:01	0.029	0.011	41.8576	-87.6499
6/14/2016 11:00	0.031	0.011	41.8576	-87.6499
6/14/2016 10:59	0.031	0.011	41.8576	-87.6499
6/14/2016 10:58	0.032	0.011	41.8576	-87.6499
6/14/2016 10:57	0.033	0.01	41.8576	-87.6499
6/14/2016 10:56	0.075	0.01	41.8576	-87.6499
6/14/2016 10:55	0.033	0.01	41.8576	-87.6499
6/14/2016 10:54	0.029	0.01	41.8576	-87.6499
6/14/2016 10:53	0.03	0.01	41.8576	-87.6499
6/14/2016 10:52	0.032	0.01	41.8576	-87.6499
6/14/2016 10:51	0.031	0.01	41.8576	-87.6498
6/14/2016 10:50	0.031	0.01	41.8576	-87.6498
6/14/2016 10:49	0.031	0.01	41.8576	-87.6498
6/14/2016 10:48	0.031	0.01	41.8576	-87.6498
6/14/2016 10:47	0.032	0.01	41.8576	-87.6498
6/14/2016 10:46	0.031	0.01	41.8576	-87.6498
6/14/2016 10:45	0.031	0.01	41.8576	-87.6499
6/14/2016 10:44	0.031	0.01	41.8576	-87.6499
6/14/2016 10:43	0.032	0.01	41.8576	-87.6499
6/14/2016 10:42	0.031	0.009	41.8575	-87.6499
6/14/2016 10:41	0.034	0.009	41.8576	-87.6499
6/14/2016 10:40	0.031	0.009	41.8576	-87.6499
6/14/2016 10:39	0.03	0.009	41.8576	-87.6499
6/14/2016 10:38	0.029	0.009	41.8576	-87.6499
6/14/2016 10:37	0.032	0.009	41.8576	-87.6498
6/14/2016 10:36	0.032	0.009	41.8576	-87.6498
6/14/2016 10:35	0.031	0.009	41.8576	-87.6498
6/14/2016 10:34	0.029	0.009	41.8576	-87.6498
6/14/2016 10:33	0.029	0.009	41.8576	-87.6498
6/14/2016 10:32	0.03	0.009	41.8576	-87.6498
6/14/2016 10:31	0.028	0.009	41.8576	-87.6498
6/14/2016 10:30	0.028	0.009	41.8576	-87.6498
6/14/2016 10:29	0.028	0.009	41.8576	-87.6498
6/14/2016 10:28	0.032	0.009	41.8576	-87.6498
6/14/2016 10:27	0.029	0.008	41.8576	-87.6498
6/14/2016 10:26	0.026	0.008	41.8576	-87.6498
6/14/2016 10:25	0.027	0.008	41.8576	-87.6498
6/14/2016 10:24	0.027	0.008	41.8576	-87.6498
6/14/2016 10:23	0.027	0.008	41.8576	-87.6498

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/14/2016 10:22	0.029	0.008	41.8576	-87.6498
6/14/2016 10:21	0.03	0.008	41.8576	-87.6498
6/14/2016 10:20	0.028	0.008	41.8576	-87.6498
6/14/2016 10:19	0.027	0.008	41.8576	-87.6498
6/14/2016 10:18	0.027	0.008	41.8576	-87.6498
6/14/2016 10:17	0.028	0.008	41.8576	-87.6498
6/14/2016 10:16	0.03	0.008	41.8576	-87.6498
6/14/2016 10:15	0.028	0.008	41.8576	-87.6498
6/14/2016 10:14	0.027	0.008	41.8576	-87.6499
6/14/2016 10:13	0.029	0.008	41.8576	-87.6499
6/14/2016 10:12	0.028	0.008	41.8576	-87.6499
6/14/2016 10:11	0.026	0.008	41.8576	-87.6498
6/14/2016 10:10	0.03	0.008	41.8576	-87.6498
6/14/2016 10:09	0.026	0.008	41.8577	-87.6499
6/14/2016 10:08	0.04	0.008	41.8576	-87.6499
6/14/2016 10:07	0.026	0.008	41.8576	-87.6498
6/14/2016 10:06	0.027	0.008	41.8576	-87.6498
6/14/2016 10:05	0.028	0.008	41.8576	-87.6498
6/14/2016 10:04	0.03	0.008	41.8576	-87.6498
6/14/2016 10:03	0.028	0.008	41.8576	-87.6498
6/14/2016 10:02	0.027	0.008	41.8576	-87.6498
6/14/2016 10:01	0.028	0.008	41.8576	-87.6498
6/14/2016 10:00	0.027	0.008	41.8576	-87.6498
6/14/2016 9:59	0.027	0.008	41.8576	-87.6498
6/14/2016 9:58	0.028	0.008	41.8576	-87.6498
6/14/2016 9:57	0.026	0.007	41.8576	-87.6498
6/14/2016 9:56	0.029	0.007	41.8576	-87.6499
6/14/2016 9:55	0.027	0.007	41.8576	-87.6499
6/14/2016 9:54	0.027	0.007	41.8577	-87.6498
6/14/2016 9:53	0.028	0.007	41.8576	-87.6498
6/14/2016 9:52	0.026	0.007	41.8577	-87.6499
6/14/2016 9:51	0.027	0.007	41.8577	-87.6498
6/14/2016 9:50	0.026	0.007	41.8577	-87.6498
6/14/2016 9:49	0.026	0.007	41.8577	-87.6498
6/14/2016 9:48	0.025	0.007	41.8577	-87.6498
6/14/2016 9:47	0.027	0.007	41.8577	-87.6498
6/14/2016 9:44	0.025	0.007	41.8576	-87.6498
6/14/2016 9:43	0.027	0.007	41.8576	-87.6498
6/14/2016 9:42	0.025	0.006	41.8576	-87.6499
6/14/2016 9:41	0.026	0.006	41.8577	-87.6498
6/14/2016 9:40	0.026	0.006	41.8577	-87.6498

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/14/2016 9:39	0.025	0.006	41.8577	-87.6498
6/14/2016 9:38	0.025	0.006	41.8577	-87.6498
6/14/2016 9:37	0.024	0.006	41.8577	-87.6498
6/14/2016 9:36	0.025	0.006	41.8577	-87.6498
6/14/2016 9:35	0.024	0.006	41.8577	-87.6498
6/14/2016 9:34	0.024	0.006	41.8577	-87.6498
6/14/2016 9:33	0.024	0.006	41.8576	-87.6498
6/14/2016 9:32	0.023	0.006	41.8576	-87.6498
6/14/2016 9:31	0.024	0.006	41.8576	-87.6499
6/14/2016 9:30	0.024	0.006	41.8577	-87.6498
6/14/2016 9:29	0.023	0.006	41.8576	-87.6499
6/14/2016 9:28	0.024	0.006	41.8576	-87.6499
6/14/2016 9:27	0.023	0.005	41.8576	-87.6498
6/14/2016 9:26	0.024	0.005	41.8576	-87.6498
6/14/2016 9:25	0.024	0.005	41.8576	-87.6498
6/14/2016 9:24	0.03	0.005	41.8576	-87.6498
6/14/2016 9:23	0.024	0.005	41.8576	-87.6498
6/14/2016 9:22	0.024	0.005	41.8577	-87.6498
6/14/2016 9:21	0.024	0.005	41.8577	-87.6498
6/14/2016 9:20	0.026	0.005	41.8576	-87.6498
6/14/2016 9:19	0.023	0.005	41.8576	-87.6498
6/14/2016 9:18	0.024	0.005	41.8576	-87.6498
6/14/2016 9:17	0.025	0.005	41.8577	-87.6498
6/14/2016 9:16	0.022	0.005	41.8577	-87.6498
6/14/2016 9:15	0.022	0.005	41.8577	-87.6498
6/14/2016 9:14	0.023	0.005	41.8576	-87.6498
6/14/2016 9:13	0.022	0.005	41.8577	-87.6498
6/14/2016 9:12	0.022	0.004	41.8577	-87.6498
6/14/2016 9:11	0.023	0.004	41.8576	-87.6498
6/14/2016 9:10	0.025	0.004	41.8577	-87.6499
6/14/2016 9:09	0.024	0.004	41.8577	-87.6498
6/14/2016 9:08	0.024	0.004	41.8576	-87.6498
6/14/2016 9:07	0.024	0.004	41.8576	-87.6498
6/14/2016 9:06	0.028	0.004	41.8576	-87.6498
6/14/2016 9:05	0.027	0.004	41.8576	-87.6499
6/14/2016 9:04	0.026	0.004	41.8576	-87.6498
6/14/2016 9:03	0.026	0.004	41.8577	-87.6498
6/14/2016 9:02	0.026	0.004	41.8576	-87.6498
6/14/2016 9:01	0.024	0.004	41.8577	-87.6498
6/14/2016 9:00	0.023	0.004	41.8576	-87.6499
6/14/2016 8:59	0.023	0.004	41.8576	-87.6498

