## Final Design

NON RESPONSIVE

[redacted]

| Depth | QA - Lead | QA - Arsenic | QB - Lead | QB - Arsenic | QC - Lead | QC - Arsenic | QD - Lead | QD - Arsenic |
|---|---|---|---|---|---|---|---|---|
| 0-6 in | 2560 | 32.5 | 868 | 36.4 | 978 | 30 | 1140 | 19.9 |
| 6-12 in | 817 | 10.8 | 607 | 14.8 | 1380 | 22.1 | 149 | 9.1 |
| 12-18 in | 43.1 | 8.3 | 58 | 10.9 | 1850 J | 18.3 | 658 | 12.4 |
| 18-24 in | 110 | 10.2 | 34.6 | 6.6 | 1330 | 14.7 | 510 | 8.8 |
| 24-30 in | 63.7 | 10 | 62.2 | 7.3 | 1230 | 20.1 | 27.8 | 4.4 |

J - Estimated / U - Non-Detect / NS - Not Sampled / ^ - Laboratory Equivalent XRF Data

## Notes

**Sampling Notes**

QA: 1: 30" 2: 30" 3: 30" 4: 30" 5: 30"
QB: 1: 30" 2: 30" 3: 30" 4: 30" 5: native sand @ 24"
QC: 1: 30" 2: 30" 3: 30" 4: 30" 5: 30"
QD: 1: 30" 2: 30" 3: 30" 4: 30" 5: 30"

**Design Notes**

Excavation depth is 12 inches for quadrant A.
Excavation depth is 12 inches for quadrant B.
Excavation depth is 24 inches for quadrant C.
Excavation depth is 24 inches for quadrant D.

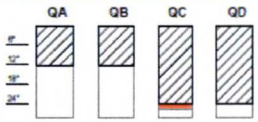
A visual barrier is to be placed at 24 inches in quadrant C.

**Property Zoning Category:**
**Residential**

Data from samples collected at other locations at the site suggest soils with lead concentrations greater than 2,000 mg/kg may exceed TCLP criteria.

Date of Aerial Image: February, 2013

## Cross Sections (not to scale)




## Zone 3 - Property Location Map

NON RESPONSIVE

[redacted]

## Design Information

**Access agreement:** 11/01/2018 (Under EPA Warrant)

**Date sampled:**
QA: 11/9/2018 QC: 11/9/2018
QB: 11/9/2018 QD: 11/9/2018

**Restoration agreement:**

**Quantities**

**Total Mechanical Excavation Volume:** 229 cu yd
**Total Manual Excavation Volume:** 25 cu yd

| Type | Units | QA | QB | QC | QD |
|---|---|---|---|---|---|
| Mechanical Excav. Vol. | cu yd | 33 | 79 | 28 | 89 |
| Manual Excav. Vol. | cu yd | 8 | 0 | 15 | 2 |
| Compacted Backfill Vol. | cu yd | 16 | 40 | 21 | 67 |
| Compacted Topsoil Vol. | cu yd | 24 | 40 | 23 | 24 |
| Sod Area | sq ft | 1,484 | 2,136 | 1,635 | 1,357 |
| Basal Barrier Needed | | No | No | Yes | No |

## Legend

- Property Boundary
- Yard Boundary
- Area to be Remediated
- Basal Visual Barrier Required
- Tree (Trunk Diameter in Inches)
- Tree Canopy
- Bushes
- Utility Pole / Fire Hydrant
- Tree Stumps

## Revisions/Review

| # | Date | Drawn By | QC'd By | Date |
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US SMELTER & LEAD REFINERY
LAKE COUNTY, EAST CHICAGO, INDIANA
EPA REGION 5 RAC 2

NON RESPONSIVE

[redacted]

Date Created: 4/26/2019 | Drawing #: 21

ST SulTRAC

## Final Design

NON RESPONSIVE

[redacted]

| Depth | Front - Lead | Front - Arsenic | Back - Lead | Back - Arsenic |
|---|---|---|---|---|
| 0-6 inches | 320 | 21.6 | 200 | 16.4 |
| 6-12 inches | 148 | 12.2 | 99.5 | 9.9 |
| 12-18 inches | 222 | 11.3 | 53 | 7.5 |
| 18-24 inches | 98 | 31 | 68.4 | 14.1 |
| 24-30 inches | 72.1 | 17 | 35.6 | 7.9 |

J - Estimated / U - Non-Detect / NS - Not Sampled / ^ - Laboratory Equivalent XRF Data

## Notes

**Sampling Notes**

Front: 1: 30" 2: 30" 3: 30" 4: 30" 5: 30"
Back: 1: 30" 2: 30" 3: refusal (rocks) @ 24" 4: 30" 5: 30"

**Design Notes**

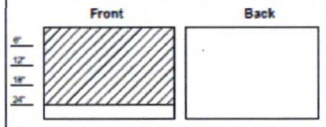
Excavation depth is 24 inches for the front yard.
Back yard requires no remediation.

**Property Zoning Category:**
**Residential**

Data from samples collected at other locations at the site suggest soils with lead concentrations greater than 2,000 mg/kg may exceed TCLP criteria.

