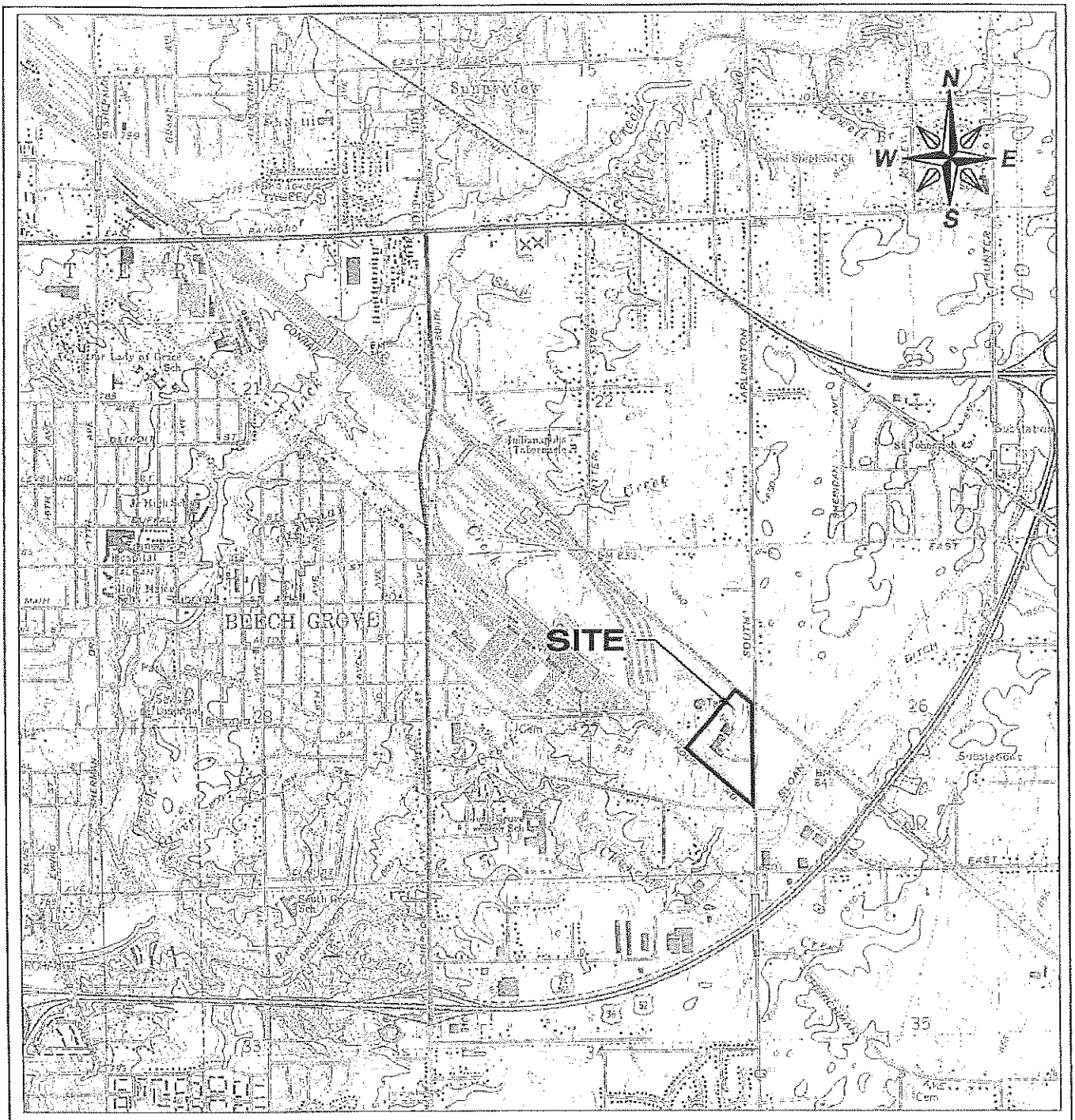
FIGURES



REF. U.S.G.S. 7 1/2 MINUTE
BEECH GROVE, IND
QUADRANGLE MAP

CORRECTIVE MEASURES DESIGN
REFINED METALS CORPORATION

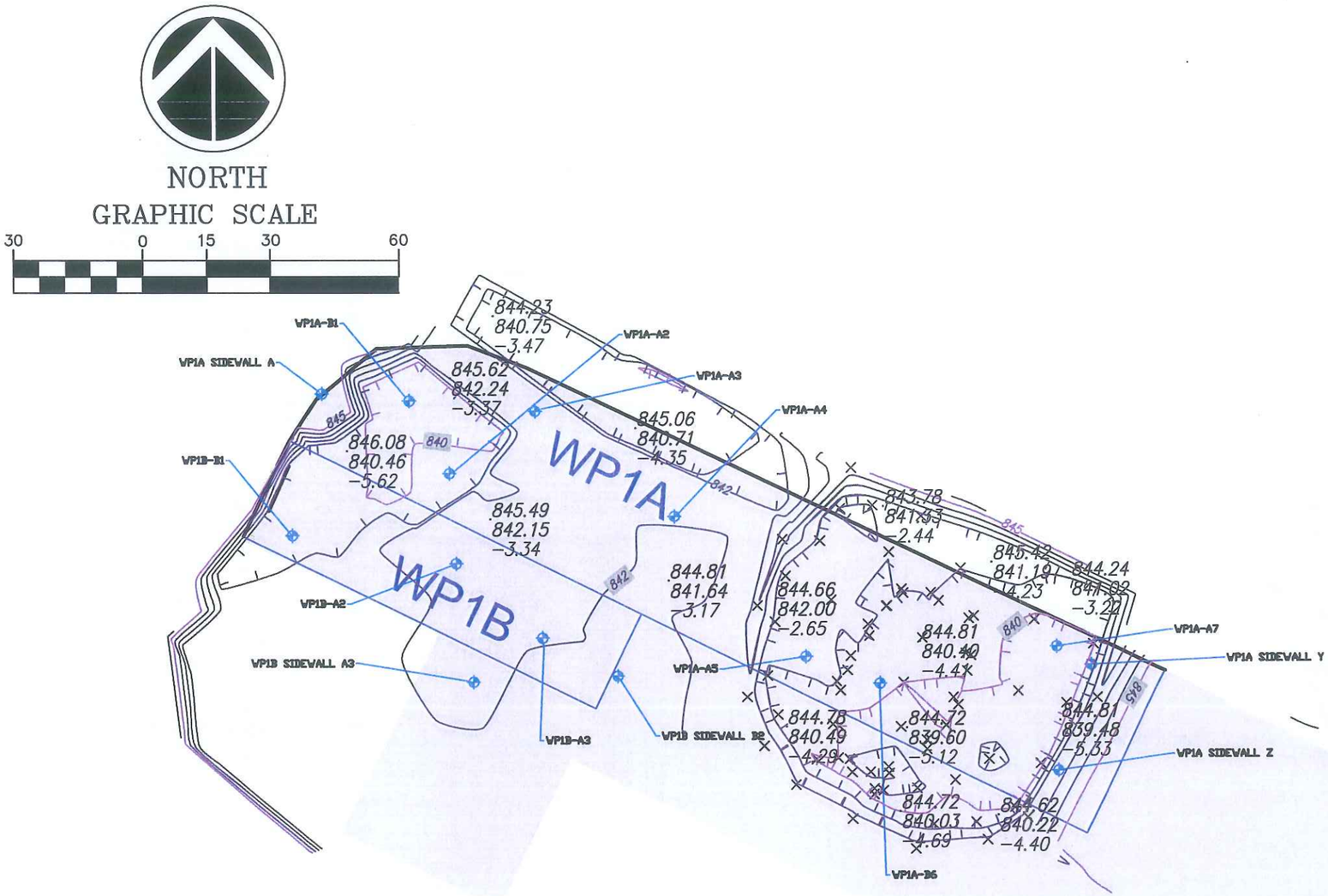
BEECH GROVE, INDIANA

Scale: 1"=2000'	SITE LOCATION MAP
Originated By: K.M.S.	
Drawn By: P.S.G.	
Checked By: S.W.K.	Advanced GeoServices Corp. 1055 Andrew Drive, Suite A West Chester, Pennsylvania 19380 (610) 840-9100 FAX: (610) 840-9199
Project Mgr: P.G.S.	
Dwg No. 2003-1046-05-02	
Issued:	Project No. 2003-1046-05 — FIGURE: 1

2000 0 2000 4000

SCALE IN FEET

J:\REFINED METALS\DRAWINGS\2003-1046-05\2003-1046-05-02



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
WP1A Excavation Volume	1.00	1.00	618.12sq.yd	713 Cu. Yd.	0 Cu. Yd.	713 Cu. Yd.<Cut>
WP1A 9-15-2015EXCAVATION AREA	1.00	1.00	611.89sq.yd	791 Cu. Yd.	2 Cu. Yd.	789 Cu. Yd.<Cut>
WP1B Excavation Volume	1.00	1.00	704.21sq.yd	894 Cu. Yd.	0 Cu. Yd.	894 Cu. Yd.<Cut>
WP1A INSIDE DESIGN AREA	1.00	1.00	469.79sq.yd	555 Cu. Yd.	0 Cu. Yd.	555 Cu. Yd.<Cut>
Totals			2404.03sq.yd	2954 Cu. Yd.	2 Cu. Yd.	2951 Cu. Yd.<Cut>

HWMU Area WP1A Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP1A	XRF-WP1A/3.5-4.0/B1	XRF	15.4	ND	5.0	ND	5.0
WP1A	XRF-WP1A/4.0-4.5/B1	XRF	17.0	ND	4.5	ND	5.1
WP1A	XRF-WP1A/2.5-3.0/A2	XRF	66.9	ND	9.2	ND	5.0
WP1A	XRF-WP1A/3.0-3.5/A2	XRF	41.0	ND	7.7	ND	5.9
WP1A	XRF-WP1A/2.5-3.0/A3	XRF	71.9	ND	3.3	ND	7.6
WP1A	XRF-WP1A/3.0-3.5/A3	XRF	48.7	ND	8.5	ND	7.4
WP1A	XRF-WP1A/2.5-3.0/A4	XRF	26.0	ND	6.2	ND	5.9
WP1A	XRF-WP1A/3.0-3.5/A4	XRF	19.0	ND	6.5	1.2	4.7
WP1A	WP1A/2.5-3.0/A5	Lab	34.4	U (1.1)	7.6	U (0.56)	U (1.1)
WP1A	WP1A/3.0-3.5/A5	Lab	222.0	1.0	6.9	U (0.5)	U (1)
WP1A	WP1A/3.0-3.5/B6	Lab	7.7	U (1.1)	8.7	U (0.57)	U (1.1)
WP1A	WP1A/3.5-4.0/B6	Lab	9.0	U (1.1)	10.6	U (0.56)	U (1.1)
WP1A	WP1A/2.5-3.0/A7	Lab	7.5	U (0.97)	6.8	U (0.48)	U (0.97)
WP1A	WP1A/3.0-3.5/A7	Lab	11.7	U (0.97)	8.2	U (0.49)	U (0.97)
WP1A	XRF-WP1A/Sidewall-A	XRF	138.2	ND	3.3	ND	5.7
WP1A	WP1A/Sidewall-Y	Lab	7.4	U (1.1)	10.1	0.54	U (1.1)
WP1A	WP1A/Sidewall-Z	Lab	27.4	U (1)	9.9	0.54	U(1)

HWMU Area WP1B Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP1B	XRF-WP1B/2.0-2.5/B1	XRF	16.0	ND	5.1	ND	6.0
WP1B	XRF-WP1B/2.5-3.0/B1	XRF	12.9	ND	4.7	ND	5.3
WP1B	WP1B/1.0-1.5/A2	Lab	1,740	15.6	12.6	1.2	2.6
WP1B	XRF-WP1B/1.5-2.0/A2	XRF	18.9	ND	7.4	ND	6.7
WP1B	WP1B/1.0-1.5/A3	Lab	34.3	U (1.2)	12.8	U (0.61)	U (1.2)
WP1B	XRF-WP1B/1.5-2.0/A3	XRF	59.0	ND	7.5	ND	5.0
WP1B	XRF-WP1B/Sidewall-A3	XRF	59.7	ND	3.8	ND	7.3
WP1B	XRF-WP1B/Sidewall-B2	XRF	20.6	ND	3.5	ND	5.7

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).
Sidewall samples are noted as such in sample ID.
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.
For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.
Ten sidewall locations initially laid out in WP1A (A - J). Final excavation depth and extent in WP1A and surrounding areas resulted in no sidewall remaining to be sampled in may locations. Sidewall results shown for locations remaining inside pre-defined limits of the HWMU.

NOTES:
1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–CONSTRUCTION SURVEY, WP1A & WP1B EXCAVATION VOLUME.
2. CONTOURS SHOWN AT 1–FT INTERVALS.
3. *DENOTES FIELD LOCATED SAMPLE LOCATION.

LEGEND:

HWMU PRE–DEFINED LIMITS

EXCAVATION AREA PRE–DEFINED LIMITS

POST–EXCAVATION SAMPLE LOCATION

◆ SIDEWALL A

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
WP1A & WP1B

ADVANCED GeoServices
Engineering for the Environment. Planning for People.™
1055 ANDREW DRIVE, SUITE A
WEST CHESTER, PENNSYLVANIA 19380
Tel: 610.840.9100 Fax: 610.840.9199 Web: www.advancedgeoservices.com

Scale:	1" = 30'
Drawn By:	JSD/SDW
Checked By:	PGS
Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003–1046
Drawing Date:	7/15/2016
Sheet No.:	2 OF 33
Revision Number:	0

FIGURE 2

F:\Projects\2003\2003046-RMC P Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\HWMU\ACAD-WP1A WP1B EXCAVATION VOLUME REVISF^ ^ 70_recover-Model.dwg

NORTH

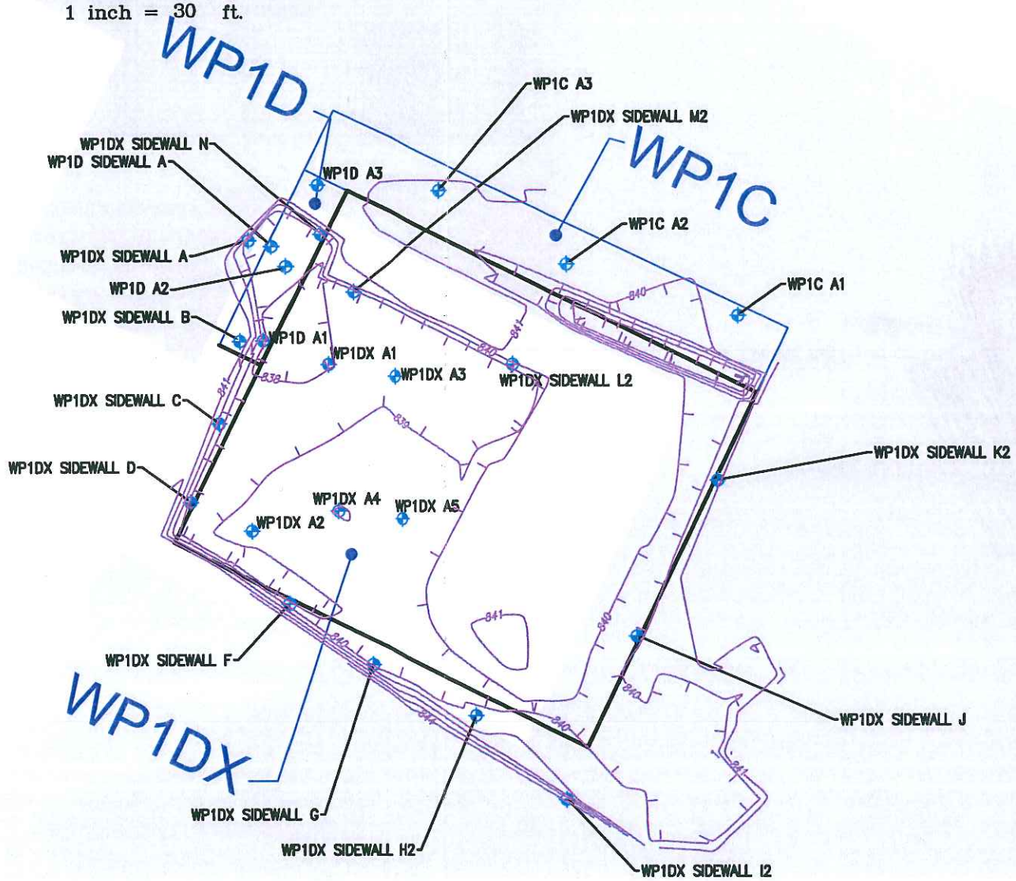
GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.

Cut/Fill Summary

Name	2d Area	Cut	Fill	Net
WP1D EXCAVATION VOLUME	65.75sq.yd	125 Cu. Yd.	0 Cu. Yd.	125 Cu. Yd.<Cut>
WP1C EXCAVATION VOLUME	192.08sq.yd	291 Cu. Yd.	0 Cu. Yd.	291 Cu. Yd.<Cut>
WP1DX EXCAVATION VOLUME	1054.90sq.yd	1777 Cu. Yd.	0 Cu. Yd.	1777 Cu. Yd.<Cut>
Totals	1312.74sq.yd	2193 Cu. Yd.	0 Cu. Yd.	2193 Cu. Yd.<Cut>



NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, WP1C, WP1D & WP1DX EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVAL.

LEGEND:

HWMU PRE–DEFINED LIMITS

EXCAVATION AREA PRE–DEFINED LIMITS

◆ SIDEWALL A — POST–EXCAVATION SAMPLE LOCATION

HWMU Area WP1C Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP1C	XRF-WP1C/1.3-1.8/A1	XRF	18.4	ND	7.9	1.8	5.3
WP1C	XRF-WP1C/1.8-2.3/A1	XRF	493.1	ND	2.5	ND	5.7
WP1C	XRF-WP1C/1.3-1.8/A2	Lab	6.8	U (1.1)	9.3	4.0	U (1.1)
WP1C	XRF-WP1C/1.8-2.3/A2	Lab	6.2	U (1.1)	7.5	1.3	U (1.1)
WP1C	XRF-WP1C/1.3-1.8/A3	Lab	7.8	U (0.97)	8.6	U (0.48)	U (0.97)
WP1C	XRF-WP1C/1.8-2.3/A3	Lab	15.1	U (1.1)	7.6	U (0.53)	U (1.1)

Six sidewall locations initially laid out in WP1C (A - F). Final excavation depth and extent in WP1C and surrounding areas resulted in no sidewall remaining to be sampled in many locations. Sidewall results shown for locations remaining inside pre-defined limits of the HWMU.

HWMU Area WP1D Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
WP1D	XRF-WP1D/3.3-3.8/A1	XRF	30.0	2.8	6.5	2.2	ND
WP1D	WP1D/3.8-4.3/A1	Lab	430.0	1.4	8.4	0.81	U (1)
WP1D	XRF-WP1D/3.3-3.8/A2	XRF	39.3	1.6	6.1	ND	ND
WP1D	XRF-WP1D/3.8-4.3/A2	XRF	39.4	0.5	3.9	0.1	ND
WP1D	WP1D/3.3-3.8/A3	Lab	515.0	3.2	11.7	1.4	U (1)
WP1D	WP1D/3.8-4.3/A3	Lab	325.0	1.9	10.6	1.1	U (1.1)
WP1D	XRF-WP1D-Sidewall-A	XRF	180.4	10.8	3.7	2.9	ND

Two sidewall locations initially laid out in WP1D (A - B). Final excavation depth and extent in WP1D and surrounding areas (WP1DX) resulted in no sidewall remaining to be sampled in B location. Sidewall results shown for locations remaining inside pre-defined limits of the HWMU.

HWMU Area WP1DX Post-Excavation Data Summary (Final Conditions)
(Samples added to area beyond CMD limits).