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/14/2016 8:58	0.024	0.004	41.8576	-87.6499
6/14/2016 8:57	0.023	0.004	41.8576	-87.6499
6/14/2016 8:56	0.025	0.004	41.8576	-87.6498
6/14/2016 8:55	0.026	0.004	41.8576	-87.6498
6/14/2016 8:54	0.024	0.004	41.8576	-87.6498
6/14/2016 8:53	0.026	0.004	41.8576	-87.6499
6/14/2016 8:52	0.025	0.004	41.8576	-87.6499
6/14/2016 8:51	0.025	0.004	41.8576	-87.6499
6/14/2016 8:50	0.025	0.004	41.8576	-87.6499
6/14/2016 8:49	0.026	0.004	41.8576	-87.6499
6/14/2016 8:48	0.036	0.004	41.8576	-87.6499
6/14/2016 8:47	0.039	0.004	41.8576	-87.65
6/14/2016 8:46	0.026	0.004	41.8576	-87.6499
6/14/2016 8:45	0.028	0.004	41.8576	-87.65
6/14/2016 8:44	0.03	0.004	41.8576	-87.65
6/14/2016 8:43	0.028	0.004	41.8576	-87.6499
6/14/2016 8:42	0.027	0.003	41.8576	-87.6499
6/14/2016 8:41	0.028	0.003	41.8576	-87.6499
6/14/2016 8:40	0.028	0.003	41.8576	-87.6499
6/14/2016 8:39	0.026	0.003	41.8576	-87.65
6/14/2016 8:38	0.023	0.003	41.8576	-87.65
6/14/2016 8:37	0.026	0.003	41.8576	-87.6499
6/14/2016 8:36	0.025	0.003	41.8576	-87.6499
6/14/2016 8:35	0.026	0.003	41.8576	-87.6499
6/14/2016 8:34	0.023	0.003	41.8576	-87.6499
6/14/2016 8:33	0.024	0.003	41.8576	-87.6499
6/14/2016 8:32	0.026	0.003	41.8576	-87.65
6/14/2016 8:31	0.025	0.003	41.8576	-87.6499
6/14/2016 8:30	0.024	0.003	41.8576	-87.6499
6/14/2016 8:29	0.026	0.003	41.8576	-87.65
6/14/2016 8:28	0.025	0.003	41.8576	-87.6499
6/14/2016 8:27	0.024	0.002	41.8576	-87.65
6/14/2016 8:26	0.023	0.002	41.8576	-87.65
6/14/2016 8:25	0.022	0.002	41.8576	-87.6499
6/14/2016 8:24	0.022	0.002	41.8576	-87.6499
6/14/2016 8:23	0.024	0.002	41.8576	-87.6499
6/14/2016 8:22	0.024	0.002	41.8576	-87.6499
6/14/2016 8:21	0.025	0.002	41.8576	-87.6499
6/14/2016 8:20	0.026	0.002	41.8576	-87.6499
6/14/2016 8:19	0.027	0.002	41.8576	-87.6499
6/14/2016 8:18	0.028	0.002	41.8576	-87.6498

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/14/2016 8:17	0.026	0.002	41.8577	-87.65
6/14/2016 8:16	0.026	0.002	41.8576	-87.65
6/14/2016 8:15	0.026	0.002	41.8576	-87.65
6/14/2016 8:14	0.027	0.002	41.8576	-87.6499
6/14/2016 8:13	0.026	0.002	41.8576	-87.6499
6/14/2016 8:12	0.028	0.001	41.8576	-87.6499
6/14/2016 8:11	0.028	0.001	41.8576	-87.6499
6/14/2016 8:10	0.028	0.001	41.8576	-87.6498
6/14/2016 8:09	0.028	0.001	41.8576	-87.6499
6/14/2016 8:08	0.029	0.001	41.8576	-87.6499
6/14/2016 8:07	0.031	0.001	41.8576	-87.6499
6/14/2016 8:06	0.026	0.001	41.8576	-87.6499
6/14/2016 8:05	0.029	0.001	41.8576	-87.6499
6/14/2016 8:04	0.029	0.001	41.8576	-87.6499
6/14/2016 8:03	0.03	0.001	41.8576	-87.6499
6/14/2016 8:02	0.031	0.001	41.8575	-87.6498
6/14/2016 8:01	0.032	0.001	41.8576	-87.6498
6/14/2016 8:00	0.036	0.001	41.8576	-87.6499
6/14/2016 7:59	0.032	0.001	41.8576	-87.6499
6/14/2016 7:58	0.031	0.001	41.8576	-87.6499
6/14/2016 7:57	0.032	0	41.8576	-87.6499
6/14/2016 7:56	0.035	0	41.8576	-87.6499
6/14/2016 7:55	0.033	0	41.8576	-87.6499
6/14/2016 7:54	0.034	0	41.8576	-87.6499
6/14/2016 7:53	0.032	0		
6/14/2016 7:52	0.033	0	41.8576	-87.6499
6/14/2016 7:51	0.032	0	41.8576	-87.6499
6/14/2016 7:50	0.031	0	41.8576	-87.6499
6/14/2016 7:49	0.032	0	41.8576	-87.6499
6/14/2016 7:48	0.04	0	41.8576	-87.6499
6/14/2016 7:47	0.043	0	41.8576	-87.6499
6/14/2016 7:46	0.04	0	41.8576	-87.6499
6/14/2016 7:44	0.038	0	41.8576	-87.6499
6/14/2016 7:43	0.038	0	41.8576	-87.6498
Minimum	0.022	0.001	NA	NA
Average	0.0292	0.0146	NA	NA
Maximum	0.075	0.029	NA	NA
95% UCL	0.0296	NA	NA	NA
6/13/2016 16:13	0.016	0.016	41.8578	-87.6499
6/13/2016 16:12	0.016	0.016	41.8577	-87.65
6/13/2016 16:11	0.016	0.016	41.8577	-87.65