Date of Aerial Image: February, 2013

## Cross Sections (not to scale)




## Zone 3 - Property Location Map

NON RESPONSIVE

[redacted]

## Design Information

**Access agreement:** 11/01/2018 (under EPA Warrant)

**Date sampled:**
F: 11/9/2018
B: 11/9/2018

**Restoration agreement:**

**Quantities**
**Total Mechanical Excavation Volume:** 97 cu yd
**Total Manual Excavation Volume:** 2 cu yd

| Type | Units | Front | Back |
|---|---|---|---|
| Mechanical Excavation Volume | cu yd | 97 | 0 |
| Manual Excavation Volume | cu yd | 2 | 0 |
| Compacted Backfill Volume | cu yd | 73 | 0 |
| Compacted Topsoil Volume | cu yd | 26 | 0 |
| Sod Area | sq ft | 1,427 | 0 |
| Basal Barrier Needed | | No | No |

## Legend

- Property Boundary
- Yard Boundary
- Area to be Remediated
- Tree (Trunk Diameter in Inches)
- Tree Canopy
- Bushes
- Utility Pole / Fire Hydrant
- Tree Stumps

## Revisions/Review

| # | Date | Drawn By | QC'd By | Date |
|---|---|---|---|---|
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US SMELTER & LEAD REFINERY
LAKE COUNTY, EAST CHICAGO, INDIANA
EPA REGION 5 RAC 2

NON RESPONSIVE

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Date Created: 4/26/2019 | Drawing #: 22

ST SulTRAC

## Final Design

NON RESPONSIVE

[redacted]

| Depth | Front - Lead | Front - Arsenic | Back - Lead | Back - Arsenic |
|---|---|---|---|---|
| 0-6 inches | 177 | 20.8 | 219 | 13.5 |
| 6-12 inches | 123 | 20.3 | 76.8 | 11.5 |
| 12-18 inches | 74.3 | 30.3 | 48.2 | 14.4 |
| 18-24 inches | 122 | 42.8 | 31.1 | 21.3 |
| 24-30 inches | 49.3 | 34 | 18.6 | 6.6 |

J - Estimated / U - Non-Detect / NS - Not Sampled / ^ - Laboratory Equivalent XRF Data

## Notes

**Sampling Notes**

Front: 1: 30" 2: 30" 3: 30" 4: 30" 5: refusal (roots) @ 15"
Back: 1: 30" 2: 30" 3: 30" 4: 30" 5: 30"

**Design Notes**

Excavation depth is 24 inches for the front yard.
Back yard requires no remediation.

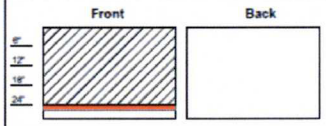
A visual barrier is to be placed at 24 inches in the front yard.

**Property Zoning Category:**
**Residential**

Data from samples collected at other locations at the site suggest soils with lead concentrations greater than 2,000 mg/kg may exceed TCLP criteria.

Date of Aerial Image: February, 2013

## Cross Sections (not to scale)




## Zone 3 - Property Location Map

NON RESPONSIVE

[redacted]

## Design Information

**Access agreement:** 11/01/2018 (under EPA Warrant)
**Date sampled:** Accesss Granted 2/21/2019
F: 11/8/2018
B: 11/8/2018
**Restoration agreement:**

**Quantities**
**Total Mechanical Excavation Volume:** 42 cu yd
**Total Manual Excavation Volume:** 9 cu yd

| Type | Units | Front | Back |
|---|---|---|---|
| Mechanical Excavation Volume | cu yd | 42 | 0 |
| Manual Excavation Volume | cu yd | 9 | 0 |
| Compacted Backfill Volume | cu yd | 31 | 0 |
| Compacted Topsoil Volume | cu yd | 19 | 0 |
| Sod Area | sq ft | 1,291 | 0 |
| Basal Barrier Needed | | Yes | No |

## Legend

- Property Boundary
- Yard Boundary
- Area to be Remediated
- Basal Visual Barrier Required
- Tree (Trunk Diameter in Inches)
- Tree Canopy

## Revisions/Review

| # | Date | Drawn By | QC'd By | Date |
|---|---|---|---|---|
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US SMELTER & LEAD REFINERY
LAKE COUNTY, EAST CHICAGO, INDIANA
EPA REGION 5 RAC 2

NON RESPONSIVE

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Date Created: 4/26/2019 | Drawing #: 23

ST SulTRAC

## Final Design

NON RESPONSIVE

[redacted]

## Notes

**Sampling Notes**

Front: 1: sand @ 12" 2: sand @ 13" 3: sand @ 12" 4: sand @ 12" 5: sand @ 12"
Back: 1: sand @ 7" 2: sand @ 7" 3: refusal (roots) @ 6" 4: sand @ 12" 5: sand @ 12"

**Design Notes**

Front yard requires no remediation.
Excavation depth is 6 inches for the back yard.