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP1DX	XRF-WP1DX/3.0-3.5/A1	XRF	44.3	ND	5.5	ND	6.4
WP1DX	XRF-WP1DX/3.5-4.0/A1	XRF	18.6	ND	4.8	ND	6.3
WP1DX	XRF-WP1DX/3.0-3.5/A2	XRF	20.6	ND	7.5	ND	4.3
WP1DX	XRF-WP1DX/3.5-4.0/A2	XRF	17.7	ND	4.2	ND	5.9
WP1DX	XRF-WP1DX/2.0-2.5/A3	XRF	57.7	ND	7.0	ND	5.9
WP1DX	WP1DX/2.5-3.0/A3	Lab	8.3	U (1.1)	8.6	U (0.53)	U (1.1)
WP1DX	XRF-WP1DX/3.0-3.5/A4	XRF	27.6	ND	4.6	ND	6.3
WP1DX	XRF-WP1DX/3.5-4.0/A4	XRF	22.1	ND	4.1	ND	6.0
WP1DX	XRF-WP1DX/3.0-3.5/A5	XRF	18.9	ND	5.4	ND	5.4
WP1DX	WP1DX/3.5-4.0/A5	Lab	7.5	U (0.99)	7.8	U (0.5)	U (0.99)
WP1DX	WP1DX/Sidewall-A	Lab	184.0	2.1	10.6	0.73	U (1)
WP1DX	XRF-WP1DX/Sidewall-B	XRF	29.4	ND	4.7	6.7	4.7
WP1DX	WP1DX/Sidewall-C	Lab	228.0	7.3	6.1	0.57	U (0.95)
WP1DX	XRF-WP1DX/Sidewall-D	XRF	41.7	ND	5.6	ND	6.0
WP1DX	WP1DX/Sidewall-F	Lab	681.0	2.1	9.0	1.3	U (1)
WP1DX	XRF-WP1DX/Sidewall-G*	XRF	168.1	ND	8.5	ND	6.1
WP1DX	XRF-WP1DX/Sidewall-H2	XRF	17.0	ND	4.8	ND	5.1
WP1DX	XRF-WP1DX/Sidewall-I2	XRF	20.9	ND	5.1	ND	5.7
WP1DX	XRF-WP1DX/Sidewall-J	XRF	234.8	ND	5.8	ND	6.6
WP1DX	XRF-WP1DX/Sidewall-K2	XRF	17.9	ND	4.5	ND	4.1
WP1DX	XRF-WP1DX/Sidewall-L2	XRF	55.1	ND	6.0	ND	5.7
WP1DX	XRF-WP1DX/Sidewall-M2	XRF	17.3	ND	5.2	ND	6.1
WP1DX	XRF-WP1DX/Sidewall-N	XRF	58.7	ND	4.9	ND	5.7

Fourteen sidewall locations initially laid out in WP1DX (A - N). Final excavation depth and extent in WP1D and surrounding areas (WP3A, WP1DX) resulted in no sidewall remaining to be sampled in B location. Sidewall results shown for locations remaining inside pre-defined limits of

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).
Sidewall samples are noted as such in sample ID.
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.
For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
WP1C, WP1D, & WP1DX

ADVANCED GeoServices
Engineering for the Environment. Planning for People.™
1055 ANDREW DRIVE, SUITE A
WEST CHESTER, PENNSYLVANIA 19380
Tel: 610.840.9100 Fax: 610.840.9199 Web: www.advancedgeoservices.com

Scale:	1" = 30'
Drawn By:	JSD/SDW
Checked By:	PGS
Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003–1046
Drawing Date:	7/18/2016
Sheet No.:	3 OF 33
Revision Number:	0

FIGURE 3

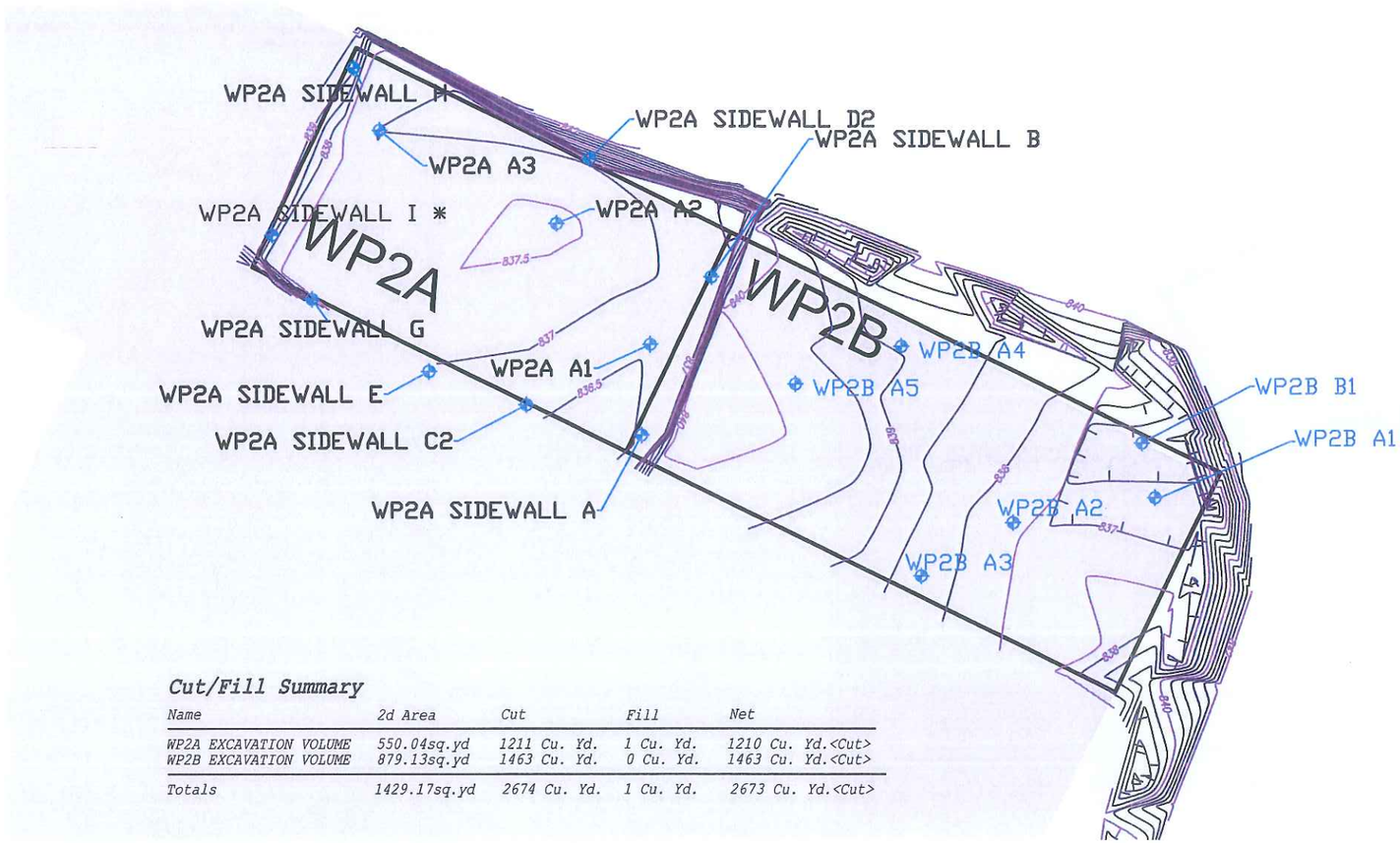
F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\HWMU Report\ACAD-WP1C WP1D WP1DX EXCAVATION VOLUME-Model.dwg

NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.



Cut/Fill Summary

Name	2d Area	Cut	Fill	Net
WP2A EXCAVATION VOLUME	550.04sq.yd	1211 Cu. Yd.	1 Cu. Yd.	1210 Cu. Yd.<Cut>
WP2B EXCAVATION VOLUME	879.13sq.yd	1463 Cu. Yd.	0 Cu. Yd.	1463 Cu. Yd.<Cut>
Totals	1429.17sq.yd	2674 Cu. Yd.	1 Cu. Yd.	2673 Cu. Yd.<Cut>

HWMU Area WP2A Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP2A	XRF-WP2A/7.3-7.8/A1	XRF	85.4	ND	10.5	ND	6.7
WP2A	XRF-WP2A/7.8-8.3/A1	XRF	488.1	ND	11.1	ND	5.4
WP2A	XRF-WP2A/7.3-7.8/A2	XRF	19.0	ND	4.6	ND	5.9
WP2A	XRF-WP2A/7.8-8.3/A2	XRF	367.9	ND	4.8	ND	6.3
WP2A	WP2A/7.3-7.8/A3	Lab	112.0	2.2	8.1	0.52	U (1)
WP2A	XRF-WP2A/7.8-8.3/A3	XRF	17.6	ND	5.1	ND	5.7
WP2A	WP2A/Sidewall-A	Lab	459.0	2.4	11.8	0.89	U (1.1)
WP2A	XRF-WP2A/Sidewall-B	XRF	163.7	ND	9.5	ND	6.0
WP2A	XRF-WP2A/Sidewall-C2	Lab	58.5	U (1)	10.9	2.0	U (1)
WP2A	XRF-WP2A/Sidewall-D2	Lab	99.1	1.2	11.8	4.2	U (1)
WP2A	WP2A/Sidewall-E	Lab	186	2.2	12.6	0.98	U (1.2)
WP2A	XRF-WP2A/Sidewall-G	XRF	38.4	ND	5.5	ND	4.7
WP2A	XRF-WP2A/Sidewall-H	XRF	37.4	ND	7.2	ND	5.1
WP2A	XRF-WP2A/Sidewall-I	XRF	16	ND	6.1	ND	5.3

Nine sidewall locations initially laid out in WP1D (A - I). Final excavation extent in WP2A resulted in no sidewall remaining to be sampled at F location within pre-defined limits of the HWMU.

HWMU Area WP2B Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP2B	XRF-WP2B/3.0-3.5/A1	XRF	17.0	ND	5.3	0.0	4.0
WP2B	XRF-WP2B/4.5-5.0/B1	XRF	22.7	ND	4.6	ND	7.1
WP2B	XRF-WP2B/5.0-5.5/B1	XRF	19.3	ND	5.2	ND	5.6
WP2B	XRF-WP2B/2.5-3.0/A2	XRF	15.9	ND	6.9	ND	5.3
WP2B	XRF-WP2B/3.0-3.5/A2	XRF	13.3	ND	6.3	ND	5.3
WP2B	XRF-WP2B/2.5-3.0/A3	XRF	17.1	ND	5.0	ND	5.9
WP2B	WP2B/3.0-3.5/A3	Lab	53.0	1.6	8.4	U (0.48)	U (0.96)
WP2B	XRF-WP2B/2.5-3.0/A4	XRF	17.6	ND	5.9	ND	5.7
WP2B	WP2B/3.0-3.5/A4	Lab	10.1	U (1.1)	10.5	U (0.56)	U (1.1)
WP2B	XRF-WP2B/2.5-3.0/A5	XRF	28.3	ND	5.8	ND	5.0
WP2B	XRF-WP2B/3.0-3.5/A5	XRF	18.7	ND	6.3	ND	5.6

Five sidewall locations initially laid out in WP2B (A - E). Final excavation depth and extent in WP2B and surrounding areas resulted in no sidewall remaining to be sampled within pre-defined limits of the HWMU.

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).
Sidewall samples are noted as such in sample ID.
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.
For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.

NOTES:
1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, WP2A & WP2A EXCAVATION VOLUMES.
2. ELEVATION CONTOURS SHOWN AT 0.5–FT INTERVALS.
3. * DENOTES FIELD LOCATED SAMPLE LOCATION.

LEGEND:

HWMU PRE–DEFINED LIMITS

EXCAVATION AREA PRE–DEFINED LIMITS

◆ SIDEWALL A — POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
WP2A & WP2B

ADVANCED GeoServices
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WEST CHESTER, PENNSYLVANIA 19380
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Project No.:	2003-1046
Drawing Date:	7/18/2016
Sheet No.:	4 OF 33
Revision Number:	0

FIGURE 4

F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\HWMU Report\ACAD-WP2A WP2B EXCAVATION VOLUME-Model.dwg

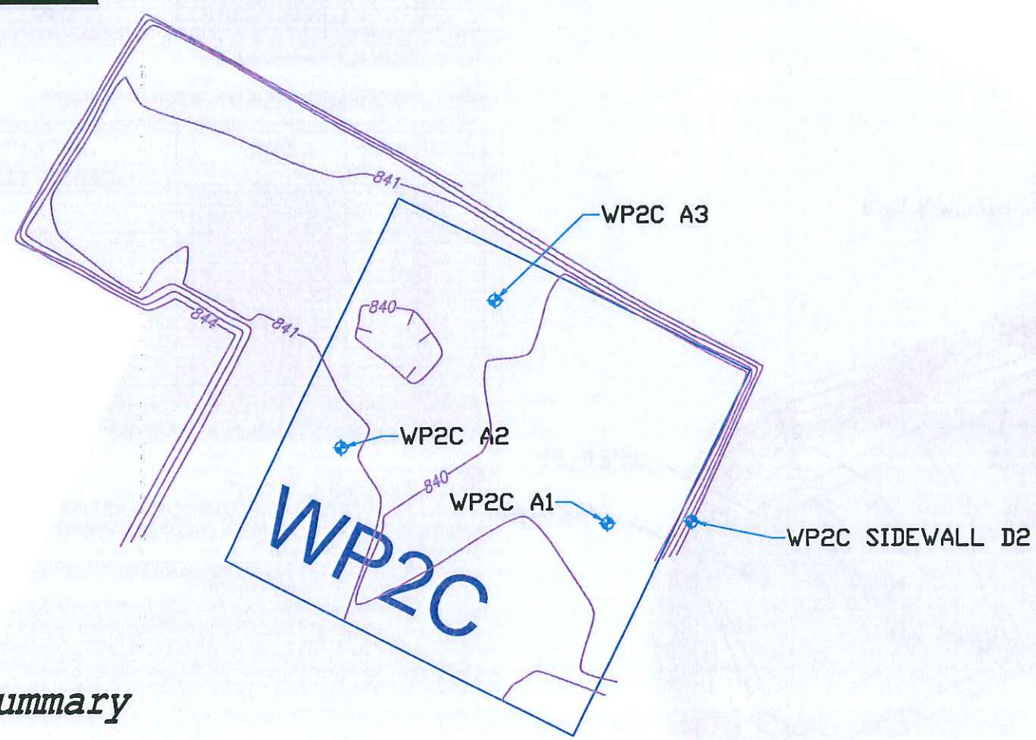
NORTH

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)

1 inch = 20 ft.



Cut/Fill Summary

Name	*2d Area*	*Cut*	*Fill*	*Net*
WP2C EXCAVATION VOLUME	*537.90sq.yd*	*657 Cu. Yd.*	*0 Cu. Yd.*	*657 Cu. Yd.<Cut>*
Totals	*537.90sq.yd*	*657 Cu. Yd.*	*0 Cu. Yd.*	*657 Cu. Yd.<Cut>*

HWMU Area WP2C Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP2C	XRF-WP2C/1.0-1.5/A1	XRF	18.0	ND	5.5	41.0	6.3
WP2C	XRF-WP2C/1.5-2.0/A1	XRF	16.3	ND	5.2	20.6	4.7
WP2C	XRF-WP2C/1.0-1.5/A2	XRF	13.7	ND	4.8	ND	5.1
WP2C	WP2C/1.5-2.0/A2	Lab	120.0	U (1)	9.1	0.56	U (1)
WP2C	XRF-WP2C/1.0-1.5/A3	XRF	28.4	ND	6.3	ND	6.3
WP2C	XRF-WP2C/1.5-2.0/A3	XRF	15.4	ND	5.1	ND	4.7
WP2C	WP2C/Sidewall-D2	Lab	120.0	U (1.2)	12.0	U (0.58)	U (1.2)

Four sidewall locations initially laid out in WP2C (A - D). Final excavation depth and extent in WP2C and surrounding areas (WP1DX, MSB2A, ad WP1A) resulted in no sidewall remaining to be sampled within pre-defined limits of the HWMU. Only Sidewall-D remained to be collected on eastern sidewall.

Notes:

ND - Not Detected by XRF (uncorrected).

U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).

Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):

Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).

Sidewall samples are noted as such in sample ID.

Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.

Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.

For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, WP2C EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVAL.

LEGEND:

HWMU PRE–DEFINED LIMITS

EXCAVATION AREA PRE–DEFINED LIMITS

SIDEWALL A — POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
WP2C

ADVANCED GeoServices

Engineering for the Environment. Planning for People. ™

1055 ANDREW DRIVE, SUITE A
WEST CHESTER, PENNSYLVANIA 19380
Tel: 610.840.9100 Fax: 610.840.9189 Web: www.advancedgeoservices.com

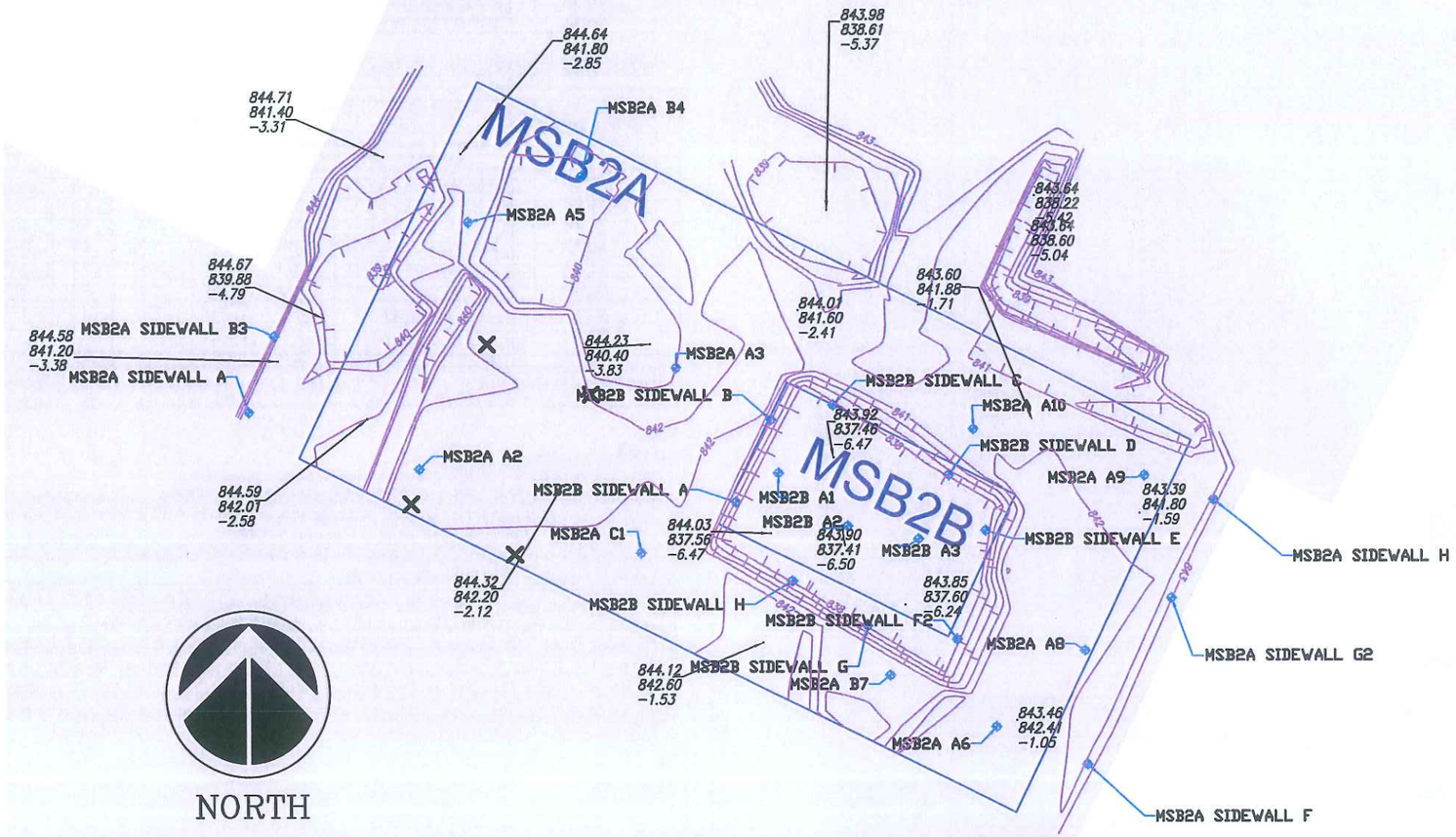
Scale:	1" = 20'
Drawn By:	JSD/SDW
Checked By:	PGS
Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003–1046
Drawing Date:	7/15/2016
Sheet No.:	5 OF 33
Revision Number:	0