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/13/2016 16:10	0.015	0.016	41.8577	-87.65
6/13/2016 16:09	0.016	0.016	41.8577	-87.65
6/13/2016 16:08	0.02	0.016	41.8577	-87.65
6/13/2016 16:07	0.017	0.016	41.8577	-87.65
6/13/2016 16:06	0.015	0.016	41.8577	-87.65
6/13/2016 16:05	0.015	0.016	41.8577	-87.65
6/13/2016 16:04	0.017	0.015	41.8577	-87.65
6/13/2016 16:03	0.017	0.015	41.8577	-87.6499
6/13/2016 16:02	0.017	0.015	41.8577	-87.6499
6/13/2016 16:01	0.023	0.015	41.8577	-87.6499
6/13/2016 16:00	0.017	0.015	41.8577	-87.6499
6/13/2016 15:59	0.017	0.015	41.8577	-87.6499
6/13/2016 15:58	0.018	0.015	41.8578	-87.6499
6/13/2016 15:57	0.019	0.015	41.8578	-87.6499
6/13/2016 15:56	0.016	0.015	41.8578	-87.6499
6/13/2016 15:55	0.018	0.015	41.8578	-87.6499
6/13/2016 15:54	0.018	0.015	41.8578	-87.6499
6/13/2016 15:53	0.017	0.015	41.8578	-87.6499
6/13/2016 15:52	0.018	0.015	41.8578	-87.6498
6/13/2016 15:51	0.019	0.015	41.8578	-87.6499
6/13/2016 15:50	0.019	0.015	41.8578	-87.6499
6/13/2016 15:49	0.022	0.014	41.8578	-87.6499
6/13/2016 15:48	0.016	0.014	41.8578	-87.6499
6/13/2016 15:46	0.016	0.014	41.8578	-87.6499
6/13/2016 15:45	0.016	0.014	41.8578	-87.6499
6/13/2016 15:44	0.016	0.014	41.8577	-87.6499
6/13/2016 15:43	0.017	0.014	41.8578	-87.6499
6/13/2016 15:42	0.018	0.014	41.8578	-87.6499
6/13/2016 15:41	0.018	0.014	41.8578	-87.6499
6/13/2016 15:40	0.017	0.014	41.8578	-87.6499
6/13/2016 15:38	0.018	0.014	41.8578	-87.6499
6/13/2016 15:37	0.017	0.014	41.8578	-87.6499
6/13/2016 15:36	0.019	0.014	41.8578	-87.6499
6/13/2016 15:35	0.017	0.014	41.8578	-87.6499
6/13/2016 15:34	0.018	0.014	41.8578	-87.6499
6/13/2016 15:33	0.018	0.014	41.8578	-87.6499
6/13/2016 15:32	0.019	0.014	41.8578	-87.6499
6/13/2016 15:31	0.017	0.014	41.8578	-87.6499
6/13/2016 15:30	0.019	0.014	41.8578	-87.6499
6/13/2016 15:29	0.017	0.014	41.8578	-87.6499
6/13/2016 15:28	0.017	0.014	41.8578	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/13/2016 15:27	0.019	0.014	41.8578	-87.6499
6/13/2016 15:26	0.016	0.014	41.8578	-87.65
6/13/2016 15:25	0.018	0.014	41.8578	-87.6499
6/13/2016 15:24	0.018	0.014	41.8578	-87.6499
6/13/2016 15:23	0.016	0.014	41.8578	-87.6499
6/13/2016 15:22	0.017	0.014	41.8578	-87.6499
6/13/2016 15:21	0.02	0.014	41.8578	-87.6499
6/13/2016 15:20	0.017	0.014	41.8578	-87.6499
6/13/2016 15:19	0.021	0.013	41.8578	-87.6499
6/13/2016 15:18	0.016	0.013	41.8578	-87.6498
6/13/2016 15:17	0.016	0.013	41.8578	-87.6499
6/13/2016 15:16	0.017	0.013	41.8578	-87.6498
6/13/2016 15:15	0.017	0.013	41.8578	-87.6499
6/13/2016 15:14	0.016	0.013	41.8578	-87.6499
6/13/2016 15:13	0.016	0.013	41.8579	-87.6498
6/13/2016 15:12	0.026	0.013	41.8578	-87.6498
6/13/2016 15:11	0.064	0.013	41.8578	-87.6498
6/13/2016 15:10	0.029	0.013	41.8577	-87.6499
6/13/2016 15:09	0.04	0.013	41.8578	-87.6498
6/13/2016 15:08	0.027	0.013	41.8577	-87.6498
6/13/2016 15:07	0.03	0.013	41.8577	-87.6499
6/13/2016 15:06	0.024	0.013	41.8578	-87.65
6/13/2016 15:05	0.023	0.013	41.8578	-87.6499
6/13/2016 15:04	0.026	0.012	41.8577	-87.6499
6/13/2016 15:03	0.021	0.012	41.8577	-87.6499
6/13/2016 15:02	0.018	0.012	41.8577	-87.6499
6/13/2016 15:01	0.019	0.012	41.8577	-87.6499
6/13/2016 15:00	0.017	0.012	41.8578	-87.6498
6/13/2016 14:59	0.016	0.012	41.8578	-87.6498
6/13/2016 14:58	0.016	0.012	41.8578	-87.6499
6/13/2016 14:57	0.015	0.012	41.8578	-87.6499
6/13/2016 14:56	0.017	0.012	41.8578	-87.6499
6/13/2016 14:55	0.016	0.012	41.8577	-87.6499
6/13/2016 14:54	0.018	0.012	41.8578	-87.6498
6/13/2016 14:53	0.018	0.012	41.8578	-87.6499
6/13/2016 14:52	0.018	0.012	41.8578	-87.6499
6/13/2016 14:51	0.017	0.012	41.8578	-87.6499
6/13/2016 14:50	0.019	0.012	41.8578	-87.6498
6/13/2016 14:49	0.018	0.012	41.8578	-87.6499
6/13/2016 14:48	0.017	0.012	41.8578	-87.65
6/13/2016 14:47	0.016	0.012	41.8578	-87.6499

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/13/2016 14:46	0.018	0.012	41.8578	-87.6499
6/13/2016 14:45	0.017	0.012	41.8578	-87.6499
6/13/2016 14:44	0.018	0.012	41.8578	-87.6499
6/13/2016 14:43	0.022	0.012	41.8578	-87.6499
6/13/2016 14:42	0.021	0.012	41.8578	-87.6499
6/13/2016 14:41	0.021	0.012	41.8578	-87.6499
6/13/2016 14:40	0.023	0.012	41.8578	-87.6499
6/13/2016 14:39	0.019	0.012	41.8578	-87.6499
6/13/2016 14:38	0.019	0.012	41.8578	-87.6498
6/13/2016 14:37	0.017	0.012	41.8578	-87.6498
6/13/2016 14:36	0.016	0.012	41.8578	-87.6498
6/13/2016 14:35	0.018	0.012	41.8578	-87.6499
6/13/2016 14:34	0.019	0.011	41.8578	-87.6498
6/13/2016 14:33	0.02	0.011	41.8578	-87.6499
6/13/2016 14:32	0.016	0.011	41.8578	-87.6499
6/13/2016 14:31	0.018	0.011	41.8578	-87.6499
6/13/2016 14:30	0.021	0.011	41.8578	-87.6499
6/13/2016 14:29	0.02	0.011	41.8578	-87.6498
6/13/2016 14:28	0.017	0.011	41.8578	-87.6498
6/13/2016 14:27	0.018	0.011	41.8578	-87.6499
6/13/2016 14:26	0.02	0.011	41.8578	-87.6499
6/13/2016 14:25	0.019	0.011	41.8578	-87.65
6/13/2016 14:24	0.018	0.011	41.8578	-87.6499
6/13/2016 14:23	0.017	0.011	41.8578	-87.65
6/13/2016 14:22	0.018	0.011	41.8578	-87.6499
6/13/2016 14:21	0.018	0.011	41.8578	-87.6498
6/13/2016 14:20	0.017	0.011	41.8578	-87.65
6/13/2016 14:19	0.016	0.011	41.8578	-87.65
6/13/2016 14:18	0.019	0.011	41.8578	-87.65
6/13/2016 14:17	0.018	0.011	41.8578	-87.6499
6/13/2016 14:16	0.018	0.011	41.8578	-87.6498
6/13/2016 14:15	0.02	0.011	41.8578	-87.6499
6/13/2016 14:14	0.017	0.011	41.8578	-87.6499
6/13/2016 14:13	0.02	0.011	41.8578	-87.6498
6/13/2016 14:12	0.017	0.011	41.8578	-87.6499
6/13/2016 14:11	0.018	0.011	41.8578	-87.6499
6/13/2016 14:10	0.017	0.011	41.8578	-87.6498
6/13/2016 14:09	0.017	0.011	41.8578	-87.6499
6/13/2016 14:08	0.017	0.011	41.8578	-87.6499
6/13/2016 14:07	0.017	0.011	41.8578	-87.6499
6/13/2016 14:06	0.018	0.011	41.8578	-87.6498

SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/13/2016 14:05	0.017	0.011	41.8578	-87.65
6/13/2016 14:04	0.024	0.01	41.8578	-87.65
6/13/2016 14:03	0.019	0.01	41.8578	-87.6499
6/13/2016 14:02	0.02	0.01	41.8578	-87.6499
6/13/2016 14:01	0.02	0.01	41.8578	-87.6498
6/13/2016 14:00	0.02	0.01	41.8578	-87.6499
6/13/2016 13:59	0.021	0.01	41.8578	-87.6499
6/13/2016 13:58	0.02	0.01	41.8578	-87.6499
6/13/2016 13:57	0.02	0.01	41.8578	-87.6498
6/13/2016 13:56	0.024	0.01	41.8578	-87.6498
6/13/2016 13:55	0.019	0.01	41.8578	-87.6498
6/13/2016 13:54	0.018	0.01	41.8578	-87.6498
6/13/2016 13:53	0.018	0.01	41.8578	-87.6498
6/13/2016 13:52	0.02	0.01	41.8578	-87.6498
6/13/2016 13:51	0.018	0.01	41.8578	-87.6498
6/13/2016 13:50	0.021	0.01	41.8578	-87.6499
6/13/2016 13:46	0.019	0.009	41.8578	-87.6499
6/13/2016 13:45	0.02	0.009	41.8578	-87.6499
6/13/2016 13:44	0.021	0.009	41.8578	-87.6499
6/13/2016 13:43	0.021	0.009	41.8578	-87.6499
6/13/2016 13:42	0.022	0.009	41.8578	-87.6499
6/13/2016 13:41	0.019	0.009	41.8578	-87.6499
6/13/2016 13:40	0.021	0.009	41.8578	-87.6499
6/13/2016 13:39	0.02	0.009	41.8578	-87.6499
6/13/2016 13:38	0.02	0.009	41.8578	-87.6499
6/13/2016 13:37	0.02	0.009	41.8578	-87.6499
6/13/2016 13:36	0.021	0.009	41.8577	-87.6499
6/13/2016 13:35	0.019	0.009	41.8577	-87.6499
6/13/2016 13:34	0.02	0.009	41.8577	-87.65
6/13/2016 13:33	0.02	0.009	41.8577	-87.65
6/13/2016 13:32	0.02	0.009	41.8577	-87.65
6/13/2016 13:31	0.019	0.009	41.8577	-87.65
6/13/2016 13:30	0.019	0.009	41.8577	-87.65
6/13/2016 13:29	0.02	0.009	41.8577	-87.65
6/13/2016 13:28	0.019	0.009	41.8577	-87.65
6/13/2016 13:27	0.018	0.009	41.8577	-87.65
6/13/2016 13:26	0.02	0.009	41.8577	-87.65
6/13/2016 13:25	0.019	0.009	41.8577	-87.65
6/13/2016 13:24	0.019	0.009	41.8578	-87.6499
6/13/2016 13:23	0.018	0.009	41.8578	-87.6499
6/13/2016 13:22	0.021	0.009	41.8578	-87.6499

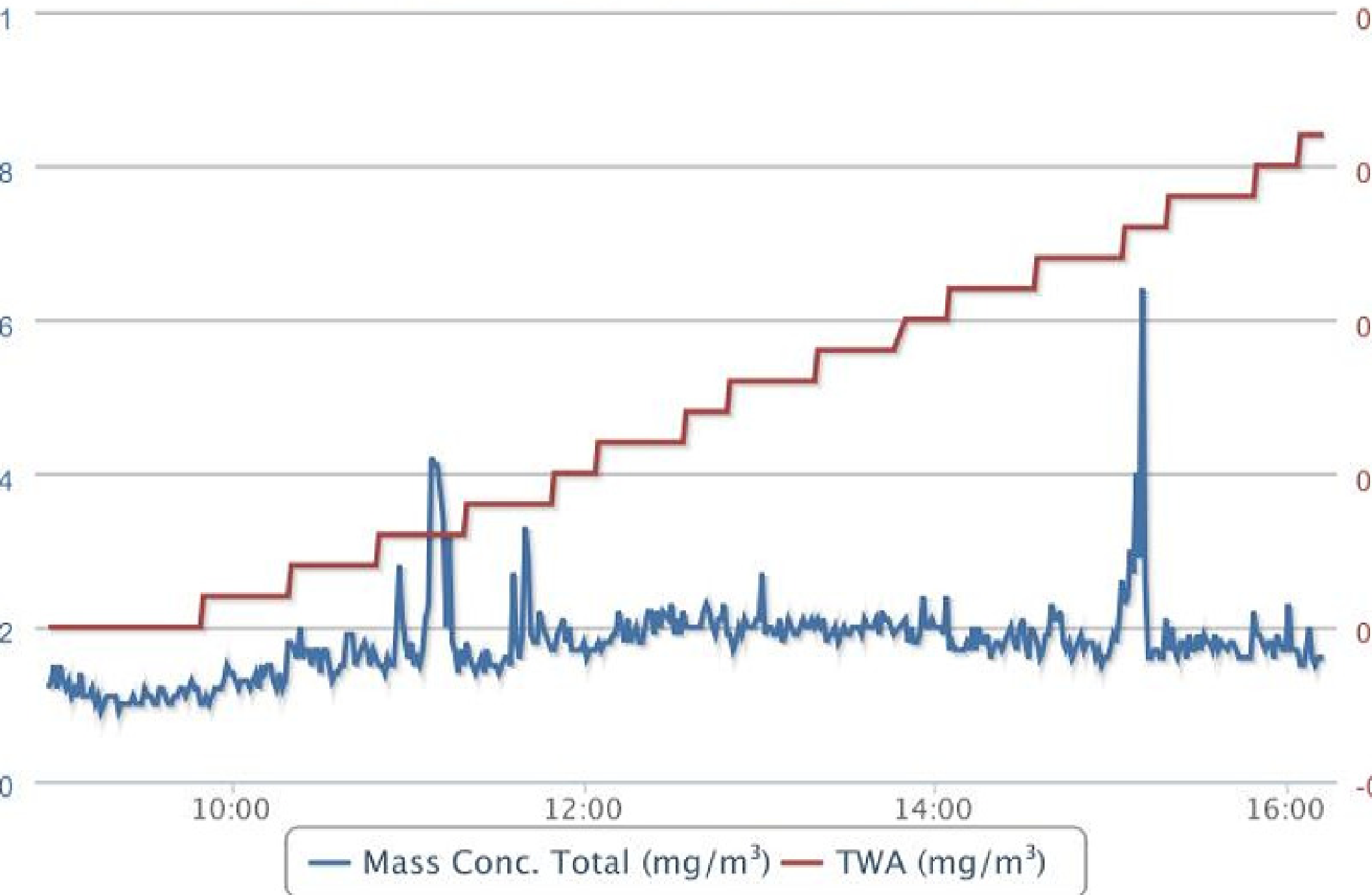
SUMMARY OF AIR MONITORING RESULTS

BNSF SANGAMON ROW
06-13-2016 to 06-16-2016

Timestamp (GMT-5)	Mass Conc. Total (mg/m ³)	TWA (mg/m ³)	Latitude	Longitude
6/13/2016 13:21	0.02	0.009	41.8578	-87.6499
6/13/2016 13:20	0.021	0.009	41.8578	-87.6499
Minimum	0.009	0.00	NA	NA
Average	0.0177	0.0068	NA	NA
Maximum	0.64	0.016	NA	NA
95% UCL	0.0196	NA	NA	NA
<p>Note: Yellow highlighted concentrations are above 75% action level concentration of 0.026 mg/m³.</p>				
<p>Orange highlighted concentrations are above 100% action level concentration of 0.035 mg/m³.</p>				