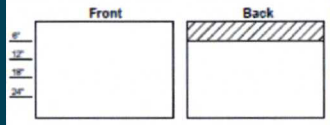
**Property Zoning Category:**

**Residential**

Data from samples collected at other locations at the site suggest soils with lead concentrations greater than 2,000 mg/kg may exceed TCLP criteria.

Date of Aerial Image: February, 2013

## Cross Sections (not to scale)




## Zone 3 - Property Location Map

NON RESPONSIVE

[redacted]

## Design Information

**Access agreement:**

**Date sampled:**

F: 5/25/2016
B: 5/25/2016

**Restoration agreement:**

**Quantities**

**Total Mechanical Excavation Volume:** 13 cu yd
**Total Manual Excavation Volume:** 21 cu yd

| Type | Units | Front | Back |
|---|---|---|---|
| Mechanical Excavation Volume | cu yd | 0 | 13 |
| Manual Excavation Volume | cu yd | 0 | 21 |
| Compacted Backfill Volume | cu yd | 0 | 0 |
| Compacted Topsoil Volume | cu yd | 0 | 34 |
| Sod Area | sq yd | 0 | 268 |
| Basal Barrier Needed | | No | No |

## Legend

- Property Boundary
- Yard Boundary
- Area to be Remediated
- Tree (Trunk Diameter in Inches)
- Tree Canopy

## Revisions/Review

| # | Date | Drawn By | QC'd By | Date |
|---|---|---|---|---|
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US SMELTER & LEAD REFINERY
LAKE COUNTY, EAST CHICAGO, INDIANA

NON RESPONSIVE

[redacted]

ST SulTRAC

| Depth | Front - Lead | Front - Arsenic | Back - Lead | Back - Arsenic |
|---|---|---|---|---|
| 0-6 inches | 396 | 20 J | 471 | 15 J |
| 6-12 inches | 284 | 18 J | 267 | 20 U |
| 12-18 inches | Native Sand (NS) | Native Sand (NS) | Native Sand (NS) | Native Sand (NS) |
| 18-24 inches | Native Sand (NS) | Native Sand (NS) | Native Sand (NS) | Native Sand (NS) |
| 24-30 inches | Native Sand (NS) | Native Sand (NS) | Native Sand (NS) | Native Sand (NS) |

J - Estimated / U - Non-Detect / NS - Not Sampled / * - Laboratory Equivalent XRF Data

[redacted]

# Amendment to Individual Plan

## Modification to Plan

Plan Name:
2019 USS Lead Zones 1 and 3 Health and Safety Plan (HASP)

Parsons has made the following modifications to the Health and Safety Plan (HASP) for the FY 2019 USS Lead Zone 2 UAO work. This specific modification is in addition to the global modifications.

Key Project Contacts in Section 11.2 are updated with the following contact information.

| Contact | Name | Number |
|---|---|---|
| EPA Project Manager | Sarah Rolfes | (312) 886-6551 |
| EPA Project Manager | Katherine Thomas | (312) 353-5878 |
| Parsons Project Manager | Randy Palachek | Office (512) 719-6006<br>NON RESPONSIVE [redacted] |
| Parsons Corporate Health and Safety (H&S) Manager | Darrell Pruitt | (812) 264-2980 |
| Parsons Construction Manager (CM) | Mark DeLorimier | (713) 501-2178 |
| Parsons Field Manager and Site Safety Officer (SSO) | Keith Thompson | (312) 810-5016 |
| Z1&3 UAO Respondents: Atlantic Richfield Company, The Chemours Company FC, LLC, and E. I. du Pont de Nemours and Company, Program Manager | Sathya Yalvigi (Chemours) | Office (302) 773-4291<br>Cell NON RESPONSIVE [redacted] |
| Z1&3 UAO Respondents: Atlantic Richfield Company, The Chemours Company FC, LLC, and E. I. du Pont de Nemours and Company, Deputy Program Manager | Sebastian Harrison (Chemours) | Office (302) 773-1290<br>Cell NON RESPONSIVE [redacted] |
| Midwest Security Services | Scott Lambdin | (219) 775-1439 |
| Midwest Security Services | Howard Carpenter | (219) 309-5322 |
| East Chicago Gateway Partners, LLC (ECGP), Principal | Scott Aschoff | Office (856) 235 4079<br>Cell NON RESPONSIVE [redacted] |
| East Chicago Gateway Partners, LLC (ECGP), CEO | Rich Parrish, PG | Office (631) 269 8800 (ext 101)<br>Cell NON RESPONSIVE [redacted] |
| Test America Laboratory, Chicago | Jeff James | Cell NON RESPONSIVE [redacted] |
| Summit Environmental, LLC | Shawn Sanders | Cell [redacted] |
| US Ecology | Jeff Waszak | Cell [redacted] |

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PARSONS

# HEALTH AND SAFETY PLAN

## USS LEAD SUPERFUND SITE
## EAST CHICAGO, LAKE COUNTY, INDIANA

*Prepared for:*

East Chicago UAO PRP Group
70 West Madison Street
Chicago, IL 60602

*Prepared by:*

PARSONS

May 2018

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