FIGURE 5

F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\HWMU Report\ACAD-WP2C EXCAVATION VOLUME-Model.dwg

Cut/Fill Summary

Name	2d Area	Cut	Fill	Net
MSB2A SMALL HOLE EXCAVATION VOLUME	11.00sq.yd	18 Cu. Yd.	0 Cu. Yd.	18 Cu. Yd.<Cut>
MSB2A BIG HOLE EXCAVATION VOLUME	94.00sq.yd	430 Cu. Yd.	0 Cu. Yd.	430 Cu. Yd.<Cut>
MSB2A EXCAVATION VOLUME	1755.18sq.yd	1568 Cu. Yd.	0 Cu. Yd.	1568 Cu. Yd.<Cut>
MSB2B EXCAVATION VOLUME	298.22sq.yd	547 Cu. Yd.	0 Cu. Yd.	547 Cu. Yd.<Cut>
Totals	2158.39sq.yd	2563 Cu. Yd.	0 Cu. Yd.	2563 Cu. Yd.<Cut>



HWMU Area MSB2A Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
MSB2A	MSB2A/2.0-2.5/C1	Lab	3.5	1.5	4.2	U (0.47)	1.7
MSB2A	XRF-MSB2A/2.5-3.0/C1	XRF	11.1	ND	2.2	ND	6.1
MSB2A	XRF-MSB2A/1.0-1.5/A2	XRF	54.6	ND	7.0	ND	ND
MSB2A	XRF-MSB2A/1.5-2.0/A2	XRF	73.4	ND	8.7	ND	ND
MSB2A	XRF-MSB2A/1.5-2.0/A3	XRF	3.4	ND	6.9	ND	ND
MSB2A	XRF-MSB2A/2.0-2.5/A3	XRF	15.3	ND	5.5	ND	5.9
MSB2A	XRF-MSB2A/2.5-3.0/A3	XRF	16.7	ND	4.4	ND	6.0
MSB2A	XRF-MSB2A/2.0-2.5/B4	XRF	61.4	ND	4.5	1.6	5.7
MSB2A	XRF-MSB2A/2.5-3.0/B4	XRF	16.3	ND	6.5	ND	5.6
MSB2A	XRF-MSB2A/1.0-1.5/A5	XRF	9.9	ND	5.7	58.9	ND
MSB2A	XRF-MSB2A/1.5-2.0/A5	XRF	42.4	ND	5.3	17.8	ND
MSB2A	XRF-MSB2A/1.0-1.5/A6	XRF	5.8	ND	4.9	3.7	ND
MSB2A	XRF-MSB2A/1.5-2.0/A6	XRF	37.6	6.6	8.7	17.8	ND
MSB2A	XRF-MSB2A/2.0-2.5/B7	XRF	22.1	ND	5.4	ND	6.1
MSB2A	XRF-MSB2A/2.5-3.0/B7	XRF	15.3	ND	4.9	ND	6.0
MSB2A	XRF-MSB2A/1.0-1.5/A8	XRF	39.1	6.9	6.0	1.7	ND
MSB2A	XRF-MSB2A/1.5-2.0/A8	XRF	76.7	ND	10.1	1.5	ND
MSB2A	XRF-MSB2A/1.0-1.5/A9	XRF	36.3	ND	4.1	ND	6.1
MSB2A	XRF-MSB2A/1.5-2.0/A9	XRF	13.0	ND	4.3	ND	5.6
MSB2A	XRF-MSB2A/1.0-1.5/A10	XRF	24.1	ND	4.6	ND	6.4
MSB2A	MSB2A/1.5-2.0/A10	Lab	84.4	1.0	9.0	0.51	U (1)
MSB2A	MSB2A/Sidewall-A	Lab	325.0	1.8	10.5	2.1	U (1.1)
MSB2A	XRF-MSB2A/Sidewall-B3	XRF	890.9	ND	2.4	ND	7.3
MSB2A	XRF-MSB2A/Sidewall-F	XRF	65.3	ND	8.8	ND	6.6
MSB2A	XRF-MSB2A/Sidewall-G2	XRF	15.3	ND	2.7	ND	6.0
MSB2A	XRF-MSB2A/Sidewall-H	XRF	17.9	ND	4.0	ND	6.1

Thirteen sidewall locations initially laid out in MSB2A (A - M). Final excavation depth and extent in MSB2A and surrounding areas (WP1DX, MSB1A, and WP1A) resulted in no sidewall remaining to be sampled within pre-defined limits of the HWMU.

HWMU Area MSB2B Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
MSB2B	XRF-MSB2B/6.0-6.5/A1	XRF	11.9	ND	5.2	ND	5.7
MSB2B	XRF-MSB2B/6.5-7.0/A1	XRF	14.1	ND	4.7	ND	5.9
MSB2B	XRF-MSB2B/6.0-6.5/A2	XRF	14.7	ND	4.5	ND	6.7
MSB2B	XRF-MSB2B/6.5-7.0/A2	XRF	12.4	ND	4.9	ND	5.9
MSB2B	XRF-MSB2B/6.0-6.5/A3	XRF	12.7	ND	5.0	ND	6.0
MSB2B	XRF-MSB2B/6.5-7.0/A3	XRF	15.3	ND	5.1	ND	5.4
MSB2B	XRF-MSB2B/Sidewall-A	XRF	14.6	ND	4.4	1.2	5.0
MSB2B	XRF-MSB2B/Sidewall-B	XRF	16.7	ND	5.2	ND	6.0
MSB2B	XRF-MSB2B/Sidewall-C	XRF	62.3	ND	6.9	ND	5.1
MSB2B	XRF-MSB2B/Sidewall-D	XRF	35.1	ND	4.9	ND	5.7
MSB2B	XRF-MSB2B/Sidewall-E	XRF	31.9	ND	4.8	ND	5.0
MSB2B	XRF-MSB2B/Sidewall-F2	XRF	11.7	7.0	4.5	ND	5.1
MSB2B	XRF-MSB2B/Sidewall-G	XRF	16.3	ND	4.4	ND	5.4
MSB2B	XRF-MSB2B/Sidewall-H	XRF	13.0	ND	4.5	ND	5.9

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).
Sidewall samples are noted as such in sample ID.
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.
For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.

*-Sidewall samples became part of excavation area WP1DX as samples XRF-WP1DX/Sidewall-H, XRF-WP1DX/Sidewall-I, XRF-WP1DX/Sidewall-J, XRF-WP1DX-Sidewall K.
**-Sidewall sample locations to the north and east were removed during over-excavation of area WP2B along the former railroad tracks.

NOTES:
1. POST-EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST-EXCAVATION SURVEY, MSB2A & MSB2B EXCAVATION VOLUMES.
2. BIG HOLE AND SMALL HOLE VOLUMES CALCULATED USING FIELD MEASUREMENTS.

LEGEND:

HWMU PRE-DEFINED LIMITS

EXCAVATION AREA PRE-DEFINED LIMITS

◆ SIDEWALL A — POST-EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST-EXCAVATION CONDITIONS
MSB2A & MSB2B

ADVANCED GeoServices
Engineering for the Environment. Planning for People.™
1055 ANDREW DRIVE, SUITE A
WEST CHESTER, PENNSYLVANIA 19380
Tel: 610.840.9100 Fax: 610.840.9199 Web: www.advancedgeoservices.com

Scale:	1" = 30'
Drawn By:	JSD/SDW
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Originated By:	PGS
Project No.:	2003-1046
Drawing Date:	7/18/2016
Sheet No.:	6 OF 33
Revision Number:	0

FIGURE 6

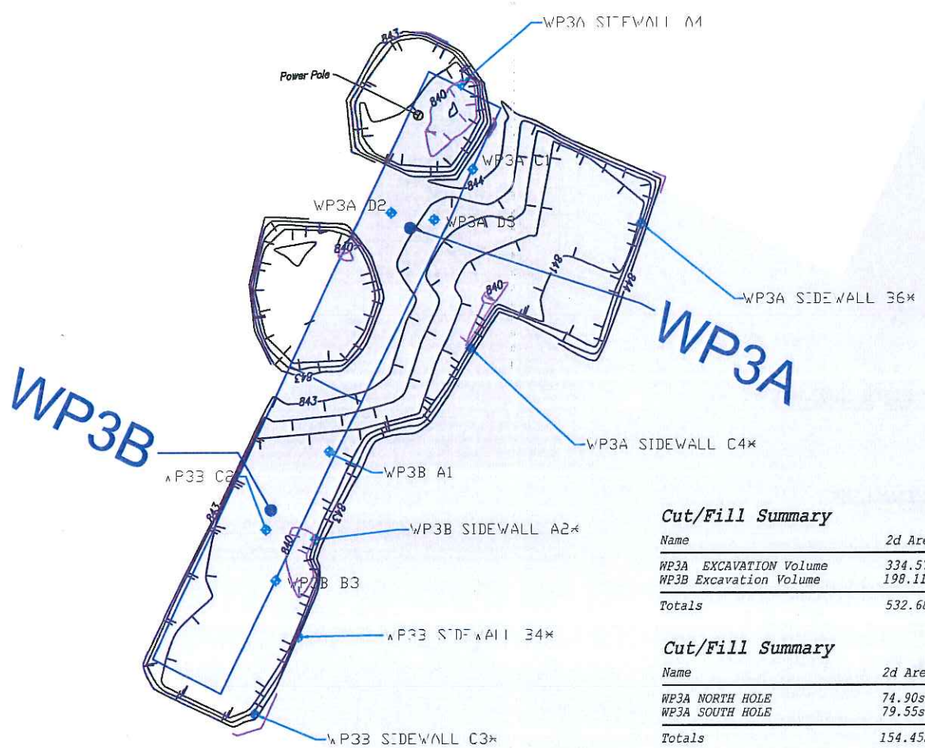
:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\HWMU\ACAD-MSB2A MSB2B EXCAVATION VOLUME-Model.dwg

NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.



Cut/Fill Summary

Name	2d Area	Cut	Fill	Net
WP3A EXCAVATION Volume	*334.57sq.yd*	*282 Cu. Yd.*	*0 Cu. Yd.*	*282 Cu. Yd.<Cut>*
WP3B Excavation Volume	*198.11sq.yd*	*230 Cu. Yd.*	*0 Cu. Yd.*	*230 Cu. Yd.<Cut>*
Totals	*532.68sq.yd*	*512 Cu. Yd.*	*0 Cu. Yd.*	*512 Cu. Yd.<Cut>*

Cut/Fill Summary

Name	2d Area	Cut	Fill	Net
WP3A NORTH HOLE	*74.90sq.yd*	*84 Cu. Yd.*	*0 Cu. Yd.*	*84 Cu. Yd.<Cut>*
WP3A SOUTH HOLE	*79.55sq.yd*	*88 Cu. Yd.*	*0 Cu. Yd.*	*88 Cu. Yd.<Cut>*
Totals	*154.45sq.yd*	*172 Cu. Yd.*	*0 Cu. Yd.*	*172 Cu. Yd.<Cut>*

HWMU Area WP3A Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP3A	XRF-WP3A/3.0-3.5/C1	XRF	26.0	4.6	12.2	4.2	ND
WP3A	WP3A/3.5-4.0/C1	Lab	471.0	2.8	8.7	1.5	U (1)
WP3A	XRF-WP3A/4.0-4.5/D2	XRF	18.3	ND	5.4	ND	7.1
WP3A	XRF-WP3A/4.5-5.0/D2	XRF	16.7	ND	4.8	ND	6.0
WP3A	XRF-WP3A/4.0-4.5/D3	XRF	20.1	ND	5.3	ND	5.4
WP3A	XRF-WP3A/4.5-5.0/D3	XRF	16.7	ND	5.2	ND	5.1
WP3A	WP3A/Sidewall-A4	Lab	26.2	U (1)	7.2	U (0.5)	U (1)
WP3A	XRF-WP3A/Sidewall-B6	XRF	61.4	ND	6.1	ND	5.9
WP3A	XRF-WP3A/Sidewall-C4	XRF	258.7	ND	11.4	ND	6.7

HWMU Area WP3B Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP3B	XRF-WP3B/3.3-3.8-A1	XRF	31.9	3.3	ND	0.8	1.3
WP3B	XRF-WP3B/3.8-4.3-A1	XRF	23.7	5.1	1.4	5.0	ND
WP3B	XRF-WP3B-5.3-5.8-C2	XRF	14.4	ND	4.0	ND	5.7
WP3B	XRF-WP3B-5.8-6.3-C2	XRF	26.9	ND	4.4	ND	5.7
WP3B	XRF-WP3B/4.3-4.8/B3	XRF	45.7	ND	3.3	ND	5.1
WP3B	XRF-WP3B/4.8-5.3/B3	XRF	77.1	ND	3.7	ND	4.0
WP3B	WP3B/Sidewall-A2	Lab	222.0	2.2	11.2	15.0	U (0.96)
WP3B	WP3B/sidewall-B4	Lab	392.0	1.9	9.2	4.7	U (0.96)
WP3B	XRF-WP3B-Sidewall-C3	XRF	479.5	ND	9.2	ND	5.7

Four sidewall locations initially laid out in WP3B (A - D). Final excavation depth and extent in WP3B and surrounding areas (WP3A and FL-2) resulted in no sidewall remaining at location D within pre-defined limits of the

Notes:

ND - Not Detected by XRF (uncorrected).

U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).

Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):

Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result

Sidewall samples are noted as such in sample ID.

Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original botton

Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.

For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was

*Sidewall samples became part of excavation area WP1DX as sample XRF-WP1DX/Sidewall-D

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, WP3A & WP3B EXCAVATION VOLUMES.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.
3. * DENOTES A FIELD LOCATED SAMPLE LOCATION.

LEGEND:

HWMU PRE–DEFINED LIMITS

EXCAVATION AREA PRE–DEFINED LIMITS

POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
WP3A & WP3B

ADVANCED GeoServices
Engineering for the Environment. Planning for People.™
1055 ANDREW DRIVE, SUITE A
WEST CHESTER, PENNSYLVANIA 19380
Tel: 610.840.9100 Fax: 610.840.9199 Web: www.advancedgeoservices.com

Scale:	1" = 30'
Drawn By:	JSD/SDW
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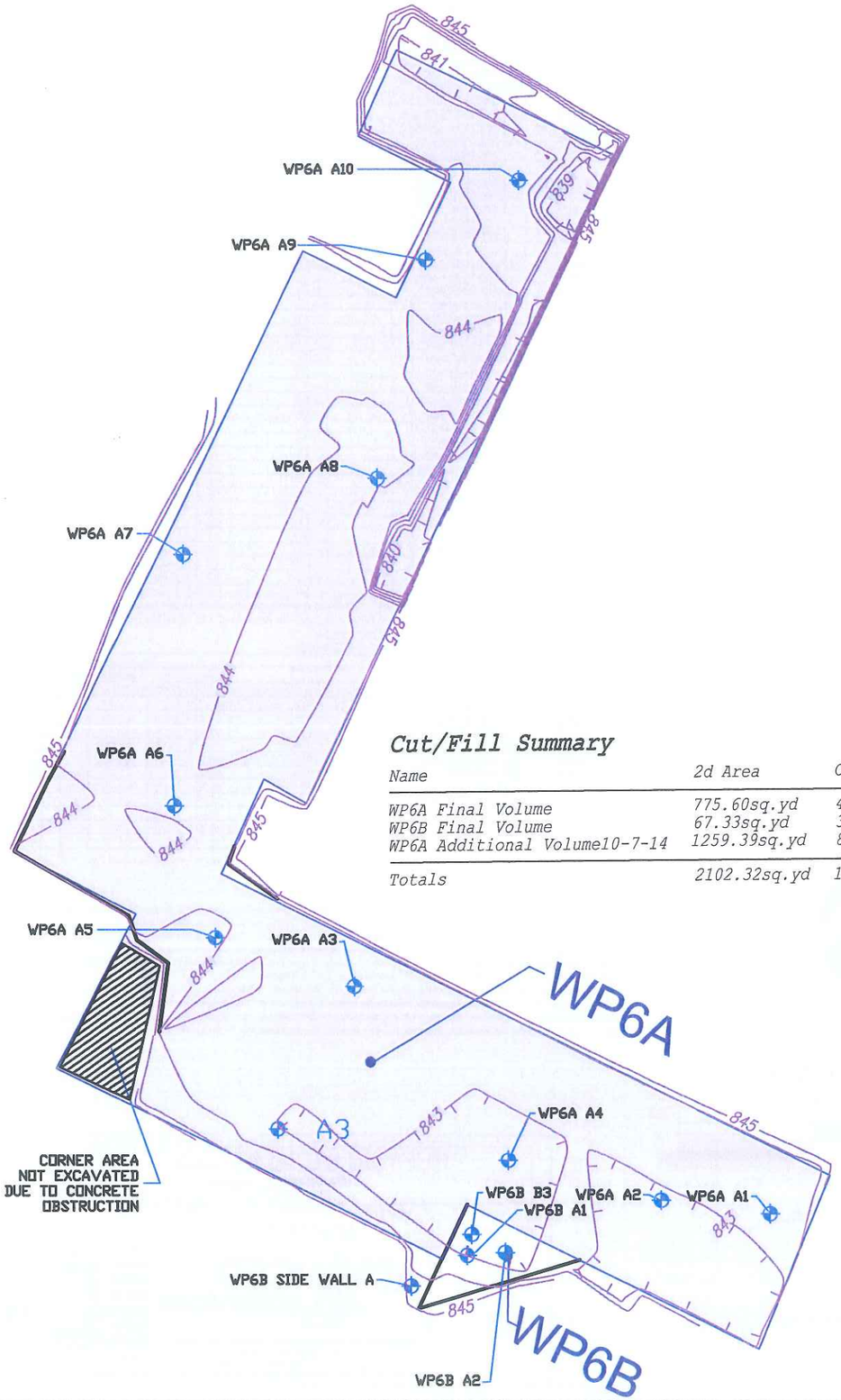
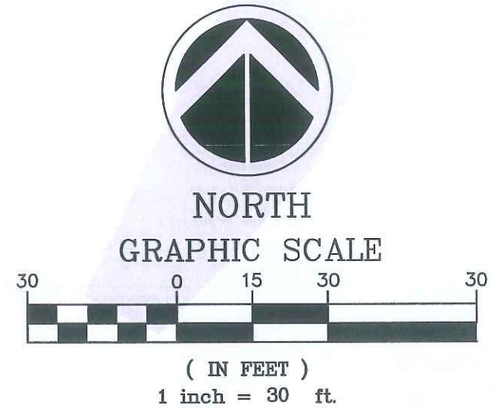
Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003–1046
Drawing Date:	7/18/2016
Sheet No.:	7 OF 33
Revision Number:	0

FIGURE 7

F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\HWMU\ACAD-WP3A-WP3B Excavation Volume-Model.dwg





Cut/Fill Summary

Name	2d Area	Cut	Fill	Net
WP6A Final Volume	775.60sq.yd	413 Cu. Yd.	0 Cu. Yd.	413 Cu. Yd.<Cut>
WP6B Final Volume	67.33sq.yd	37 Cu. Yd.	0 Cu. Yd.	37 Cu. Yd.<Cut>
WP6A Additional Volume10-7-14	1259.39sq.yd	886 Cu. Yd.	0 Cu. Yd.	886 Cu. Yd.<Cut>
Totals	2102.32sq.yd	1336 Cu. Yd.	0 Cu. Yd.	1336 Cu. Yd.<Cut>

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, WP6A & WP6B EXCAVATION VOLUMES.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.
3. * DENOTES FIELD LOCATED SAMPLE LOCATION.