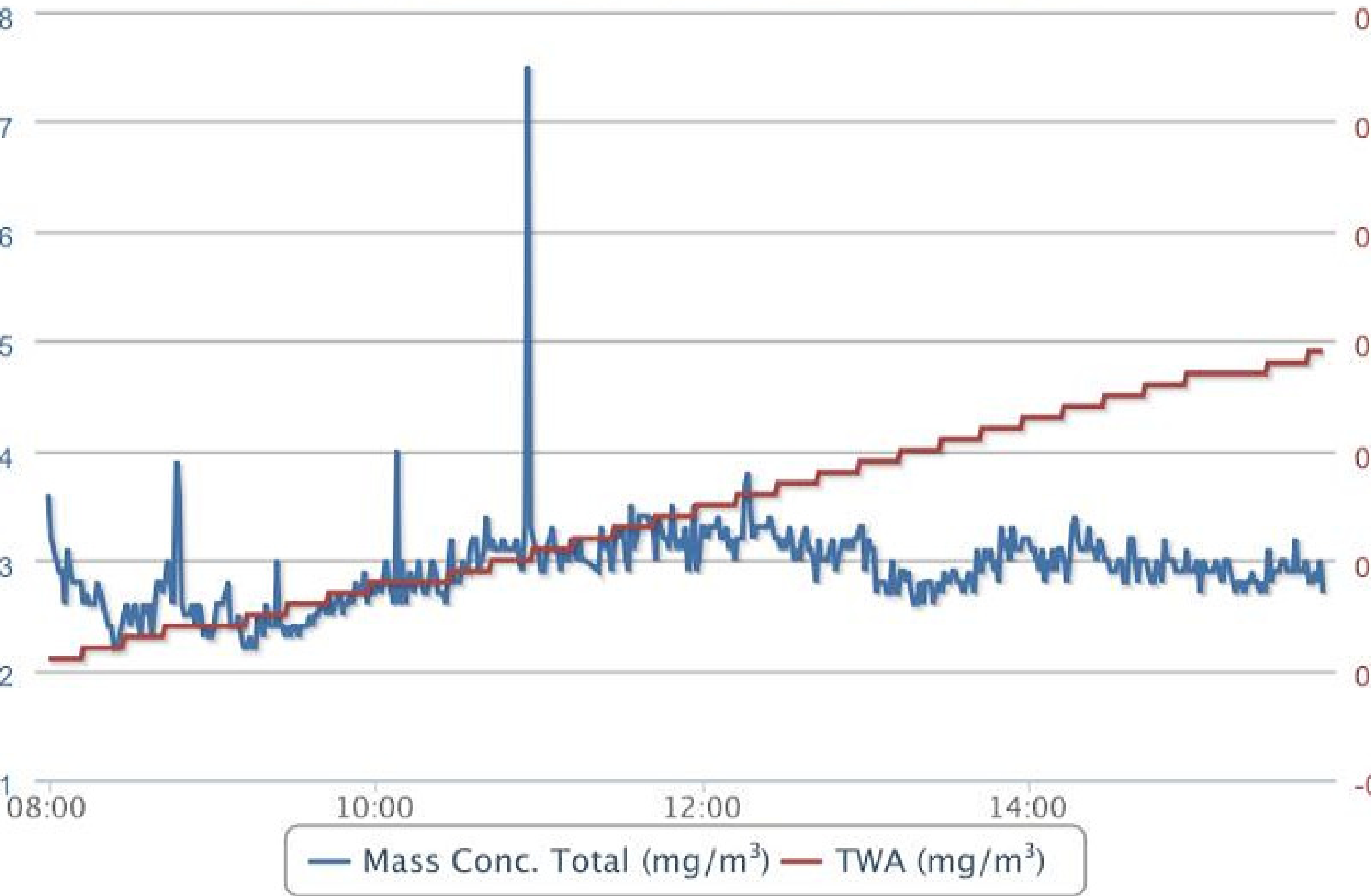
TF0A185652

June 13, 2016 08:00 to June 13, 2016 17:00 (GMT-5)



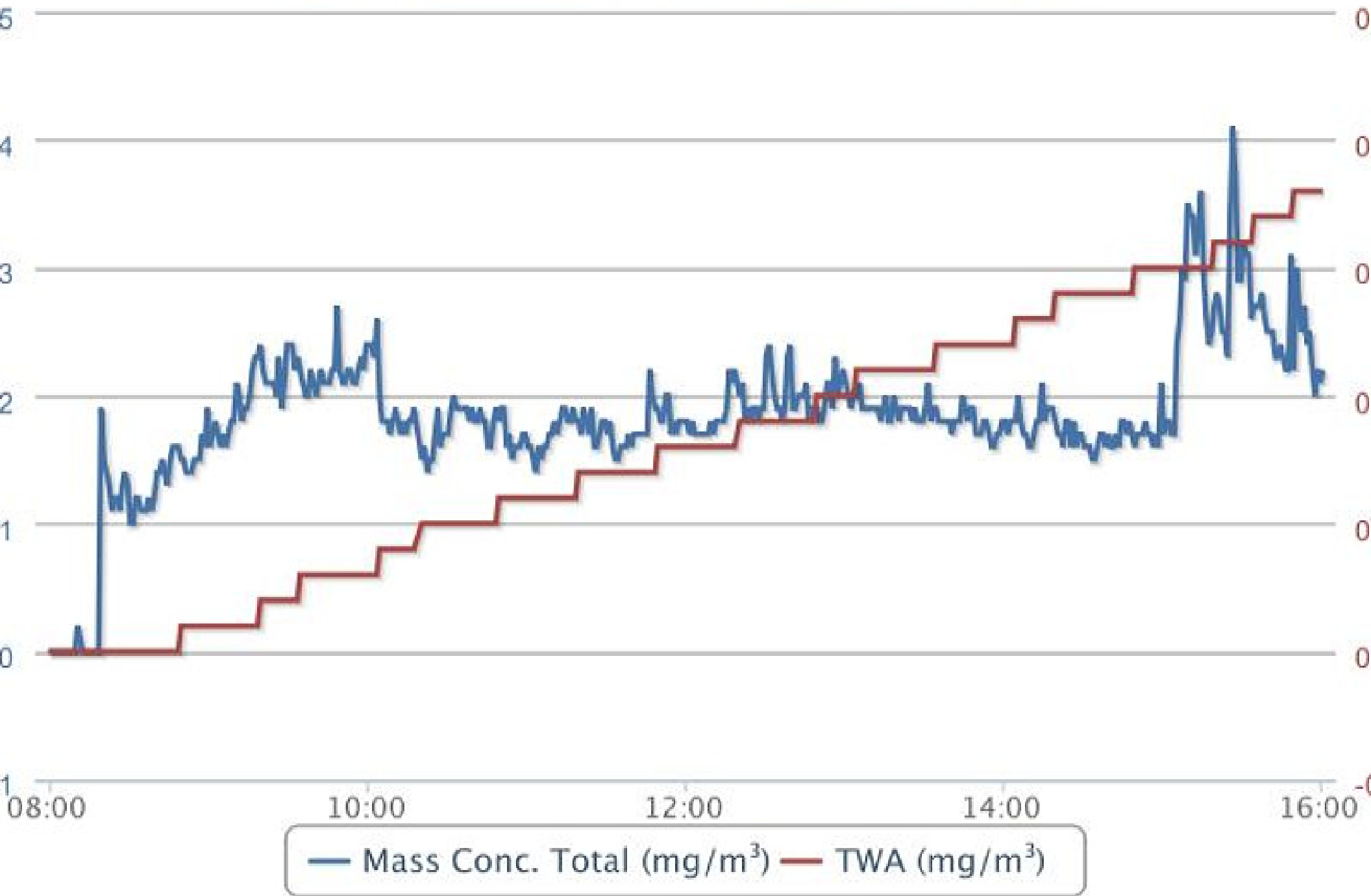
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June 14, 2016 08:00 to June 14, 2016 17:00 (GMT-5)



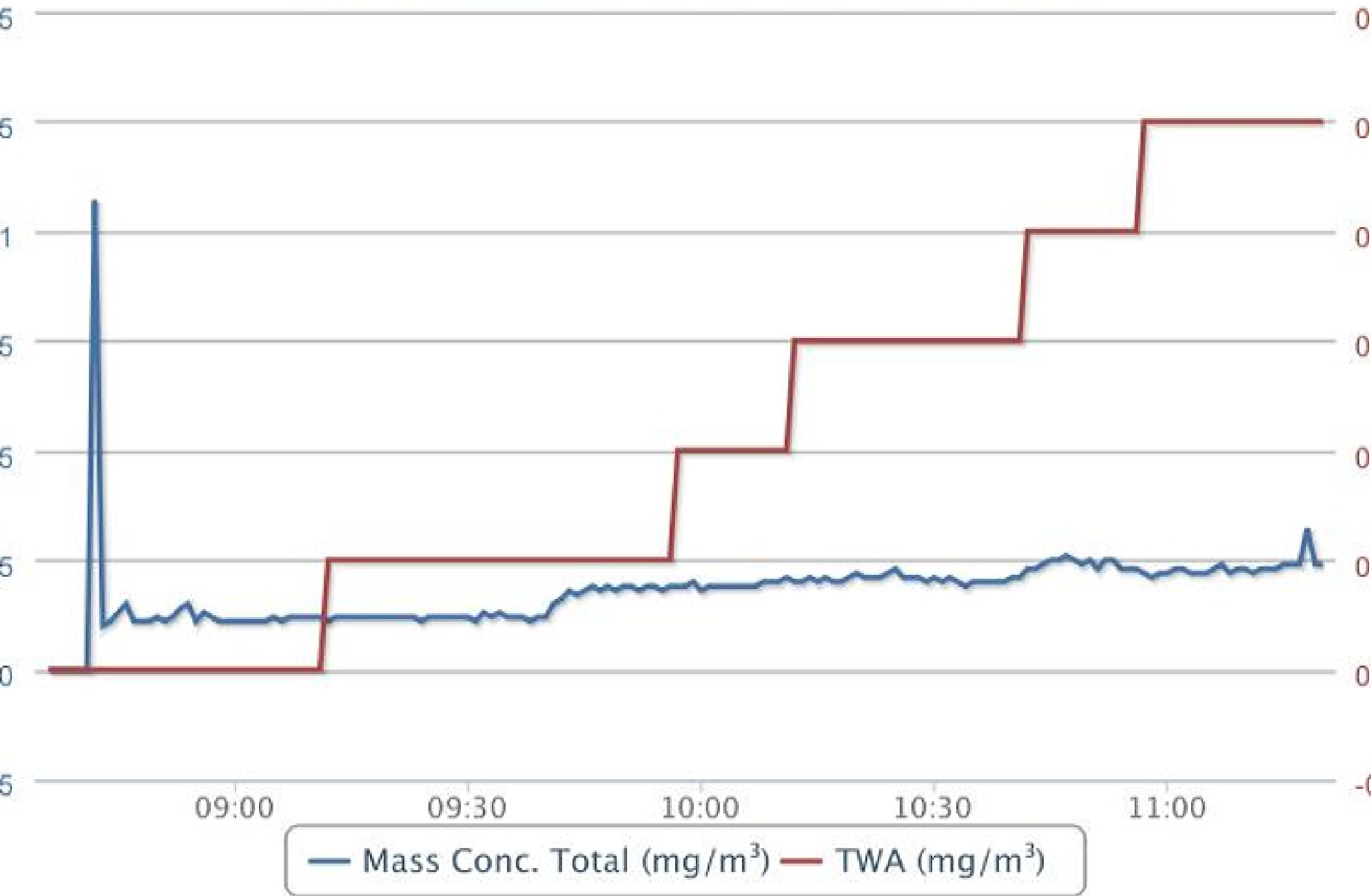
TF0A185652

June 15, 2016 08:00 to June 15, 2016 17:00 (GMT-5)



TF0A185652

June 16, 2016 08:00 to June 16, 2016 17:00 (GMT-5)



**AIR MONITORING PLAN
LOEWENTHAL METALS REMOVAL SITE
CHICAGO, COOK COUNTY, ILLINOIS**

Prepared For

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Emergency Response Branch
Region V
77 West Jackson Boulevard
Chicago, IL 60604-3507

Prepared By

WESTON SOLUTIONS, INC.
750 East Bunker Court, Suite 500
Vernon Hills, IL 60061

Date Prepared	May 14, 2013
TDD Number	S05-0001-1304-012
Document Control Number	2123-4H-BDQL
Contract Number	EP-S5-06-04
START Project Manager	Tonya Balla
Telephone Number	(847) 918-4094
U.S. EPA On-Scene Coordinator	Steve Faryan

**AIR MONITORING PLAN
LOEWENTHAL METALS REMOVAL SITE
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77 West Jackson Boulevard
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WESTON SOLUTIONS, INC.
750 East Bunker Court, Suite 500
Vernon Hills, IL 60061

May 14, 2013

Prepared by: _____
Trenna Seilheimer
WESTON START Member

Date: _____

Reviewed by: _____
Tonya Balla
WESTON START Project Manager

Date: _____

Approved by: _____
Steve Faryan
U.S. EPA On-Scene Coordinator

Date: _____

TABLE OF CONTENTS

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Figure 1	Site Location Map
Figure 2	Site Features Map

1. INTRODUCTION

The U.S. Environmental Protection Agency (EPA) has tasked Weston Solutions, Inc. (WESTON[®]), under the Superfund Technical Assessment and Response Team (START) contract, to perform air monitoring during removal activities at the Loewenthal Metals Site (Site), Chicago, Cook County, Illinois. The EPA has committed to conducting air monitoring during removal activities to ensure the safety of onsite workers and to ensure that offsite migration of fugitive emissions from the removal activities does not adversely affect neighboring residential and commercial areas.

This Air Monitoring Plan (AMP) describes the design, setup, and operation of air monitoring systems that START will implement during the Site removal activities. During removal activities, START will perform real-time air monitoring to document the levels of volatile organic compounds (VOCs) and particulates (dust) in the ambient air in and around the Site.

1.1 SITE DESCRIPTION

The Site is located at 947 West Cullerton Street in Chicago, Cook County, Illinois (**Figure 1**). The coordinates of the Site are 41°51'19" North latitude and 87°39'0.6" West longitude. The Site is bordered to the north by West Cullerton Street, with residential properties beyond; to the east by a recreational trail and South Sangamon Street, with railroad tracks and commercial properties beyond; and to the south and west by residential properties (**Figure 2**). The Site currently consists of an empty lot with a grass surface cover occupying approximately 0.42 acre. The southern portion of the Site is elevated approximately 4 to 5 feet above grade and contains evidence of a concrete foundation. This elevated area includes the remnants of an abandoned railroad spur that served a former smelting facility at the Site. The Site is unsecured.