LEGEND:

HWMU PRE–DEFINED LIMITS

EXCAVATION AREA PRE–DEFINED LIMITS

● SIDEWALL A — POST–EXCAVATION SAMPLE LOCATION

HWMU Area WP6A Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP6A	XRF-WP6A/1.0-1.5-A1	XRF	16.9	ND	0.9	ND	ND
WP6A	XRF-WP6A/1.5-2.0-A1	XRF	23.1	ND	ND	ND	ND
WP6A	XRF-WP6A/1.0-1.5-A2	XRF	11.1	ND	2.4	ND	1.9
WP6A	XRF-WP6A/1.5-2.0-A2	XRF	10.0	ND	2.6	ND	2.3
WP6A	XRF-WP6A/1.0-1.5-A3	XRF	17.0	ND	2.3	ND	2.0
WP6A	XRF-WP6A/1.5-2.0-A3	XRF	13.6	ND	3.6	ND	2.9
WP6A	WP6A/1.0-1.5/A4	Lab	200.0	4.1	14.2	4.5	U (1.2)
WP6A	XRF-WP6A/1.5-2.0-A4	XRF	78.1	6.8	3.3	4.4	ND
WP6A	XRF-WP6A/1.0-1.5-A5	XRF	22.4	3.3	2.4	3.1	ND
WP6A	XRF-WP6A/1.5-2.0-A5	XRF	30.9	1.6	2.1	5.4	ND
WP6A	XRF-WP6A/1.0-1.5-A6	XRF	8.7	3.0	5.1	ND	ND
WP6A	XRF-WP6A/1.5-2.0-A6	XRF	40.1	2.7	2.6	2.1	0.0
WP6A	WP6A/1.5-2.0/A6	Lab	15.4	U (1.1)	9.7	U (0.54)	U (1.1)
WP6A	XRF-WP6A/1.0-1.5-A7	XRF	57.9	1.2	5.3	0.1	ND
WP6A	XRF-WP6A/1.5-2.0-A7	XRF	32.1	3.4	0.8	2.2	ND
WP6A	XRF-WP6A/1.0-1.5-A8	XRF	32.4	2.1	5.1	2.2	6.3
WP6A	XRF-WP6A/1.5-2.0-A8	XRF	54.1	7.6	4.8	3.7	ND
WP6A	WP6A/1.0-1.5/A9	Lab	46.0	1.4	12.5	U (0.63)	U (1.3)
WP6A	XRF-WP6A/1.5-2.0-A9	XRF	31.0	0.2	4.0	0.4	ND
WP6A	XRF-WP6A/1.0-1.5-A10	XRF	29.6	1.2	3.2	1.9	ND
WP6A	XRF-WP6A/1.5-2.0-A10	XRF	24.3	0.9	1.9	1.6	ND

HWMU Area WP6B Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
WP6B	XRF-WP6B/1.0-1.5-A1	XRF	32.0	0.3	0.9	0.7	1.3
WP6B	XRF-WP6B/1.5-2.0-A1	XRF	15.7	3.6	ND	4.3	ND
WP6B	XRF-WP6B/1.0-1.5-A2	XRF	24.0	1.2	1.0	1.9	ND
WP6B	XRF-WP6B/1.5-2.0-A2	XRF	15.1	5.7	1.2	2.2	ND
WP6B	XRF-WP6B/1.5-2.0/B3	XRF	23.0	4.4	2..4	ND	ND
WP6B	XRF-WP6B/2.0-2.5/B3	XRF	33.3	1.4	0.8	1.6	ND
WP6B	XRF-WP6B/sidewall-A	XRF	227.6	1.1	ND	2.1	ND

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).
Sidewall samples are noted as such in sample ID.
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.
For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.

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3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
WP6A & WP6B

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Checked By:	PGS
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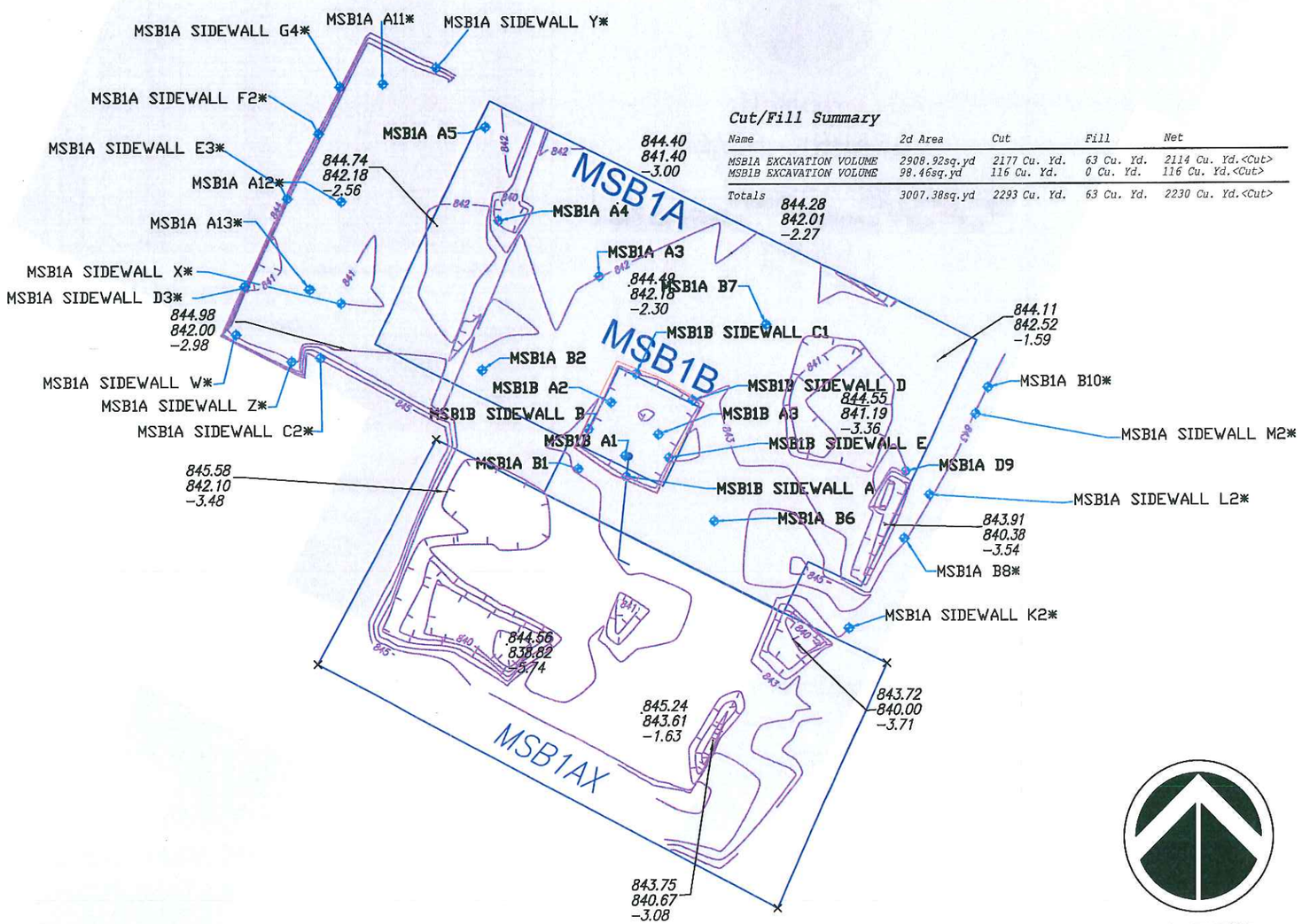
Originated By:	PGS
Project No.:	2003-1046
Drawing Date:	7/18/2016
Sheet No.:	8 OF 33
Revision Number:	0

FIGURE 8

:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\HWMU\ACAD-WP6A and WP6B Excavation Volume-Model.dwg



Cut/Fill Summary

Name	2d Area	Cut	Fill	Net
MSB1A EXCAVATION VOLUME	2908.92sq.yd	2177 Cu. Yd.	63 Cu. Yd.	2114 Cu. Yd.<Cut>
MSB1B EXCAVATION VOLUME	98.46sq.yd	116 Cu. Yd.	0 Cu. Yd.	116 Cu. Yd.<Cut>
Totals	3007.38sq.yd	2293 Cu. Yd.	63 Cu. Yd.	2230 Cu. Yd.<Cut>

NORTH

GRAPHIC SCALE

80 0 20 40 80

(IN FEET)
1 inch = 40 ft.

HWMU Area MSB1A Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
MSB1A	XRF-MSB1A/2.0-2.5/B1	XRF	9.4	ND	4.5	ND	ND
MSB1A	MSB1A/2.5-3.0/B1	Lab	85.2	1.8	13.0	0.86	U (0.96)
MSB1A	XRF-MSB1A/2.0-2.5/B2	XRF	16.6	ND	4.9	ND	5.7
MSB1A	XRF-MSB1A/2.5-3.0/B2	XRF	50.7	ND	5.4	ND	5.6
MSB1A	XRF-MSB1A/1.0-1.5/A3	XRF	19.7	3.3	2.8	0.2	ND
MSB1A	XRF-MSB1A/1.5-2.0/A3	XRF	79.3	ND	4.5	ND	ND
MSB1A	XRF-MSB1A/1.0-1.5/A4	XRF	81.0	3.3	4.6	1.4	ND
MSB1A	XRF-MSB1A/1.5-2.0/A4	XRF	21.9	8.0	6.4	2.5	0.7
MSB1A	XRF-MSB1A/1.0-1.5/A5	XRF	58.9	ND	4.4	ND	ND
MSB1A	XRF-MSB1A/1.5-2.0/A5	XRF	54.0	ND	0.8	ND	ND
MSB1A	XRF-MSB1A/2.0-2.5/B6	XRF	55.0	ND	5.7	ND	ND
MSB1A	XRF-MSB1A/2.5-3.0/B6	XRF	40.3	ND	5.2	ND	ND
MSB1A	XRF-MSB1A/2.0-2.5/B7	XRF	8.3	ND	4.4	4.7	ND
MSB1A	XRF-MSB1A/2.5-3.0/B7	XRF	7.7	ND	4.4	ND	ND
MSB1A	MSB1A/3.0-3.5/B8	Lab	19.6	U (1)	8.6	4.1	U (1)
MSB1A	MSB1A/3.5-4.0/B8	Lab	268.0	1.6	10.8	17.1	U (0.98)
MSB1A	XRF-MSB1A/5.0-5.5/D9	XRF	11.9	ND	4.6	ND	5.3
MSB1A	XRF-MSB1A/5.5-6.0/D9	XRF	11.4	ND	4.5	ND	5.3
MSB1A	MSB1A/3.0-3.5-B10	Lab	7.6	U (0.96)	7.1	0.54	U (0.96)
MSB1A	MSB1A/3.5-4.0/B10	Lab	5.3	U (1.1)	7.2	U (0.54)	U (1.1)
MSB1A	MSB1A/3.0-3.5/A11	Lab	82.9	U (0.99)	8.6	U (0.49)	U (0.99)
MSB1A	MSB1A/3.5-4.0/A11	Lab	7.9	U (1.1)	7.4	U (0.53)	U (1.1)
MSB1A	MSB1A/3.0-3.5/A12	Lab	5.2	U (1.1)	6.7	U (0.56)	U (1.1)
MSB1A	MSB1A/3.5-4.0/A12	Lab	5.6	U (1)	6.8	U (0.52)	U (1)
MSB1A	MSB1A/3.0-3.5/A13	Lab	8.4	U (1)	8.6	0.78	U (5.1)
MSB1A	MSB1A/3.5-4.0/A13	Lab	13.3	U (0.97)	7.4	1.9	U (0.97)
MSB1A	XRF-MSB1A/Sidewall-C2	XRF	15.9	ND	8.7	ND	5.7
MSB1A	MSB1A/Sidewall-D3	Lab	5.6	U (1.1)	7.0	U (0.53)	U (1.1)
MSB1A	MSB1A/Sidewall-E3	Lab	6.2	U (1.1)	9.8	U (0.56)	U (1.1)
MSB1A	MSB1A/Sidewall-F2	Lab	6.3	U (1.1)	7.0	U (0.53)	U (1.1)
MSB1A	MSB1A/Sidewall-G4	Lab	8.1	U (1.1)	8.1	U (.50)	U (1.1)
MSB1A	XRF-MSB1A/Sidewall J	XRF	26.4	ND	2.8	ND	ND
MSB1A	MSB1A/Sidewall-K2	Lab	301.0	4.7	16.2	1.5	U (0.95)
MSB1A	MSB1A/Sidewall-L2	Lab	170.0	1.9	16.9	5.8	U (0.91)
MSB1A	MSB1A/Sidewall M	Lab	43.1	U (1.1)	14.7	15.7	U (1.1)
MSB1A	XRF-MSB1A/Sidewall-M2	XRF	60.9	ND	5.6	ND	5.9
MSB1A	MSB1A/Sidewall-W	Lab	7.0	U (1.1)	7.5	U (0.53)	U (2.1)
MSB1A	MSB1A/Sidewall-X	Lab	8.2	U (1.1)	6.9	U (0.55)	U (2.2)
MSB1A	MSB1A/Sidewall-Y	Lab	8.7	U (1.1)	7.3	U (0.55)	U (1.1)
MSB1A	MSB1A/Sidewall-Z	Lab	9.7	U (0.98)	8.3	U (0.49)	U (0.98)

Thirteen sidewall locations initially laid out in MSB1A (A - M). Final excavation depth and extent in MSB1A and surrounding areas (MSB1AX and MSB2A) resulted in no sidewall remaining at locations A, B, H, I, and J on the north and south sides within pre-defined limits of the HWMU.

HWMU Area MSB1B Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
MSB1B	XRF-MSB1B/2.5-3.0/A1	XRF	45.6	ND	6.1	ND	ND
MSB1B	XRF-MSB1B/3.0-3.5/A1	XRF	297.7	ND	7.1	ND	ND
MSB1B	MSB1B/2.5-3.0/A2	Lab	719.0	2.2	12.4	10.8	U (1.1)
MSB1B	XRF-MSB1B/3.0-3.5/A2	XRF	45.0	ND	4.9	ND	0.4
MSB1B	XRF-MSB1B/2.5-3.0/A3	XRF	286.7	ND	2.9	ND	0.3
MSB1B	XRF-MSB1B/3.0-3.5/A3	XRF	84.3	ND	4.2	ND	ND
MSB1B	MSB1B/Sidewall A	Lab	64.1	1.6	4.5	U (0.48)	1.5
MSB1B	XRF-MSB1B/Sidewall B	XRF	11.1	ND	4.6	2.4	ND
MSB1B	XRF-MSB1B/Sidewall-C1	XRF	11.9	ND	5.5	ND	4.9
MSB1B	XRF-MSB1B/Sidewall D	XRF	169.0	2.2	4.2	ND	0.6
MSB1B	XRF-MSB1B/Sidewall E	XRF	9.1	ND	4.4	ND	0.4

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).
Sidewall samples are noted as such in sample ID.
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.
For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.

NOTES:
1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, MSB1A & MSB1B EXCAVATION VOLUMES.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS
3. * DENOTES FIELD LOCATED SAMPLE LOCATION.

LEGEND:

HWMU PRE–DEFINED LIMITS

EXCAVATION AREA PRE–DEFINED LIMITS

◆ SIDEWALL A — POST–EXCAVATION SAMPLE LOCATION

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POST–EXCAVATION CONDITIONS
MSB1A & MSB1B

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Checked By:	PGS
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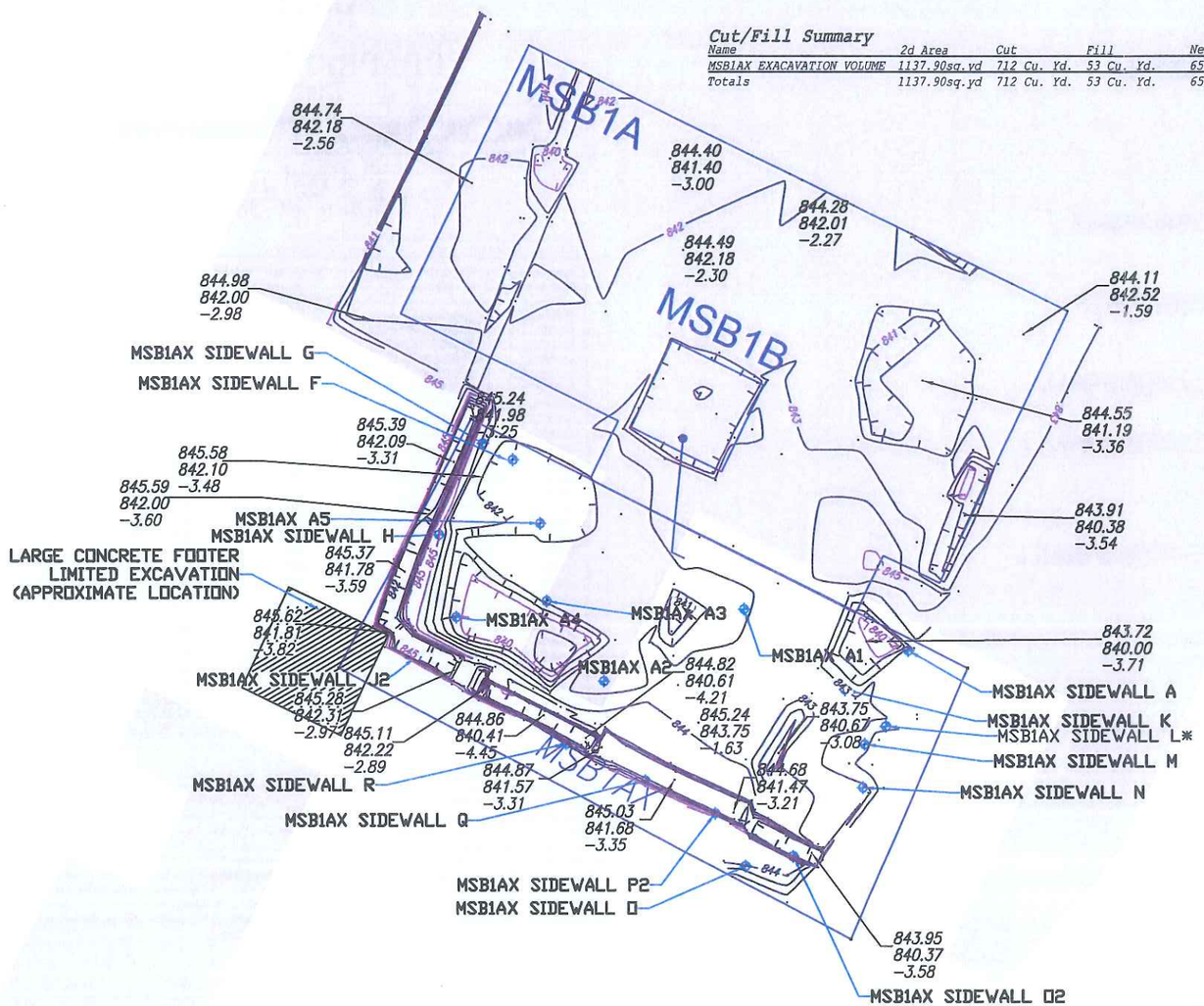
Originated By:	PGS
Project No.:	2003–1046
Drawing Date:	7/18/2016
Sheet No.:	9 OF 33
Revision Number:	0

FIGURE 9

F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\HWMU\A\CAD-MSB1A MSB1B EXCAVATION VOLUME-2 Model.dwg



Cut/Fill Summary

Name	2d Area	Cut	Fill	Net
MSB1AX EXACAVATION VOLUME	1137.90sq.yd	712 Cu. Yd.	53 Cu. Yd.	659 Cu. Yd.<Cut>
Totals	1137.90sq.yd	712 Cu. Yd.	53 Cu. Yd.	659 Cu. Yd.<Cut>

NORTH

GRAPHIC SCALE

80 0 20 40 80

(IN FEET)
1 inch = 40 ft.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, MSB1A, MSB1B, & MSB1AX EXCAVATION VOLUMES.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.
3. * DENOTES FIELD LOCATED SAMPLE LOCATION.

LEGEND:

HWMU PRE–DEFINED LIMITS

EXCAVATION AREA PRE–DEFINED LIMITS

◆ SIDEWALL A — POST–EXCAVATION SAMPLE LOCATION

HWMU Area MSB1AX Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
MSB1AX	XRF-MSB1AX/1.0-1.5/A1	XRF	3.8	ND	5.8	ND	6.4
MSB1AX	XRF-MSB1AX/1.5-2.0/A1	XRF	3.5	ND	6.8	ND	5.4
MSB1AX	XRF-MSB1AX/1.0-1.5/A2	XRF	53.3	ND	4.1	1.2	5.7
MSB1AX	MSB1AX/1.5-2.0/A2	Lab	90.9	1.5	11.5	0.87	U (1.1)
MSB1AX	XRF-MSB1AX/1.0-1.5/A3	XRF	168.2	ND	9.6	ND	5.7
MSB1AX	XRF-MSB1AX/1.5-2.0/A3	XRF	24.3	ND	5.9	ND	4.3
MSB1AX	XRF-MSB1AX/4.0-4.5/A4	XRF	17.0	ND	5.2	ND	5.6
MSB1AX	XRF-MSB1AX/4.5-5.0/A4	XRF	195.5	ND	9.2	ND	5.9
MSB1AX	XRF-MSB1AX/3.0-3.5/A5	XRF	19.1	ND	5.1	ND	4.9
MSB1AX	XRF-MSB1AX/3.5-4.0/A5	XRF	18.7	ND	4.6	ND	5.4
MSB1AX	XRF-MSB1AX/Sidewall-A	XRF	22.0	ND	4.0	ND	6.3
MSB1AX	XRF-MSB1AX/Sidewall-B	XRF	38.8	ND	4.9	ND	6.4
MSB1AX	XRF-MSB1AX/Sidewall-C	XRF	41.0	ND	4.7	ND	5.1
MSB1AX	XRF-MSB1AX/Sidewall-D	XRF	99.6	ND	7.8	ND	5.7
MSB1AX	XRF-MSB1AX/Sidewall-E	XRF	58.5	ND	4.1	4.4	6.6
MSB1AX	XRF-MSB1AX/Sidewall-F	XRF	18.4	ND	3.2	ND	5.9
MSB1AX	XRF-MSB1AX/Sidewall-G	XRF	54.5	ND	6.6	ND	5.4
MSB1AX	MSB1AX/Sidewall-H	Lab	607.0	3.1	8.8	42.3	U (1.1)
MSB1AX	MSB1AX/Sidewall-J2	Lab	15.2	U (1.2)	9.7	U (0.6)	U (6)
MSB1AX	MSB1AX/Sidewall-K	Lab	409.0	5.0	9.3	2.0	U (1)
MSB1AX	XRF-MSB1AX/Sidewall-L	XRF	77.4	ND	8.8	ND	4.3
MSB1AX	MSB1AX/Sidewall-M	Lab	127.0	1.4	9.2	1.9	U (1)
MSB1AX	XRF-MSB1AX/Sidewall-N	XRF	735.6	ND	13.7	ND	6.6
MSB1AX	XRF-MSB1AX/Sidewall-O	XRF	16.4	ND	4.3	ND	5.9
MSB1AX	MSB1AX/Sidewall-O2	Lab	6.3	U (1)	7.7	U (0.5)	U (1)
MSB1AX	MSB1AX/Sidewall-P2	Lab	12.5	U (1.1)	7.6	U (0.54)	U (1.1)
MSB1AX	MSB1AX/Sidewall-Q	Lab	7.3	U (1)	7.7	U (0.51)	U (1)
MSB1AX	MSB1AX/Sidewall-R	Lab	11.0	U (1.1)	10.2	U (0.53)	U (10.5)

Sidewall locations B, C, D, E and F (shared with MSB1A) eventually removed during adjacent MSB1A excavation.
Final sidewall I location not sampled due to large concrete obstruction.

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).
Sidewall samples are noted as such in sample ID.
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.
For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.

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3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
MSB1AX

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Sheet No.	10 OF 33
Revision Number	0

FIGURE 10

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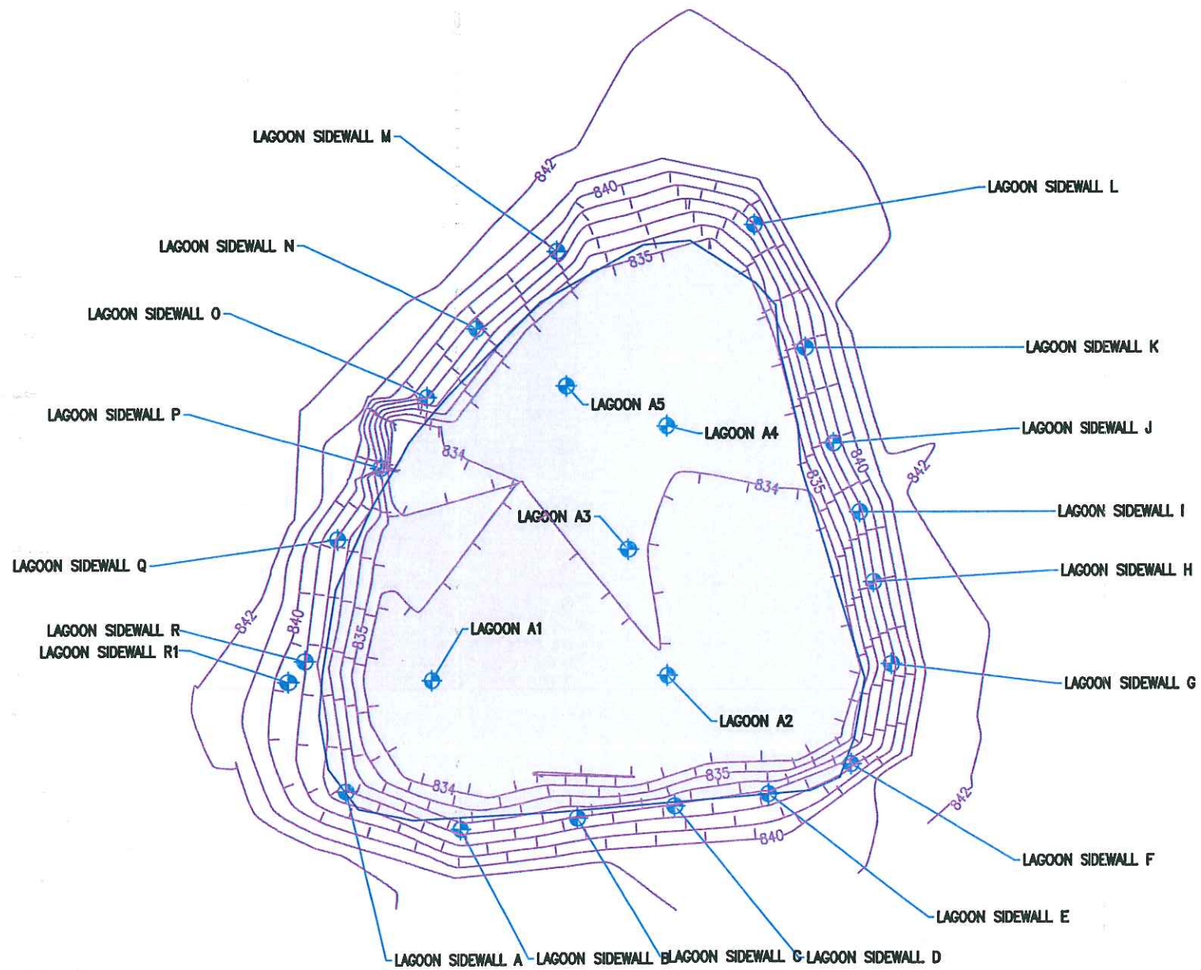

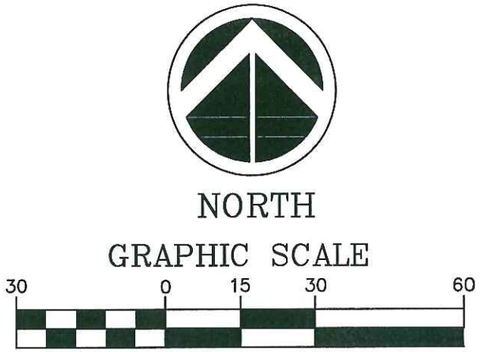

(IN FEET)
1 inch = 30 ft.

HWMU Area Lagoon Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)				
			Lead	Antimony	Arsenic	Cadmium	Selenium
		Target Closure Concentrations	970	37	20	77	53
Lagoon	XRF-Lagoon/1.0-1.5/A1	XRF	8.3	ND	4.4	ND	ND
Lagoon	XRF-Lagoon/1.5-2.0/A1	XRF	8.7	7.3	4.6	ND	ND
Lagoon	XRF-Lagoon/1.0-1.5/A2	XRF	9.1	8.0	4.5	ND	ND
Lagoon	Lagoon/1.5-2.0/A2	Lab	11.9	U (1)	8.0	0.55	U (1)
Lagoon	Lagoon/1.0-1.5/A3	Lab	7.0	U (1)	7.9	U (0.51)	U (1)
Lagoon	Lagoon/1.5-2.0/A3	Lab	6.5	U (1)	7.0	U (0.5)	U (1)
Lagoon	Lagoon/1.0-1.5/A4	Lab	5.7	U (0.99)	6.5	U (0.5)	U (0.99)
Lagoon	Lagoon/1.5-2.0/A4	Lab	6.7	U (1)	6.6	U (0.5)	U (1)
Lagoon	Lagoon/1.0-1.5/A5	Lab	18.0	U (0.97)	7.7	U (0.48)	U (0.97)
Lagoon	Lagoon/1.5-2.0/A5	Lab	6.3	U (1)	7.4	U (0.51)	U (1)
Lagoon	Lagoon/Sidewall-A	Lab	737.0	11.4	17.7	2.1	U (1.2)
Lagoon	XRF-Lagoon/Sidewall-B	XRF	15.4	ND	5.4	ND	ND
Lagoon	Lagoon/Sidewall-C	Lab	17.2	U (1.2)	10.8	U (0.6)	U (1.2)
Lagoon	XRF-Lagoon/Sidewall-D	XRF	2.0	ND	6.3	ND	ND
Lagoon	XRF-Lagoon/Sidewall-E	XRF	22.1	ND	6.6	ND	ND
Lagoon	XRF-Lagoon/Sidewall-F	XRF	10.0	ND	4.7	ND	ND
Lagoon	Lagoon/Sidewall-G	Lab	407.0	1.7	7.6	0.64	U (1.2)
Lagoon	XRF-Lagoon/Sidewall-H	XRF	17.1	ND	5.2	ND	ND
Lagoon	XRF-Lagoon/Sidewall-I	XRF	14.1	ND	5.4	ND	ND
Lagoon	XRF-Lagoon/Sidewall-J	XRF	19.4	ND	6.9	ND	ND
Lagoon	Lagoon/Sidewall-K	Lab	12.3	U (1)	11.5	U (0.51)	U (1)
Lagoon	XRF-Lagoon/Sidewall-L	XRF	12.9	ND	4.9	ND	ND
Lagoon	XRF-Lagoon/Sidewall-M	XRF	45.0	ND	4.9	ND	ND
Lagoon	XRF-Lagoon/Sidewall-N	XRF	16.4	ND	4.7	ND	ND
Lagoon	XRF-Lagoon/Sidewall-O	XRF	6.9	ND	3.9	ND	ND
Lagoon	XRF-Lagoon/Sidewall-P	XRF	41.0	6.3	5.5	ND	ND
Lagoon	XRF-Lagoon/Sidewall-Q	XRF	21.4	0.6	4.1	ND	ND
Lagoon	Lagoon/Sidewall-R1	Lab	9.2	U (1.2)	9.4	U (0.58)	U (1.2)

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed (denoted by underline).
Sidewall samples are noted as such in sample ID.
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Sidewall samples are generally collected over the 0-6" interval from the sidewall surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.
For sidewall samples: The alphabetic component indicates the location - i.e., A1, B1, etc. "1" designation indicates the first round of sampling, "2" and subsequent numbering indicate additional excavation and resampling was performed.

Cut/Fill Summary

Name	*2d Area*	*Cut*	*Fill*	*Net*
LAGOON FINAL VOLUME 10-27-14	*2441.82sq.yd*	*1243 Cu. Yd.*	*0 Cu. Yd.*	*1243 Cu. Yd.<Cut>*
Totals	*2441.82sq.yd*	*1243 Cu. Yd.*	*0 Cu. Yd.*	*1243 Cu. Yd.<Cut>*

NOTES:
1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, LAGOON EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

HWMU PRE–DEFINED LIMITS

EXCAVATION AREA PRE–DEFINED LIMITS

◆ SIDEWALL A — POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
LAGOON

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Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003-1046
Drawing Date:	7/18/2016
Sheet No.:	11 OF 33
Revision Number:	0

FIGURE 11

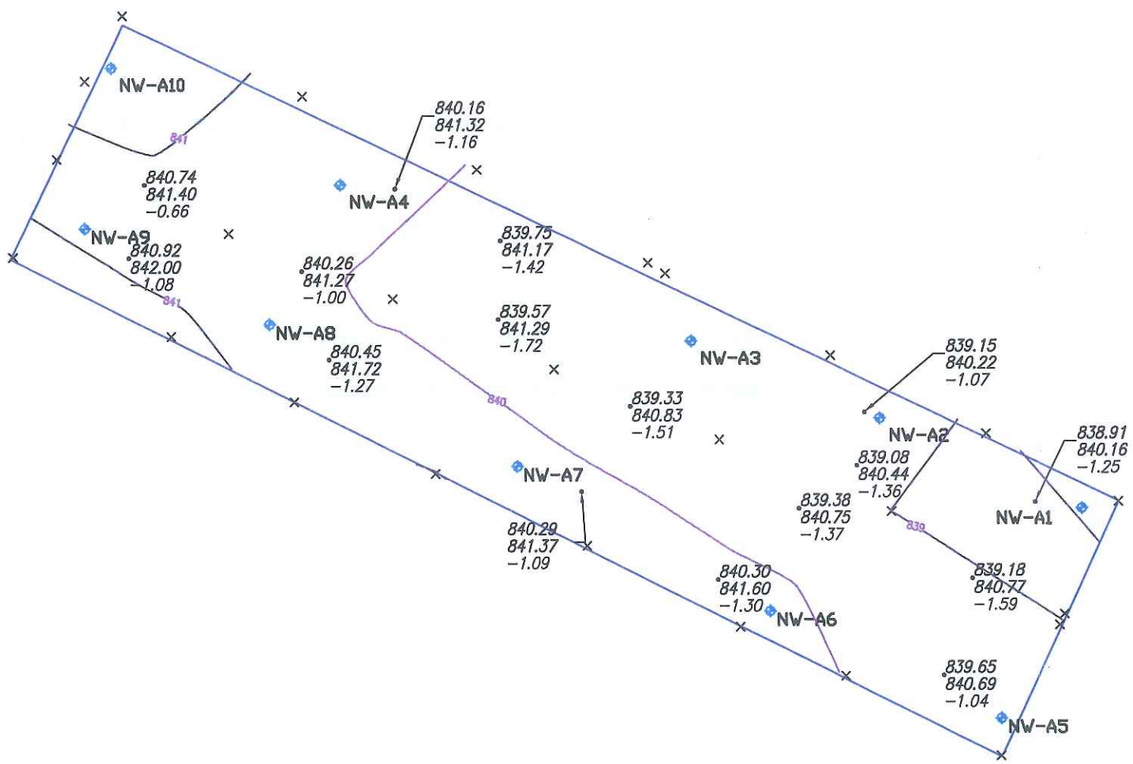
F:\Projects\2003\2003\1046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\HWMU\ACAD-Lagoon Volume-Model.dwg

NORTH

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
NW VOLUME	1.00	1.00	2428.48sq.yd	977 Cu. Yd.	0 Cu. Yd.	977 Cu. Yd.<Cut>
Totals			2428.48sq.yd	977 Cu. Yd.	0 Cu. Yd.	977 Cu. Yd.<Cut>

NON- HWMU Area NW Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	(ppm)
			Lead
	Preliminary Remediation Goal		920
NW	NW/1.0-1.5/A1	Lab	519.0
NW	XRF-NW/1.0-1.5-A2	XRF	36.1
NW	XRF-NW/1.0-1.5-A3	XRF	25.7
NW	NW/1.0-1.5/A4	Lab	38.6
NW	XRF-NW/1.0-1.5-A5	XRF	24.1
NW	XRF-NW/1.0-1.5-A6	XRF	18.9
NW	XRF-NW/1.0-1.5-A7	XRF	19.1
NW	NW/1.0-1.5/A8	Lab	13.4
NW	XRF-NW/1.0-1.5-A9	XRF	16.4
NW	XRF-NW/1.0-1.5-A10	XRF	16.3

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, NW EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

NW-A2 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
NW

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FIGURE 12

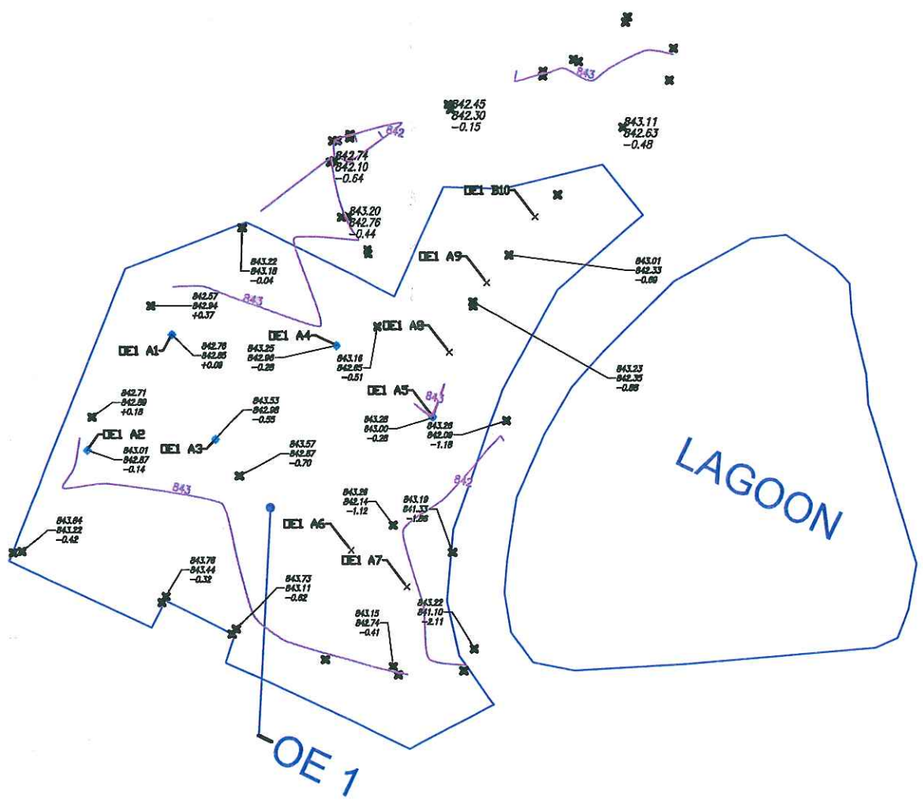
F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\NW EXACAVATION VOLUME-Model.dwg

NORTH

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
OE1 Excavation Volume 10-4-14	1.00	1.00	1694.76sq.yd	339 Cu. Yd.	5 Cu. Yd.	334 Cu. Yd.<Cut>
Totals			1694.76sq.yd	339 Cu. Yd.	5 Cu. Yd.	334 Cu. Yd.<Cut>

NON- HWMU Area OE1 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
Preliminary Remediation Goal			920
OE1	OE1/0.5-1.0/A1	Lab	270.0
OE1	XRF-OE1/0.5-1.0/A2	XRF	50.3
OE1	XRF-OE1/0.5-1.0/A3	XRF	105.1
OE1	XRF-OE1/0.5-1.0/A4	XRF	38.5
OE1	XRF-OE1/0.5-1.0/A5	XRF	419.3
OE1	XRF-OE1/0.5-1.0/A6	XRF	57.9
OE1	XRF-OE1/0.5-1.0/A7	XRF	25.7
OE1	XRF-OE1/0.5-1.0/A8	XRF	22.7
OE1	XRF-OE1/0.5-1.0/A9	XRF	292.4
OE1	XRF-OE1-1.5-2.0-B10	XRF	278.0

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, OE1 EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

◆ OE1-A2 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
OE1

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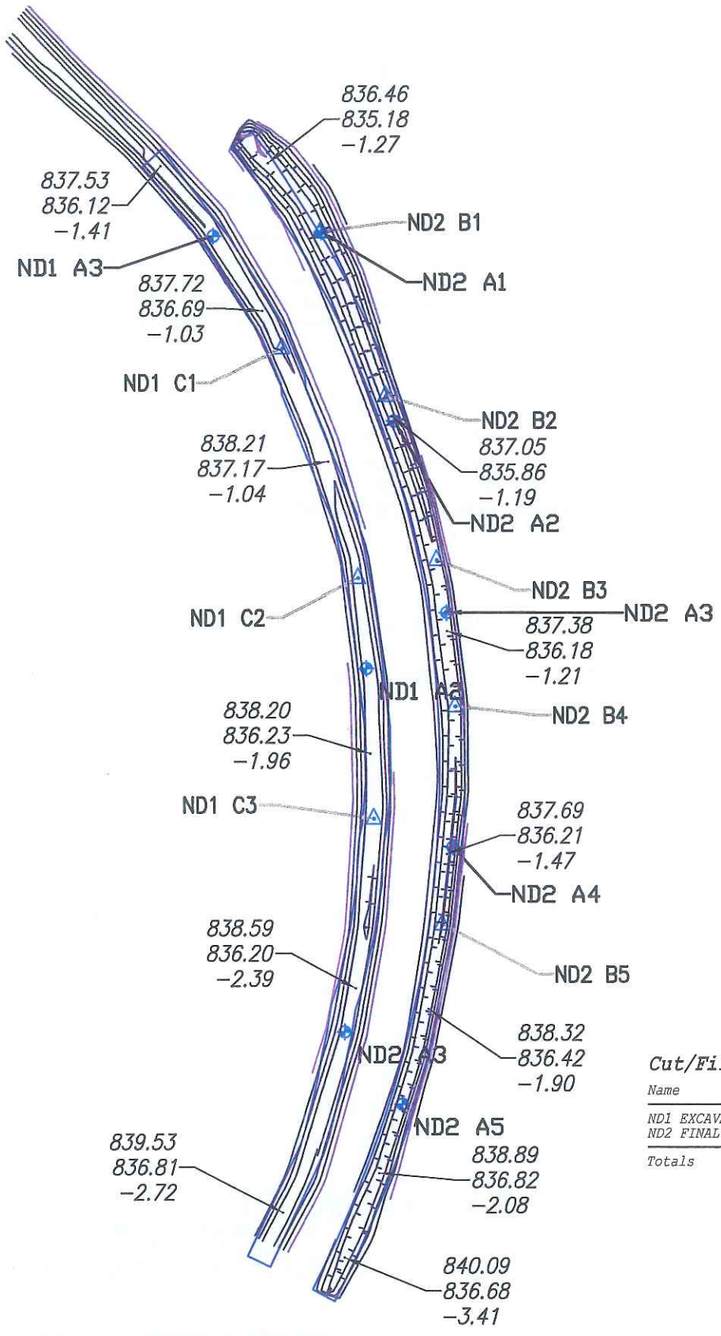
FIGURE 13

F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\OE1 EXCAVATION VOLUME-Model.dwg



NORTH

GRAPHIC SCALE

60 0 30 60 120

(IN FEET)
1 inch = 60 ft.