Sensitive populations located within 1 mile of the Site include numerous residential properties, two elementary schools, one high school, and two churches.

1.2 SITE HISTORY

Based on historical aerial photographs, the Site contained a railroad spur, and a large smelting facility operated by the Loewenthal Metals Corporation during the 1940s. In the *1940 Standard Metal Directory*, Loewenthal Metals Corporation is listed as an aluminum, antimonial lead, and zinc smelter as well as a Babbitt metal and solders manufacturer and an ingot metal and scrap metal dealer. The company also is listed in the *1948-49 Standard Metal Directory* as an aluminum and battery lead smelter, scrap iron and metal dealer, and importer and exporter of scrap metal. The smelter ceased operations in the early 1950s. Additional information regarding the demolition of the smelting facility is not available.

The Site is one of 464 potential unknown battery lead, babbitt metals, and solder smelters identified in an April 2001 report by William P. Eckel. The smelters were identified based on historical literature searches for potential smelters and cross-checking of the findings against EPA and state environmental databases. On July 15, 2006, the Illinois Environmental Protection Agency (IEPA) conducted a Site reconnaissance to determine current Site conditions. During the Site reconnaissance, the IEPA observed that Site access was completely unrestricted. The IEPA also observed evidence of transients living on the Site property. IEPA screened surface soil at 12 locations using an X-Ray Fluorescence (XRF) analyzer. Readings revealed arsenic, copper, manganese, and zinc at levels exceeding three times background levels. Lead readings exceeded the EPA Regional Screening Level (RSL) for residential soil of 400 parts per million.

Based on the Site reconnaissance results, the IEPA referred the Site to the EPA for consideration of a time-critical removal action.

On November 27, 2012, EPA OSC Faryan, EPA FIELDS Team, and WESTON START personnel arrived at the Site to conduct the site assessment. WESTON START and EPA FIELDS Team collected samples from 69 soil intervals from 19 soil borings on Site. Samples from each interval were screened for lead and arsenic using XRF analyzers. Based on the site assessment XRF field screening results, arsenic and lead readings exceeded the EPA RSLs for residential and industrial soil and lead readings exceeded the 40 Code of Federal Regulations (CFR), Part 745 for unoccupied residential soil. From those intervals, 22 soil samples (19

investigative and 3 duplicate samples) were collected and analyzed for pH and Resource Conservation and Recovery Act (RCRA) metals plus copper, manganese, and zinc. Additionally, three soil samples were analyzed for toxicity characteristic leaching procedure (TCLP) metals, target compound list (TCL) pesticides, PCBs, TCL VOCs, and TCL semivolatiles (SVOCs). One duplicate sample was analyzed for TCL VOCs only. One concrete sample was analyzed for pH and RCRA metals plus copper, manganese, and zinc. Based on site assessment soil sample analytical results, lead concentrations exceeded the EPA RSLs for residential and industrial soil and the 40 CFR, Part 745 for unoccupied residential soil. In addition, the following chemicals were detected at concentrations exceeding the EPA RSLs for residential and industrial soil: arsenic, copper, lead, mercury, and zinc. TCLP lead also was detected at concentrations exceeding the screening criterion deeming it a hazardous waste. Based on the site assessment, the following chemicals were detected in the concrete sample: arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, selenium, silver, and zinc.

1.3 PROJECT DESCRIPTION

The removal project will consist of excavation, treatment and offsite disposal of contaminated soils from the Site as well as sampling of nearby properties for lead contamination. Site activities will commence sometime in 2013, and are anticipated to last approximately 2 months.

2. AIR MONITORING PLAN

During the removal activities, the objectives of the air monitoring at the Site are to:

- Collect and record meteorological data including temperature, wind direction, wind speed; and current weather conditions;
- Using MultiRAE, DataRAM 4 (DR-4), and Personal DataRAM (PDR), to monitor for offsite migration of VOCs and particulates to (a) ensure that the perimeter action levels are not exceeded and (b) assess the need for implementation of engineering controls; and
- Using MultiRAE, DR-4, and PDR, to monitor for VOCs and particulates in work zones to ensure worker protection and that proper PPE is being utilized.

To accomplish these objectives, the ambient air monitoring will consist of the following major components: (1) meteorological monitoring and (2) real-time ambient air monitoring.

2.1 METEOROLOGICAL MONITORING

Meteorological data will be obtained daily from the National Weather Service (NWS) website that provides current weather conditions at the Chicago Midway Airport. The data obtained will include:

- Temperature (°F)
- Wind Direction
- Wind Speed
- Current Weather Conditions (i.e.; Partly Cloudy, Partly Sunny)

2.2 PERIMETER AIR STATIONS

During the removal activities, the AMP will be designed to continuously monitor particulate concentrations at up to three locations; based on work zones, wind direction, and sensitive populations (*e.g.*; two locations downwind and one location upwind). The equipment selected to conduct particulate monitoring are the DR-4 and PDR which are capable of monitoring for particulates down to 0.1 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and 0.001 milligrams per cubic meter (mg/m^3), respectively.

The specific monitoring locations will be determined by EPA, START, and ERRS personnel prior to the initiation of removal activities each day. The monitoring stations will be adjusted, as needed, to adapt to changes in sensitive population needs, wind direction, and/or the locations of Site activities. The stations may also be moved short distances as needed to avoid proximity to onsite truck traffic and offsite traffic patterns and other activities.

Each air monitoring station will consist of weather-resistant DR-4 and PDR units that will continuously monitor the ambient air for particulate content. Each DR-4 and PDR unit will include a data logger, built-in radio frequency modem, communications antenna, and battery. During each workday, all monitoring equipment will be powered by internal equipment batteries. Batteries for the equipment will be replaced at the start of each day.

START personnel will review the monitoring data collected from each of the DR-4 and PDR units on a daily basis. Data irregularities and/or problems will be identified, flagged, and investigated. Each DR-4 and PDR unit will be calibrated at the start of each day and calibration

logs will be kept for each unit. At the end of the project, all data will be reviewed for accuracy and the final database will be kept with the site files.

2.3 MULTIRAE MONITORING

The equipment selected to conduct total VOC monitoring is the RAE Systems, Inc. MultiRAE multi-gas monitor which contains a photoionization detector (PID) capable of monitoring for total VOCs down to 0.1 ppm. The MultiRAE unit also contains sensors to measure oxygen (O₂), hydrogen sulfide (H₂S), lower explosive limit (LEL), and carbon monoxide (CO).

During removal activities, START personnel will conduct periodic VOC monitoring along the entire site perimeter a minimum of two times per day. More frequent periodic monitoring will be conducted along the downwind perimeter if warranted based on site activities or if site conditions change. Continuous real-time VOC monitoring will be conducted in the work zone.

START personnel will review the monitoring data collected from the MultiRAE on a daily basis. Data irregularities and/or problems will be identified, flagged, and investigated. The MultiRAE will be calibrated at the start of each day and calibration logs will be kept for each unit. At the end of the project, all data will be reviewed for accuracy and the final database will be kept with the site files.

2.4 ACTION LEVELS

Chemical hazards due to fugitive emissions from removal activities are anticipated to be low since the removal contractor will employ administrative and engineering controls to minimize fugitive emissions (i.e.; barricades, warning signs, and mitigative actions). It is possible, however, that removal activities could generate low levels of VOCs and particulates (dust) that migrate offsite.