NON- HWMU Area ND1 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
	Preliminary Remediation Goal		920
ND1	ND1/2.0-2.5/C1	Lab	14.9
ND1	ND1/2.0-2.5/C2	Lab	12.9
ND1	ND1/2.0-2.5/C3	Lab	18.0

NON- HWMU Area ND2 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
	Preliminary Remediation Goal		920
ND2	ND2/2.0-2.5/B1	Lab	149.0
ND2	ND2/2.0-2.5/B2	Lab	77.8
ND2	ND2/2.0-2.5/B3	Lab	70.0
ND2	ND2/2.0-2.5/B4	Lab	30.5
ND2	ND2/2.0-2.5/B5	Lab	10.0

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, ND1 ND2 FINAL EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

——— EXCAVATION AREA PRE–DEFINED LIMITS

◆ ND2–A5 POST–EXCAVATION SAMPLE LOCATION

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
ND1 EXCAVATION VOLUME	1.00	1.00	963.72sq.yd	375 Cu. Yd.	3 Cu. Yd.	372 Cu. Yd.<Cut>
ND2 FINAL EXCAVATION (1)	1.00	1.00	905.86sq.yd	333 Cu. Yd.	8 Cu. Yd.	325 Cu. Yd.<Cut>
Totals			1869.58sq.yd	708 Cu. Yd.	11 Cu. Yd.	697 Cu. Yd.<Cut>

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
ND1 & ND2

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Revision Number:	0

FIGURE 14

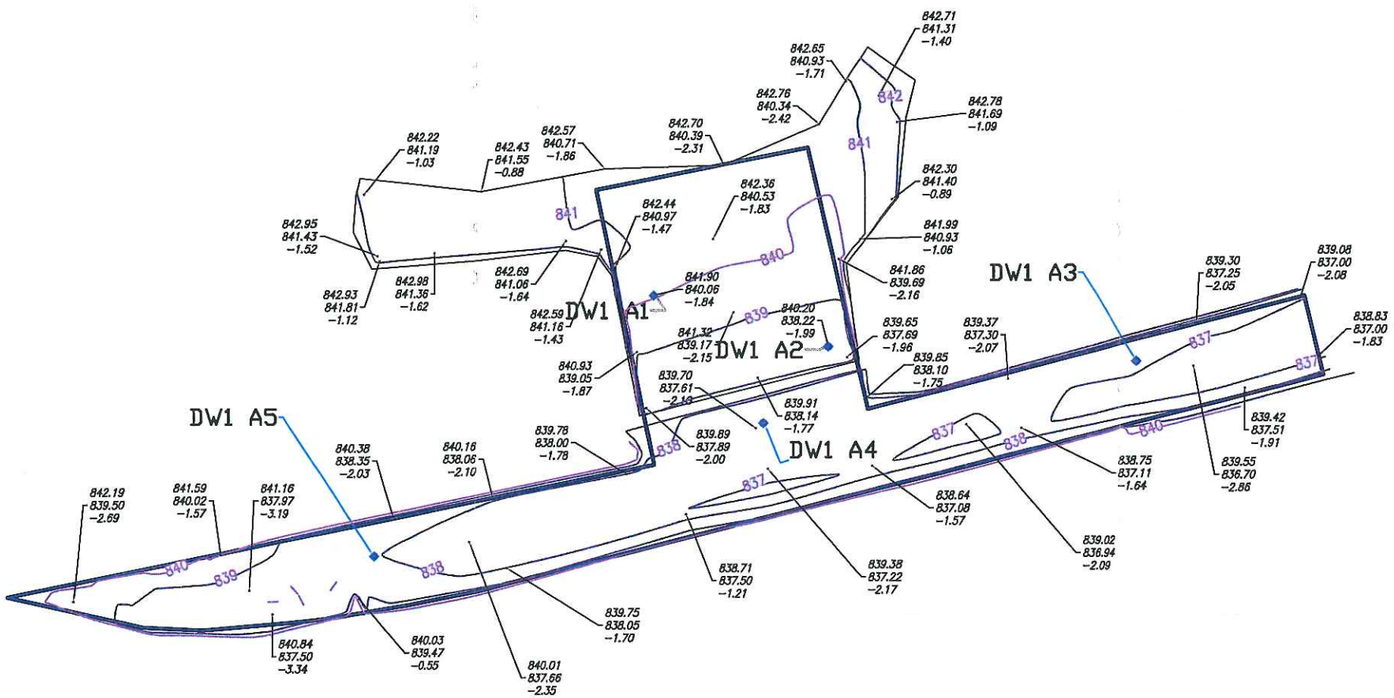
:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\ND1 ND2 FINAL EXCAVATION VOLUME-Model.dwg

NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
DW-1 PARTIAL EXCAVATION VOLUME	1.00	1.00	528.24sq.yd	346 Cu. Yd.	0 Cu. Yd.	346 Cu. Yd.<Cut>
Totals			528.24sq.yd	346 Cu. Yd.	0 Cu. Yd.	346 Cu. Yd.<Cut>

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
DW-1 PARTIAL FINAL 10-4-14 (1)	1.00	1.00	375.15sq.yd	218 Cu. Yd.	0 Cu. Yd.	218 Cu. Yd.<Cut>
Totals			375.15sq.yd	218 Cu. Yd.	0 Cu. Yd.	218 Cu. Yd.<Cut>

NON- HWMU Area DW1 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
	Preliminary Remediation Goal		920
DW1	XRF-DW1/2.0-2.5/A1	XRF	62.0
DW1	XRF-DW1-2.0-2.5/A2	XRF	376.6
DW1	DW1-2.0-2.5/A3	Lab	13.3
DW1	DW1-2.0-2.5/A4	Lab	28.0
DW1	DW1-2.0-2.5/A5	Lab	12.9

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, DW1 FINAL EXCAVATION VOLUMES COMBINED WITH 9–29–2015.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

——— EXCAVATION AREA PRE–DEFINED LIMITS

• DW1–A3 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
DW1

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Revision Number:	0

FIGURE 15

F:\Projects\2003\2003\1046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\DW-1 FINAL VOLUMES COMBINED WITH 9-29-2015-Model-Model.dwg

NORTH

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

NON- HWMU Area DW2 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
	Preliminary Remediation Goal		920
DW2	DW-2/2.0-2.5/A1	Lab	10.9
DW2	DW-2/2.0-2.5/A2	Lab	7.9
DW2	DW-2/2.0-2.5/A3	Lab	9.6
DW2	DW-2/2.0-2.5/B4	Lab	13.2
DW2	DW-2/2.0-2.5/A5	Lab	12.5

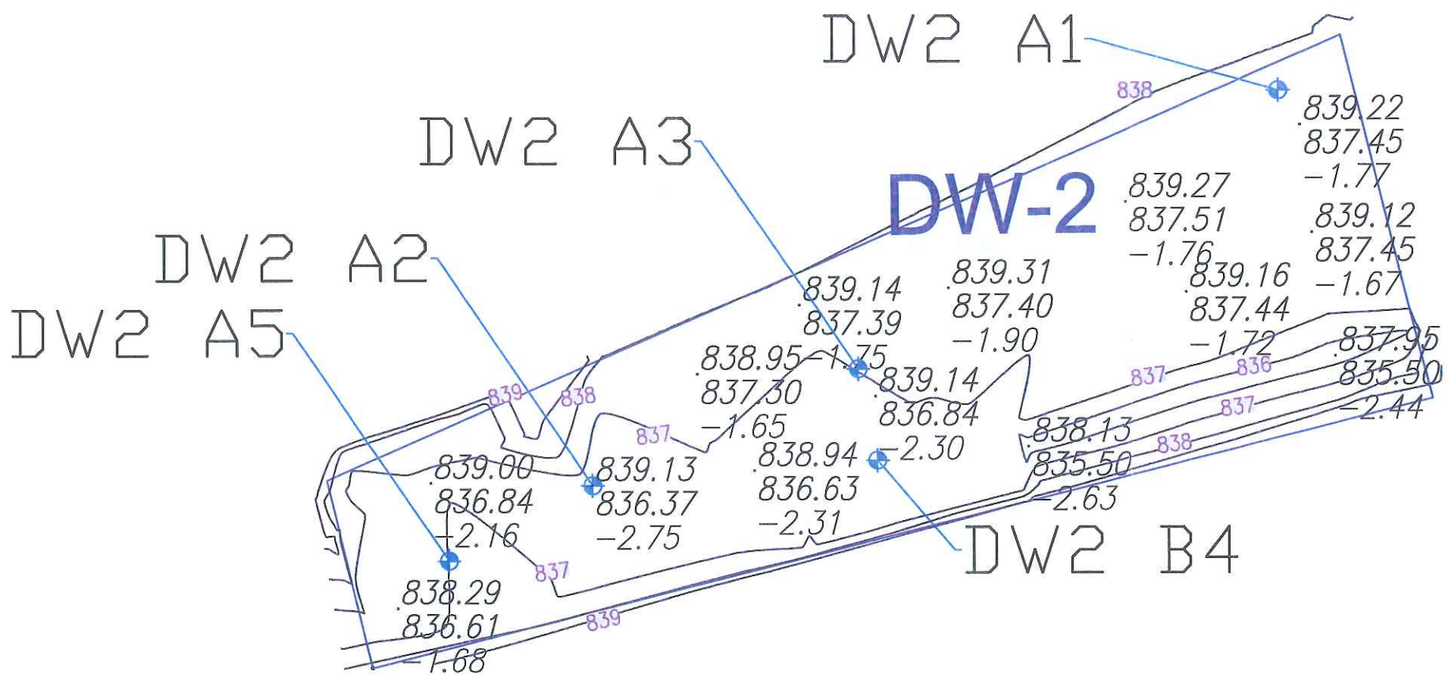
Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:
1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, DW2 EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

DW2–A5 POST–EXCAVATION SAMPLE LOCATION



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
DW-2 FINAL EXCAVATION VOLUME SURFACE	1.00	1.00	663.39sq.yd	384 Cu. Yd.	1 Cu. Yd.	383 Cu. Yd.<Cut>
Totals			663.39sq.yd	384 Cu. Yd.	1 Cu. Yd.	383 Cu. Yd.<Cut>

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
DW2

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Revision Number:	0

FIGURE 16

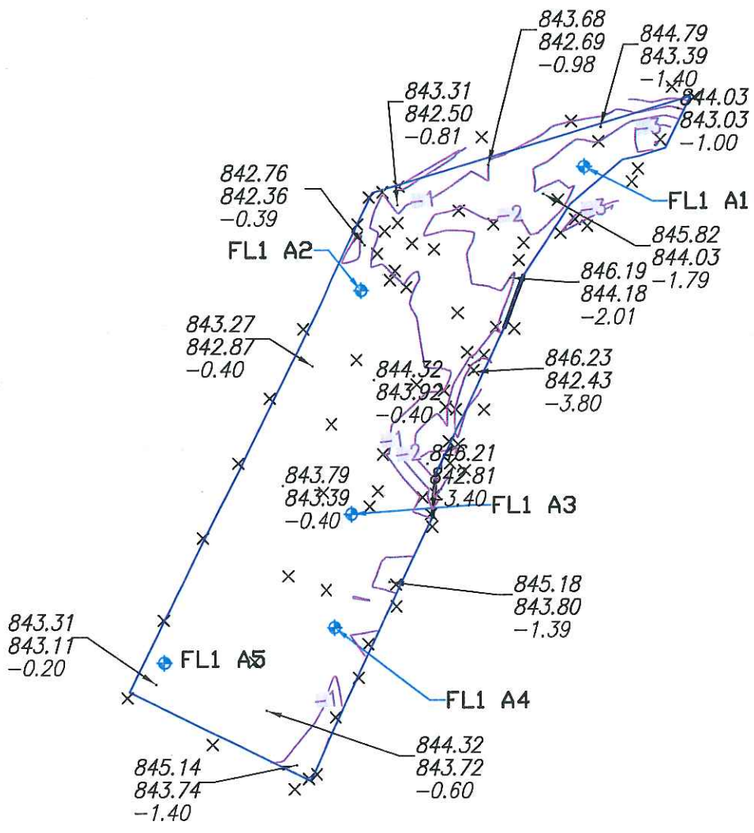
:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\DW-2 EXCAVATION VOLUME-Model.dwg

NORTH

GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
1 inch = 40 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
fil excavation volume	1.00	1.00	1061.14sq.yd	347 Cu. Yd.	1 Cu. Yd.	345 Cu. Yd.<Cut>
Totals			1061.14sq.yd	347 Cu. Yd.	1 Cu. Yd.	345 Cu. Yd.<Cut>

NON- HWMU Area FL1 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
Preliminary Remediation Goal			920
FL1	FL1/0.5-1.0/A1	Lab	16.2
FL1	FL1/0.5-1.0/A2	Lab	364.0
FL1	FL1/0.5-1.0/A3	Lab	70.8
FL1	FL1/0.5-1.0/A4	Lab	162.0
FL1	FL1/0.5-1.0/A5	Lab	46.2

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, FL1 EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

FL1-A5 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
FL1

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Checked By:	PGS
Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003–1046
Drawing Date:	7/18/2016
Sheet No.:	17 OF 33
Revision Number:	0

FIGURE 17

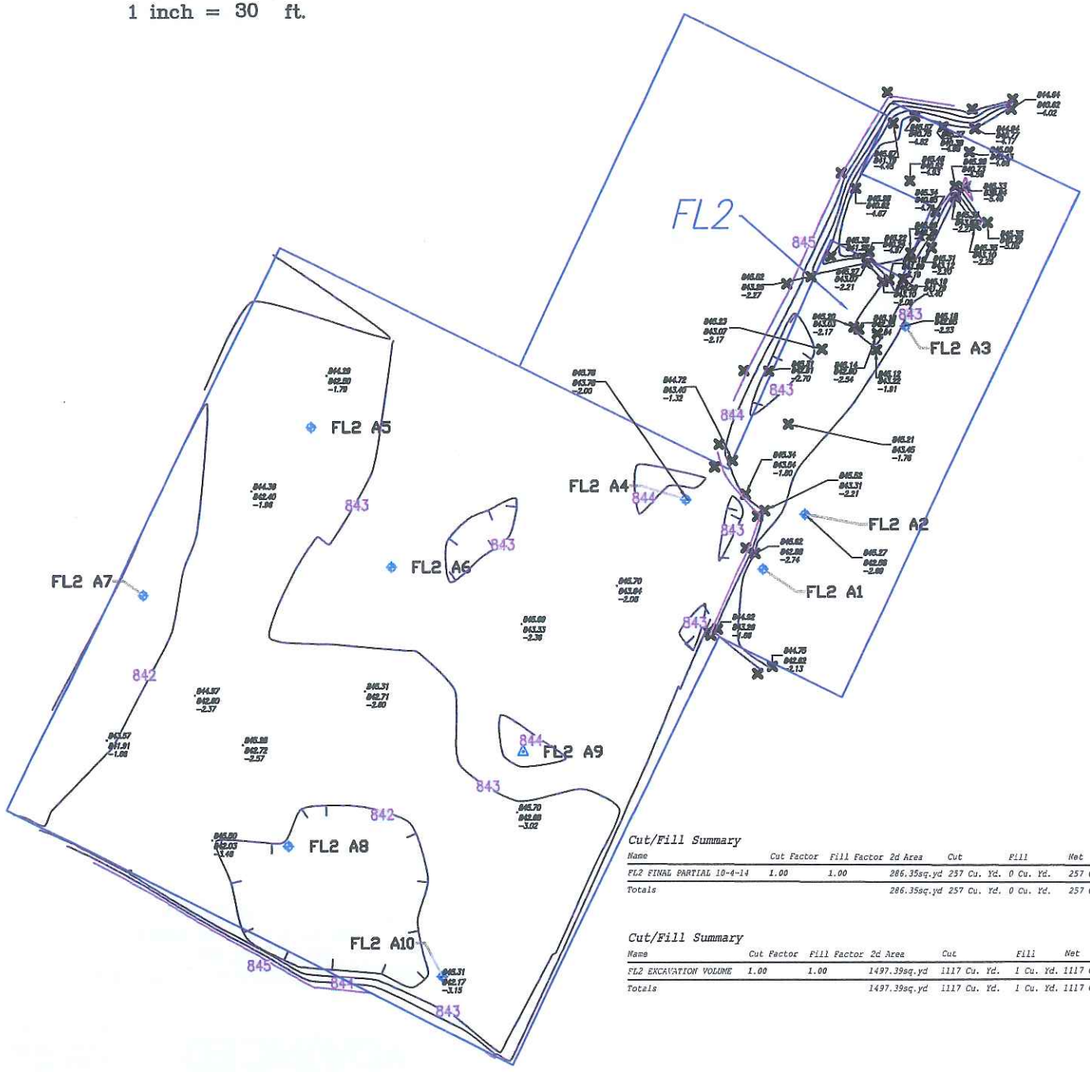
F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\FL1 EXCAVATION VOLUME-Model.dwg

NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
FL2 FINAL PARTIAL 10-4-14	1.00	1.00	286.35sq.yd	257 Cu. Yd.	0 Cu. Yd.	257 Cu. Yd.<Cut>
Totals			286.35sq.yd	257 Cu. Yd.	0 Cu. Yd.	257 Cu. Yd.<Cut>

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
FL2 EXCAVATION VOLUME	1.00	1.00	1497.39sq.yd	1117 Cu. Yd.	1 Cu. Yd.	1117 Cu. Yd.<Cut>
Totals			1497.39sq.yd	1117 Cu. Yd.	1 Cu. Yd.	1117 Cu. Yd.<Cut>

NON- HWMU Area FL2 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
	Preliminary Remediation Goal		920
FL2	XRF-FL2/1.0-1.5/A1	XRF	205.7
FL2	FL2/1.0-1.5/A1	Lab	13.5
FL2	XRF-FL2/1.0-1.5/A2	XRF	16.7
FL2	XRF-FL2/1.0-1.5/A3	XRF	37.3
FL2	FL2/1.0-1.5/A4	Lab	159.0
FL2	FL2/1.0-1.5/A5	Lab	38.7
FL2	FL2/1.0-1.5/A6-D	Lab	138.0
FL2	FL2/1.0-1.5/A7	Lab	116.0
FL2	FL2/1.0-1.5/A8	Lab	218.0
FL2	FL2/1.0-1.5/A9	Lab	18.7
FL2	FL2/1.0-1.5/A10	Lab	81.9

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, FL2 COMBINED EXCAVATION VOLUMES.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

FL2–A1 POST–EXCAVATION SAMPLE LOCATION

BASEMAP SOURCE: POST–EXCAVATION SURVEY FL2 COMBINED EXCAVATION VOLUMES, USI Consultants

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
FL2

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Originated By:	PGS
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Drawing Date:	7/18/2016
Sheet No.:	18 OF 33
Revision Number:	0

FIGURE 18

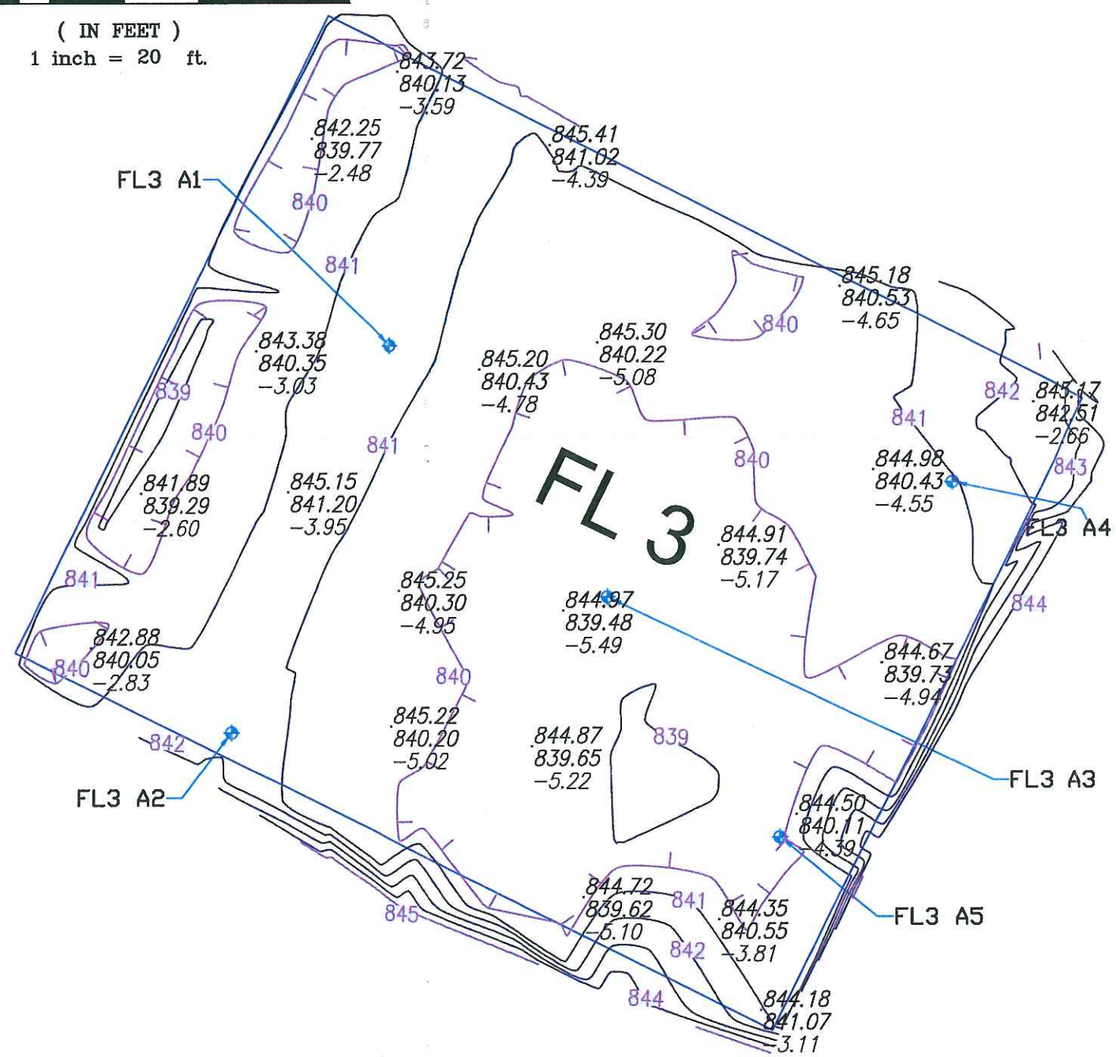
\\Projects\2003\2003046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\FL2 COMBINED EXCAVATION VOLUMES-Model.dwg

NORTH

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
FL3 EXCAVATION SURFACE	1.00	1.00	1242.89sq.yd	1772 Cu. Yd.	0 Cu. Yd.	1772 Cu. Yd.<Cut>
Totals			1242.89sq.yd	1772 Cu. Yd.	0 Cu. Yd.	1772 Cu. Yd.<Cut>

NON- HWMU Area FL3 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
	Preliminary Remediation Goal		920
FL3	FL-3/3.0-3.5/A1	Lab	305.0
FL3	FL-3/3.0-3.5/A2	Lab	18.6
FL3	FL-3/3.0-3.5/A3	Lab	10.9
FL3	FL-3/3.0-3.5/A4	Lab	17.7
FL3	FL-3/3.0-3.5/A5	Lab	10.3

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, FL3 EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

FL3-A5 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
FL3

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Drawn By:	JSD/SDW
Checked By:	PGS
Project Mgr.:	
Originated By:	PGS
Project No.:	2003-1046
Drawing Date:	7/18/2016
Sheet No.:	19 OF 33
Revision Number:	0

FIGURE 19

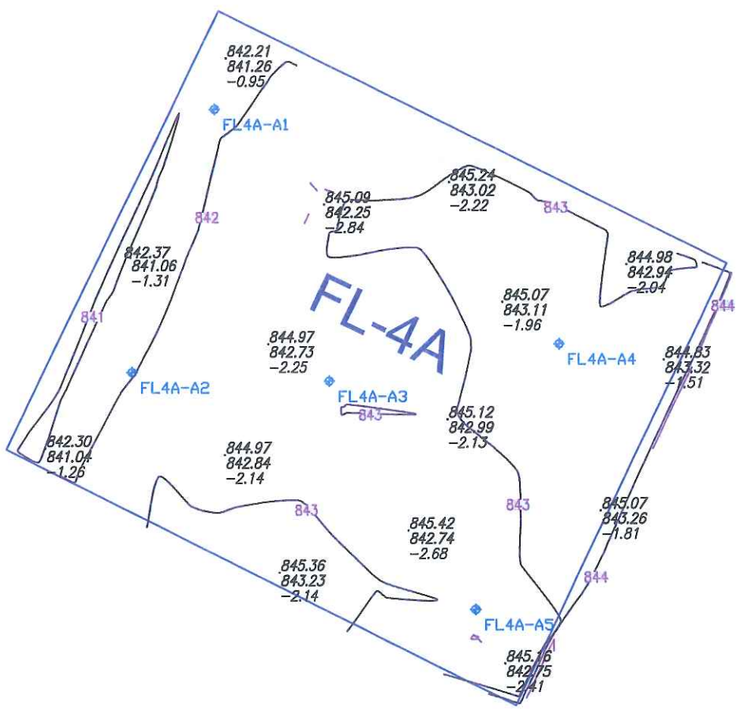
F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\FL3 EXCAVATION VOLUME-Model.dwg

NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
FL4 EXCAVATION VOLUME SURFACE	1.00	1.00	1212.60sq.yd	823 Cu. Yd.	0 Cu. Yd.	822 Cu. Yd.<Cut>
Totals			1212.60sq.yd	823 Cu. Yd.	0 Cu. Yd.	822 Cu. Yd.<Cut>

NON- HWMU Area FL4A Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
	Preliminary Remediation Goal		920
FL4A	FL4A/1.0-1.5/A1	Lab	43.0
FL4A	FL4A/1.0-1.5/A2	Lab	53.6
FL4A	FL4A/1.0-1.5/A3	Lab	383.0
FL4A	FL4A/1.0-1.5/A3-D	Lab	43.0
FL4A	FL4A/1.0-1.5/A4	Lab	58.3
FL4A	FL4A/1.0-1.5/A5	Lab	16.1

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, FL4A EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

FL4A–A5 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
FL4A

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Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003–1046
Drawing Date:	7/18/2016
Sheet No.:	20 OF 33
Revision Number:	0

FIGURE 20

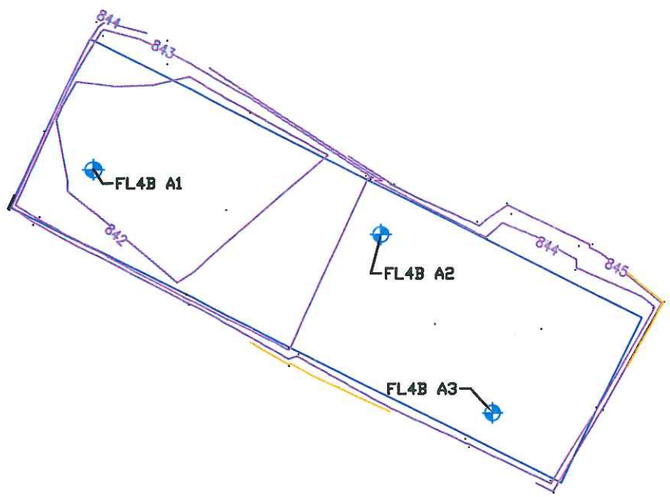
:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\FL-4A EXCAVATION VOLUME-Model.dwg

NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.



Cut/Fill Summary

Name	*Cut Factor*	*Fill Factor*	*2d Area*	*Cut*	*Fill*	*Net*
FL4B Final Volume 9-30-14	*1.00*	*1.00*	*607.79sq.yd*	*391 Cu. Yd.*	*0 Cu. Yd.*	*391 Cu. Yd.<Cut>*
Totals			*607.79sq.yd*	*391 Cu. Yd.*	*0 Cu. Yd.*	*391 Cu. Yd.<Cut>*

NON- HWMU Area FL4B Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
	Preliminary Remediation Goal		920
FL4B	XRF-FL4B/1.0-1.5-A1	XRF	55.4
FL4B	XRF-FL4B/1.0-1.5-A2	XRF	45.1
FL4B	XRF-FL4B/1.0-1.5-A3	XRF	31.3

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo datad November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:
1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, FL4B EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

FL4B-A5 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
FL4B

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Checked By:	PGS
Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003-1046
Drawing Date:	7/16/2016
Sheet No.:	21 OF 33
Revision Number:	0

FIGURE 21

F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\FL4B Excavation Volume-Model.dwg

NORTH

GRAPHIC SCALE

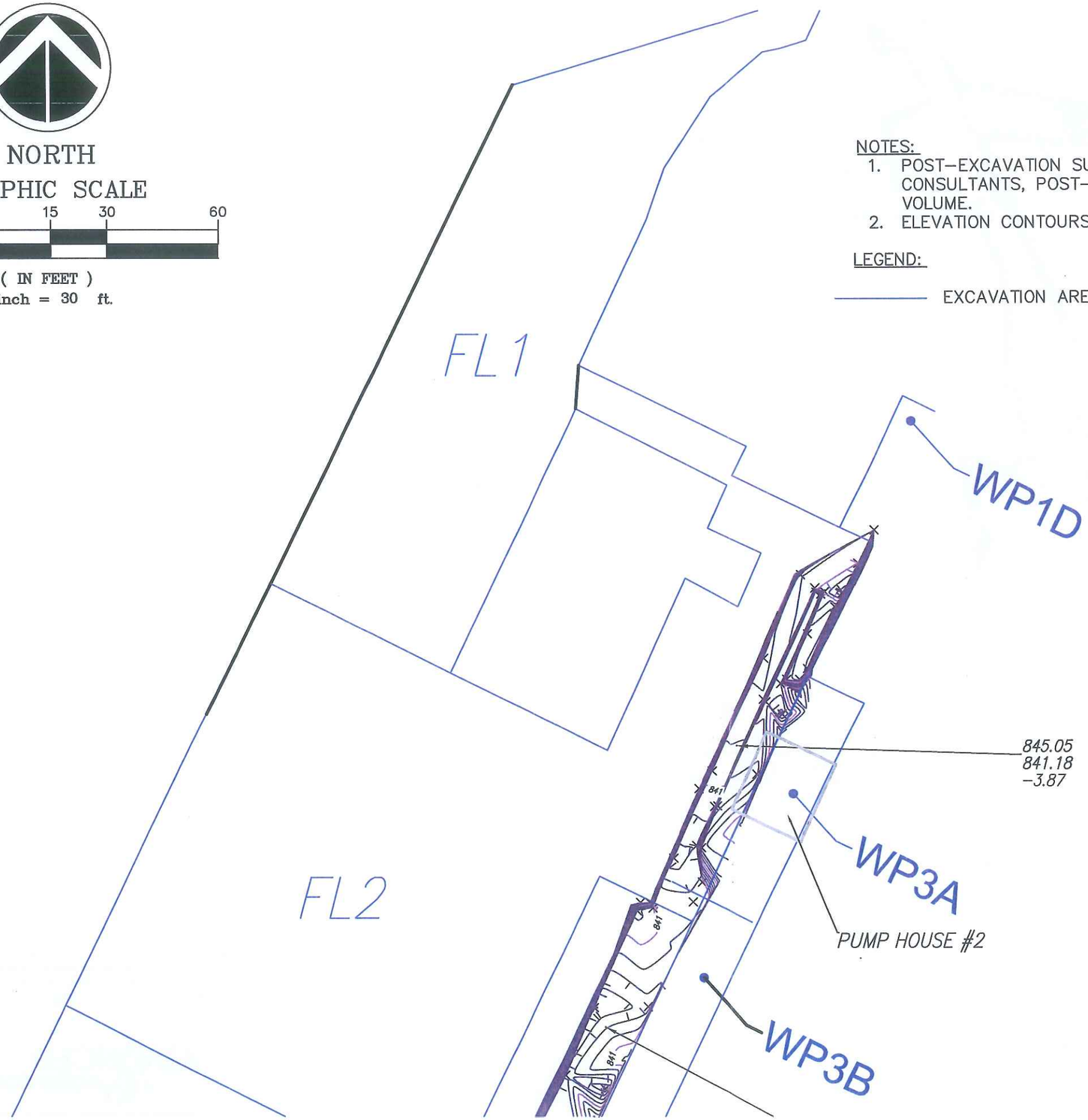
30 0 15 30 60

(IN FEET)
1 inch = 30 ft.

NOTES:
1. POST–EXCAVATION SURVEY ELEVATIONS AND CONTOURS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, DEBRIS TRENCH EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 0.2–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS



REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
FL4B DEBRIS TRENCH (NORTH)

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Originated By:	PGS
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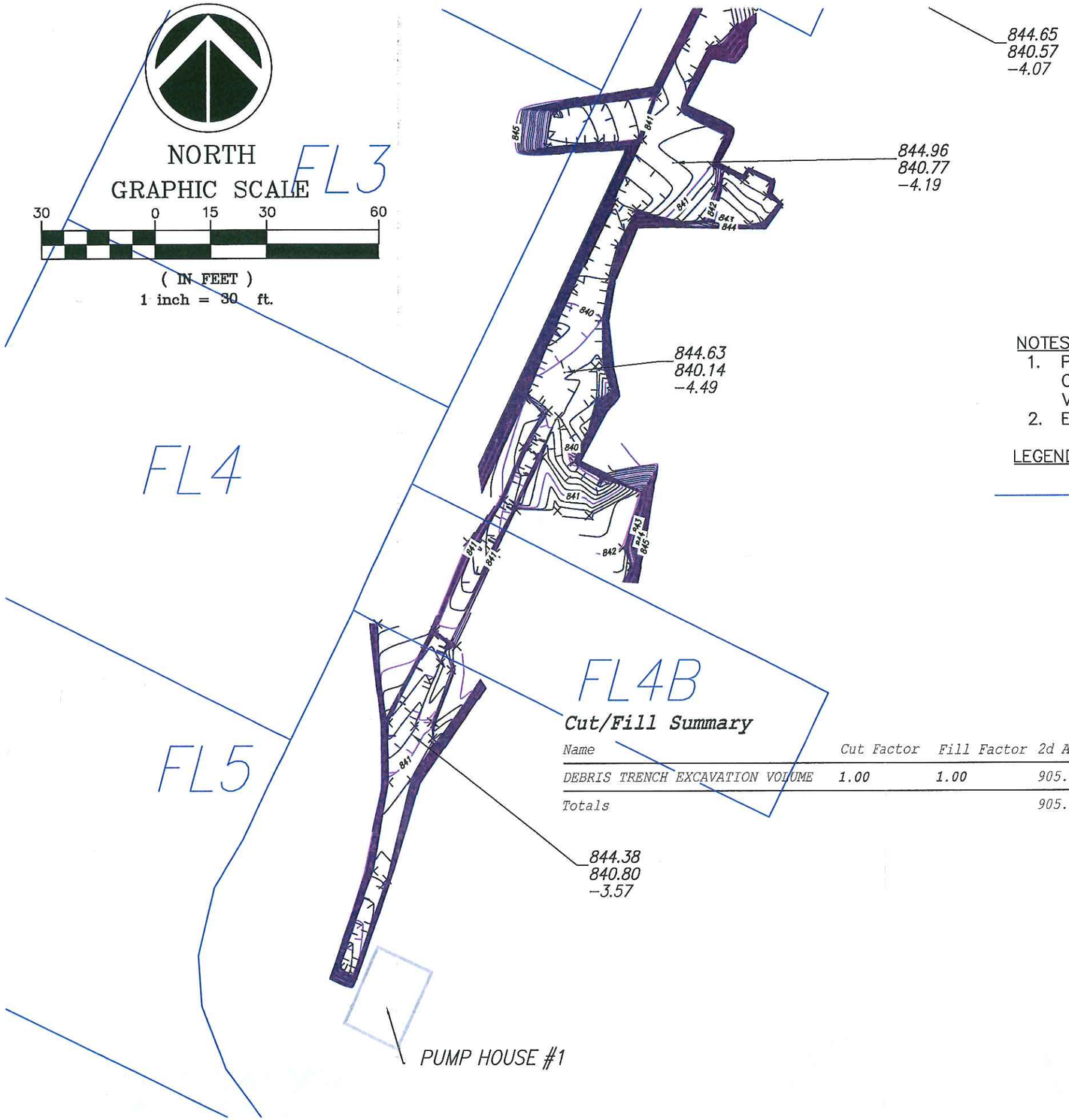
Sheet No.:	21A OF 33
Revision Number:	0

FIGURE 21A

F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\DEBRIS TRENCH.DWG



NOTES:

1. POST-EXCAVATION SURVEY ELEVATIONS AND CONTOURS FROM USI CONSULTANTS, POST-EXCAVATION SURVEY, DEBRIS TRENCH EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 0.2-FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE-DEFINED LIMITS

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
DEBRIS TRENCH EXCAVATION VOLUME	1.00	1.00	905.01sq.yd	936 Cu. Yd.	0 Cu. Yd.	935 Cu. Yd.<Cut>
Totals			905.01sq.yd	936 Cu. Yd.	0 Cu. Yd.	935 Cu. Yd.<Cut>

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST-EXCAVATION CONDITIONS
FL4B DEBRIS TRENCH (SOUTH)

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Sheet No.:	21B OF 33
Revision Number:	0