Perimeter real-time monitoring action levels will be used as indicators of when excessive offsite migration of VOCs and particulates are occurring. Monitored ambient concentrations above the action levels will result in implementation of engineering controls to more stringently control emissions. These action levels are subject to change based on actual conditions encountered

during the removal operations, real-time monitoring results, and consultations with the On-Scene Coordinator (OSC). The perimeter action levels for VOCs and particulates are as follows:

- VOCs = 5 ppm above background sustained over 15 minutes
- Particulates = 2.5 ppm sustained over 15 minutes

Should VOC and/or particulates concentrations be detected greater than the action levels listed above, site activities will cease pending implementation of engineering controls to reduce the migration of the emissions. The MultiRAE, DR-4, and PDR units are equipped with alarms to notify onsite personnel when action levels have been exceeded.

Work zone air monitoring results will be compared to the NIOSH Recommended Exposure Limit (REL) or the OSHA 8-hour time weighted average (TWA) PEL, whichever is more restrictive. If the action level is exceeded, action will be taken as described in the Site-specific Health and Safety Plan (HASP) and as deemed necessary by the EPA OSC (such as upgrading personal protective equipment [PPE] or implementing engineering controls, such as dust suppression). The action levels to which air monitoring results will be compared are listed below.

Monitoring Parameter	NIOSH REL	OSHA PEL	Level D Action Level	Level C Action Level	Level B Action Level
LEL		10%	<5%	≥5 to 10%	>10% (evacuate)
O ₂		<19.5% and >23.5%	19.5 to 23.5%	>23.5%	<19.5%
CO	35 ppm (TWA) (40 mg/m ³)	50 ppm (TWA) (55 mg/m ³)	<25 ppm	≥25 to 250 ppm	>250 ppm
H ₂ S	10 ppm (10-min) (15 mg/m ³)	20 ppm (10-min)	<10 ppm	≥10 to 100 ppm	>100 ppm
Total Particulates	NA	5 mg/m ³ (resp.-TWA) 15 mg/m ³ (total-TWA)	<2.5 mg/m ³	≥2.5 to 25 mg/m ³	>25 mg/m ³
VOC*	1 ppm (ST) 0.1 ppm (TWA)	5 ppm (ST) 1 ppm (TWA)	<5 ppm	≥5 to 50 ppm	>50 ppm

Notes:

*Exposure limit given for VOCs is specific for benzene since it is most restrictive

% - percent

CO - Carbon Monoxide

H₂S - Hydrogen Sulfide

LEL - Lower explosive limit

mg/m³ - milligram per cubic meter

NA - Not applicable

NIOSH - National Institute of Occupational Safety and Health

REL - Recommended Exposure Limit

Resp. - Respiratory

O₂ - Oxygen

OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit

ppm - part per million

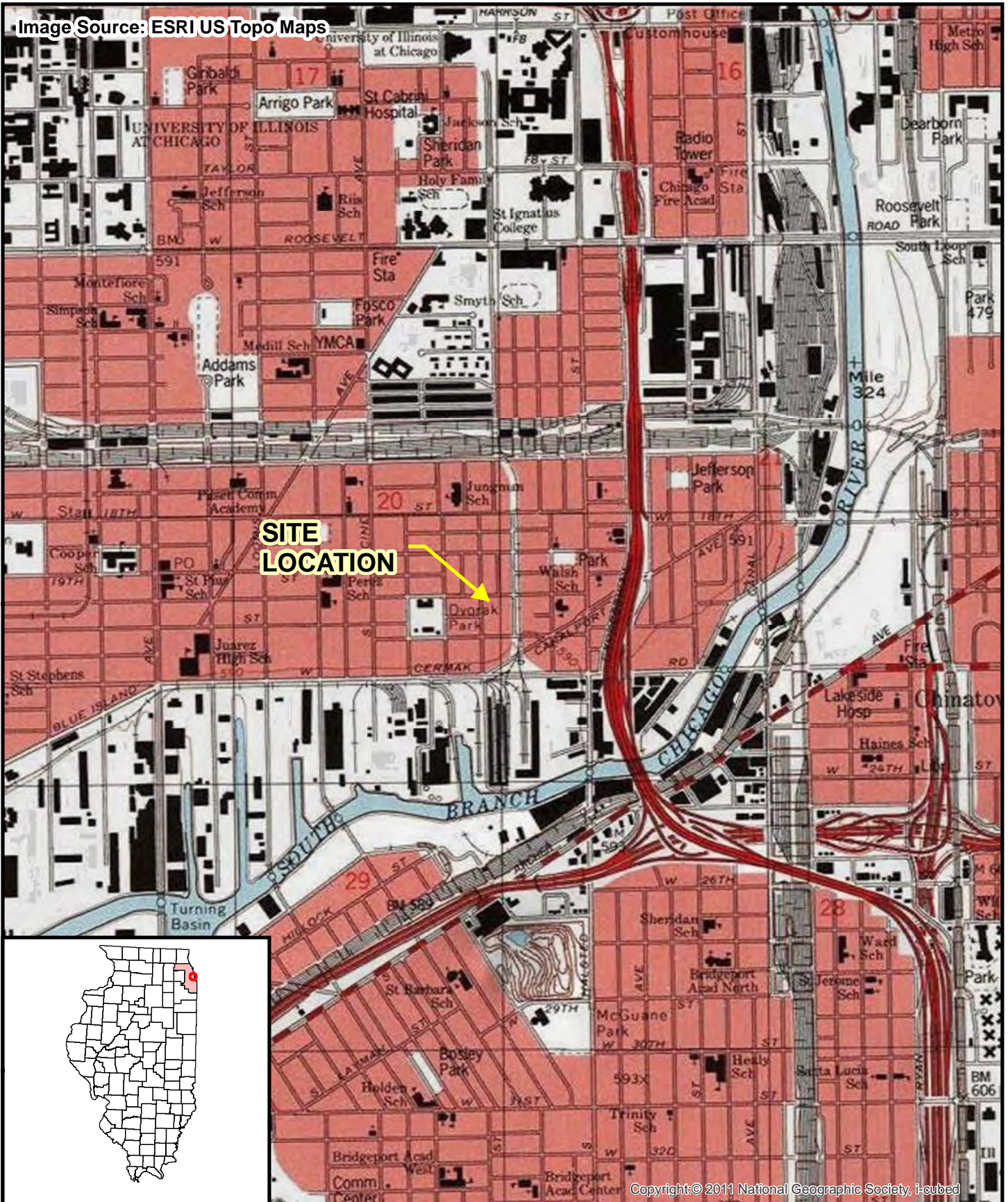
ST - Short Term

TWA - Time Weighted Average

VOC - Volatile Organic Compound

FIGURES

Image Source: ESRI US Topo Maps



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Legend

0 2,000 Feet



Prepared for:
U.S. EPA REGION V

Contract No.: EP-S5-06-04
TDD: S05-0001-1201-003
DCN: 1714-2A-BEYF



Prepared By:
WESTON SOLUTIONS, INC

750 E Bunker Ct
Suite 500
Vernon Hills, IL 60061

Figure 1
Site Location Map
Loewenthal Metals
Chicago, Cook County, Illinois

Copyright © 2011 National Geographic Society, i-cubed

Image Source: ESRI Bing Maps



Image courtesy of USGS Image courtesy of the IndianaMap © 2012 Microsoft Corporation © 2010 NAVTEQ © AND

File: D:\John_R_Street\mxd\F1_Site_Location.mxd, 21-Oct-10 13:46, mejacm

Legend

 Approximate Site Boundary

0 250 Feet



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Prepared By:
WESTON SOLUTIONS, INC

750 E Bunker Ct
Suite 500
Vernon Hills, IL 60061

Figure 2
Site Features Map
Loewenthal Metals
Chicago, Cook County, Illinois