FIGURE 21B

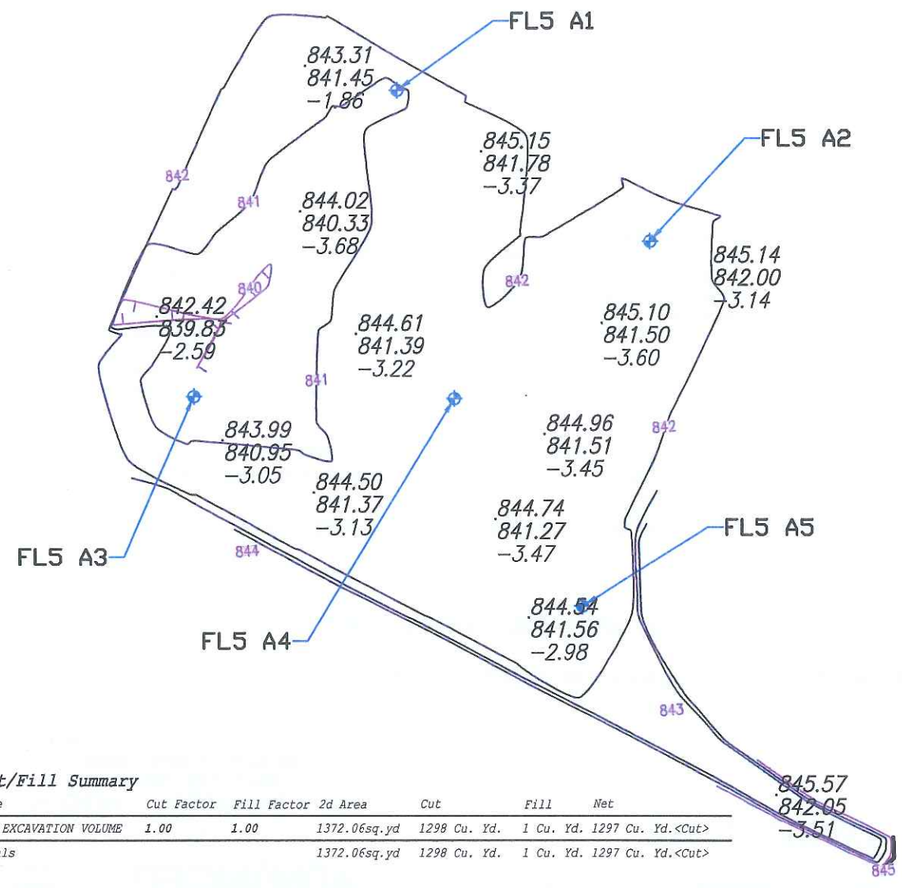
F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\DEBRIS TRENCH.DWG

NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
FL5 EXCAVATION VOLUME	1.00	1.00	1372.06sq.yd	1298 Cu. Yd.	1 Cu. Yd.	1297 Cu. Yd.<Cut>
Totals			1372.06sq.yd	1298 Cu. Yd.	1 Cu. Yd.	1297 Cu. Yd.<Cut>

NON- HWMU Area FL5 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
	Preliminary Remediation Goal		920
FL5	FL5/3.0-3.5/A1	Lab	15.0
FL5	FL5/3.0-3.5/A2	Lab	10.0
FL5	FL5/3.0-3.5/A3	Lab	12.4
FL5	FL5/3.0-3.5/A4	Lab	11.3
FL5	FL5/3.0-3.5/A5	Lab	61.5

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, FL5 EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

FL5-A5 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
FL5

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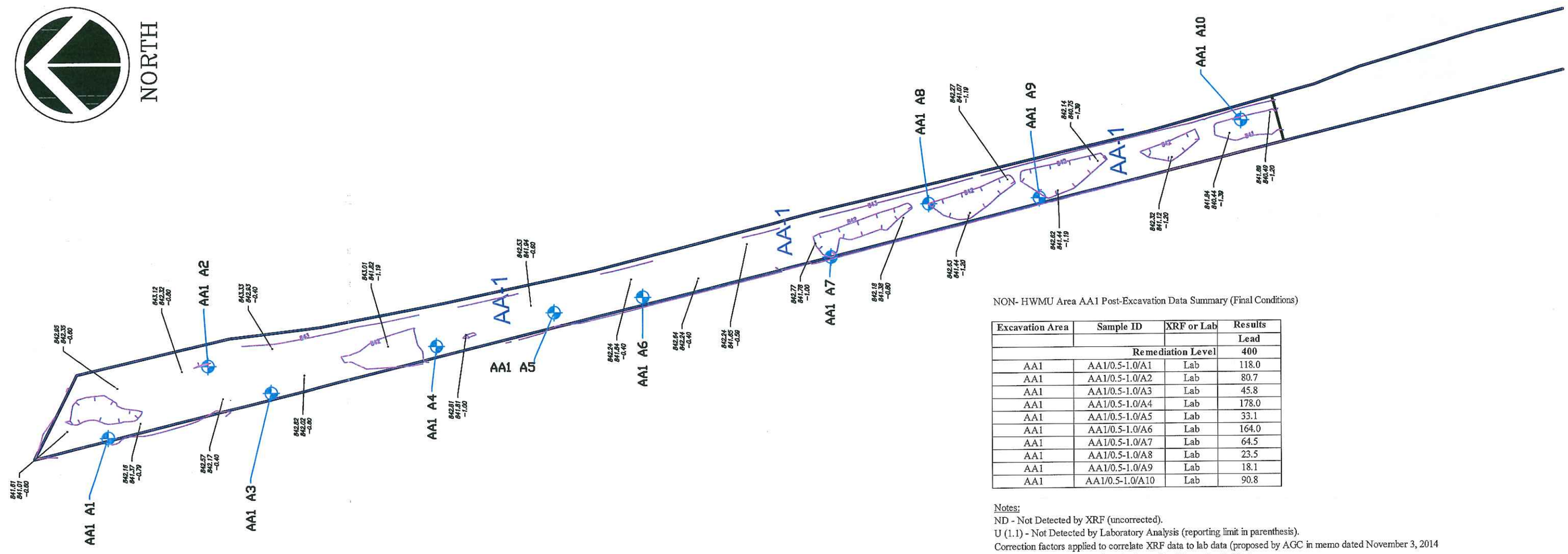
Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003–1046
Drawing Date:	7/18/2016
Sheet No.:	22 OF 33
Revision Number:	0

FIGURE 22

E:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\FL5 EXCAVATION VOLUME-Model.dwg



NON- HWMU Area AA1 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
		Remediation Level	400
AA1	AA1/0.5-1.0/A1	Lab	118.0
AA1	AA1/0.5-1.0/A2	Lab	80.7
AA1	AA1/0.5-1.0/A3	Lab	45.8
AA1	AA1/0.5-1.0/A4	Lab	178.0
AA1	AA1/0.5-1.0/A5	Lab	33.1
AA1	AA1/0.5-1.0/A6	Lab	164.0
AA1	AA1/0.5-1.0/A7	Lab	64.5
AA1	AA1/0.5-1.0/A8	Lab	23.5
AA1	AA1/0.5-1.0/A9	Lab	18.1
AA1	AA1/0.5-1.0/A10	Lab	90.8

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grad
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

Cut/Fill Summary

Name	*Cut Factor*	*Fill Factor*	*2d Area*	*Cut*	*Fill*	*Net*
AA-1 EXCAVATION VOLUME	*1.00*	*1.00*	*1683.88sq.yd*	*374 Cu. Yd.*	*2 Cu. Yd.*	*372 Cu. Yd.<Cut>*
Totals			*1683.88sq.yd*	*374 Cu. Yd.*	*2 Cu. Yd.*	*372 Cu. Yd.<Cut>*

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, AA1 EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

AA1–A5 POST–EXCAVATION SAMPLE LOCATION

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 30 ft.

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
AA1

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Scale:	1" = 50'
Drawn By:	JSD/SDW
Checked By:	PGS
Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003–1046
Drawing Date:	7/18/2016
Sheet No.:	23 OF 33
Revision Number:	0

FIGURE 23

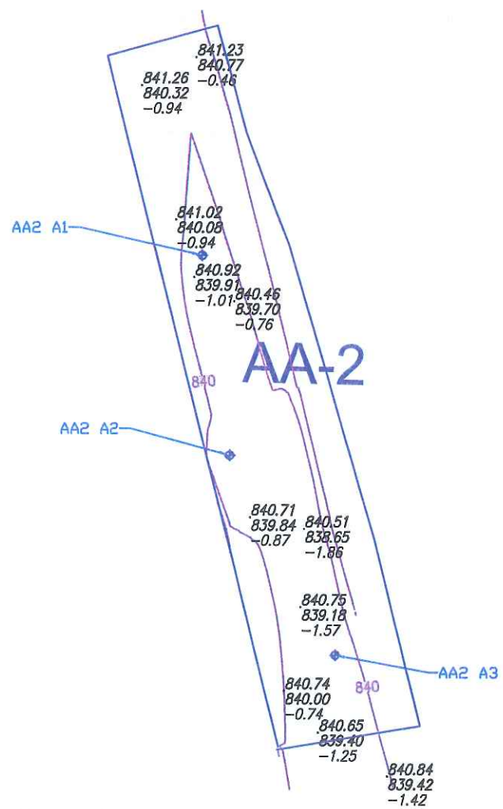
F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\AA-1 EXCAVATION VOLUME-Model.dwg

NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
AA-2 EXCAVATION VOLUME SURFACE	1.00	1.00	371.19sq.yd	125 Cu. Yd.	0 Cu. Yd.	125 Cu. Yd.<Cut>
Totals			371.19sq.yd	125 Cu. Yd.	0 Cu. Yd.	125 Cu. Yd.<Cut>

NON- HWMU Area AA2 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
		Remediation Level	400
AA2	AA2/0.5-1.0/A1	Lab	27.3
AA2	AA2/0.5-1.0/A2	Lab	34.4
AA2	AA2/0.5-1.0/A3	Lab	162.0

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grad
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:
1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, AA2 EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

AA2–A3 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
AA2

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FIGURE 24

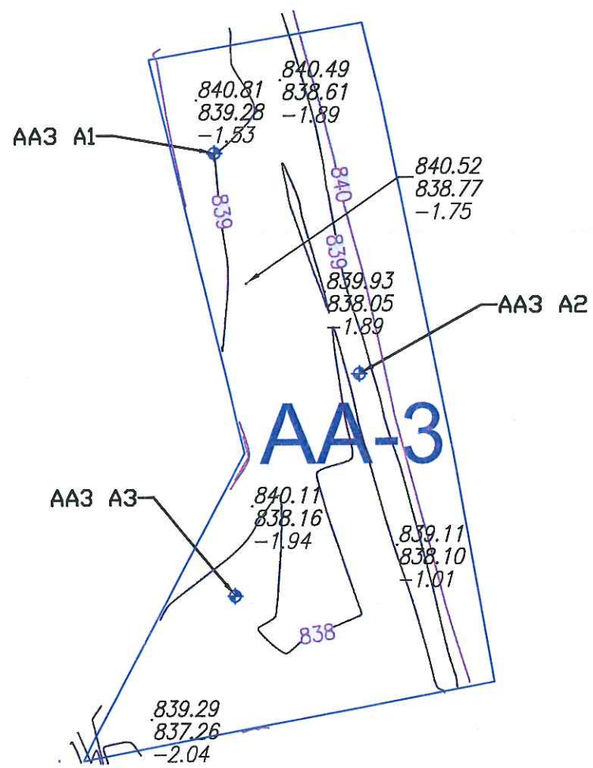
F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\AA-2 EXCAVATION VOLUME-Model-Model.dwg

NORTH

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
AA-3 EXCAVATION VOLUME SURFACE	1.00	1.00	285.96sq.yd	147 Cu. Yd.	0 Cu. Yd.	147 Cu. Yd.<Cut>
Totals			285.96sq.yd	147 Cu. Yd.	0 Cu. Yd.	147 Cu. Yd.<Cut>

NON- HWMU Area AA3 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
		Remediation Level	400
AA3	AA3/1.5-2.0/A1	Lab	10.1
AA3	AA3/1.5-2.0/A2	Lab	13.2
AA3	AA3/1.5-2.0/A3	Lab	18.3

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grad
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:
1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, AA3 FINAL EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

AA3–A2 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
AA3

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FIGURE 25

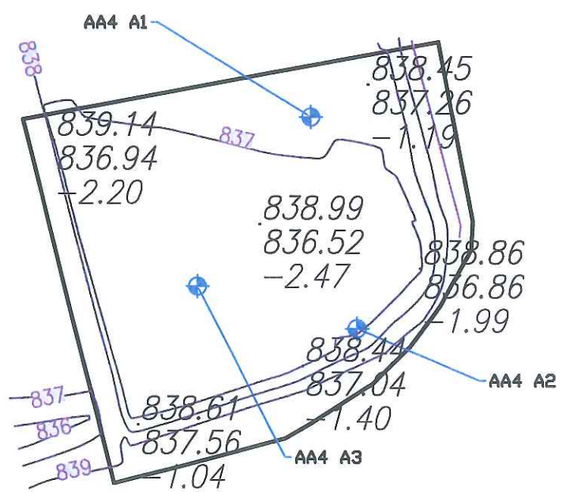
F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\AA-3 FINAL excavation volume-Model-Model.dwg

NORTH

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
AA-4 FINAL VOLUME SURFACE	1.00	1.00	309.25sq.yd	184 Cu. Yd.	0 Cu. Yd.	184 Cu. Yd.<Cut>
Totals			309.25sq.yd	184 Cu. Yd.	0 Cu. Yd.	184 Cu. Yd.<Cut>

NON- HWMU Area AA4 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
		Remediation Level	400
AA4	AA4/2.0-2.5/A1	Lab	13.4
AA4	AA4/2.0-2.5/A2	Lab	17.3
AA4	AA4/2.0-2.5/A2-D	Lab	19.5
AA4	AA4/2.0-2.5/A3	Lab	17.0

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grad
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, AA4 EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

——— EXCAVATION AREA PRE–DEFINED LIMITS

× AA4-A2 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
AA4

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Revision Number:	0

FIGURE 26

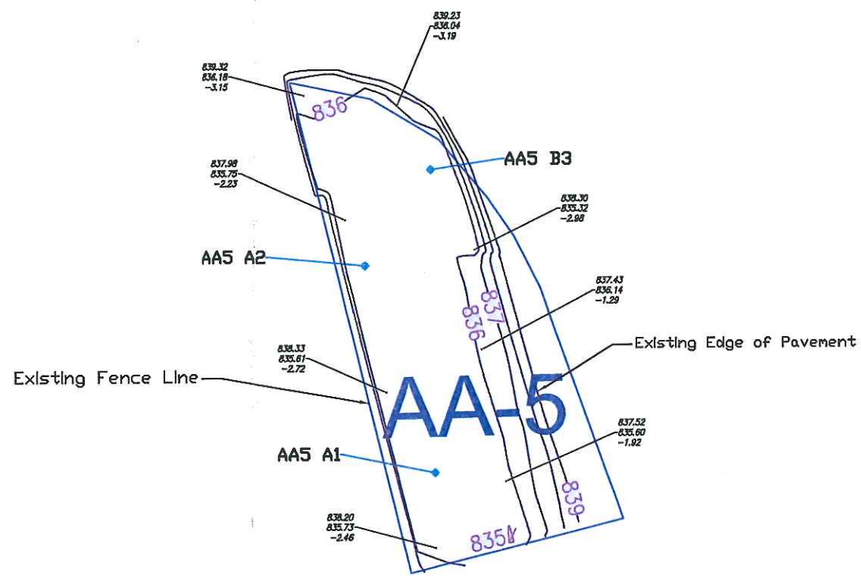
F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\AA-4 EXCAVATION VOLUME-Model.dwg

NORTH

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
AA-5 and AA-6 Excavation Volume	1.00	1.00	157.99sq.yd	114 Cu. Yd.	2 Cu. Yd.	111 Cu. Yd.<Cut>
Totals			157.99sq.yd	114 Cu. Yd.	2 Cu. Yd.	111 Cu. Yd.<Cut>

NON- HWMU Area AA5 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results (ppm)
			Lead
		Remediation Level	400
AA5	AA5/1.0-1.5/A1	Lab	12.9
AA5	AA5/1.0-1.5/A2	Lab	10.7
AA5	AA5/2.0-2.5/B3	Lab	18.7

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo datad November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade.
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:
1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, AA5 EXCAVATION VOLUME DRAWING.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

AA5–A1 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
AA5

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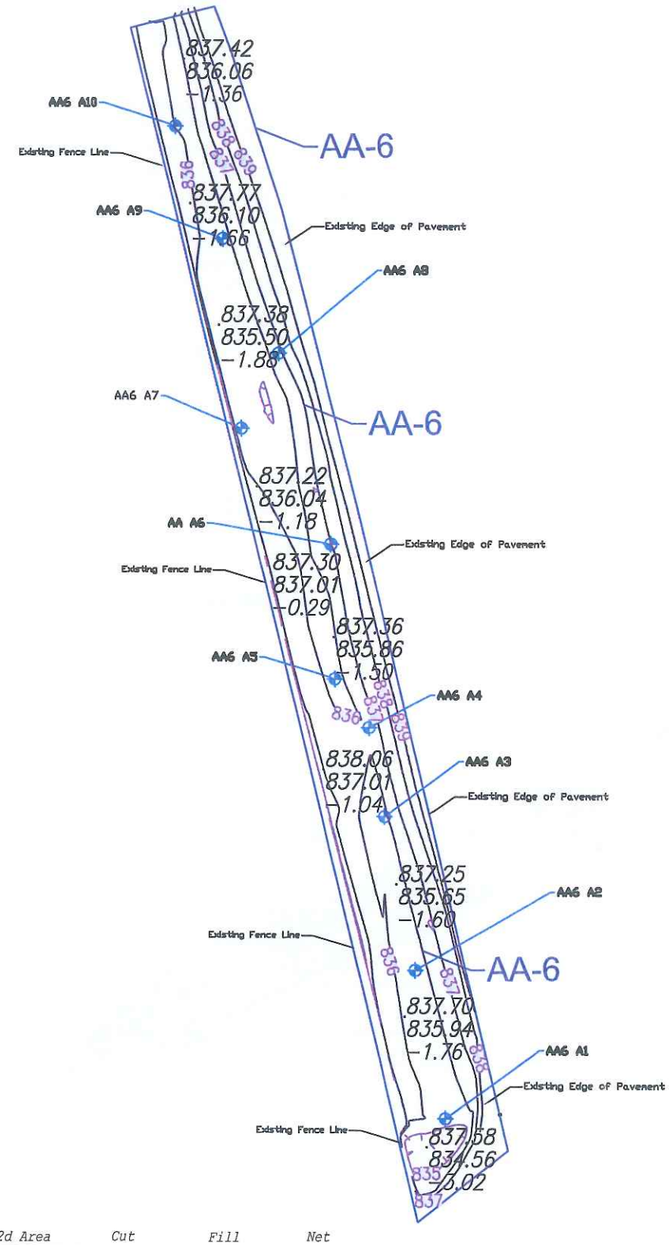
FIGURE 27

F:\Projects\2003\2003\1046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\AA-5 EXCAVATION VOLUME DRAWING-Model.dwg



NORTH

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)

1 inch = 50 ft.

NON- HWMU Area AA6 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
		Remediation Level	400
AA6	AA6/1.0-1.5/A1	Lab	9.3
AA6	AA6/1.0-1.5/A2	Lab	12.1
AA6	AA6/1.0-1.5/A3	Lab	66.6
AA6	AA6/1.0-1.5/A4	Lab	27.5
AA6	AA6/1.0-1.5/A5	Lab	8.3
AA6	AA6/1.0-1.5/A6	Lab	40.7
AA6	AA6/1.0-1.5/A7	Lab	26.6
AA6	AA6/1.0-1.5/A8	Lab	43.1
AA6	AA6/1.0-1.5/A9	Lab	12.5
AA6	AA6/1.0-1.5/A10	Lab	12.4

Notes:

ND - Not Detected by XRF (uncorrected).

U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).

Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):

Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed

Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grad

Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.

For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, AA6 EXCAVATION VOLUME DRAWING.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

AA6–A1 POST–EXCAVATION SAMPLE LOCATION

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
AA-6 EXCAVATION VOLUME SURFACE	1.00	1.00	1300.90sq.yd	407 Cu. Yd.	39 Cu. Yd.	368 Cu. Yd.<Cut>
Totals			1300.90sq.yd	407 Cu. Yd.	39 Cu. Yd.	368 Cu. Yd.<Cut>

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
AA6

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Drawing Date:	7/18/2016
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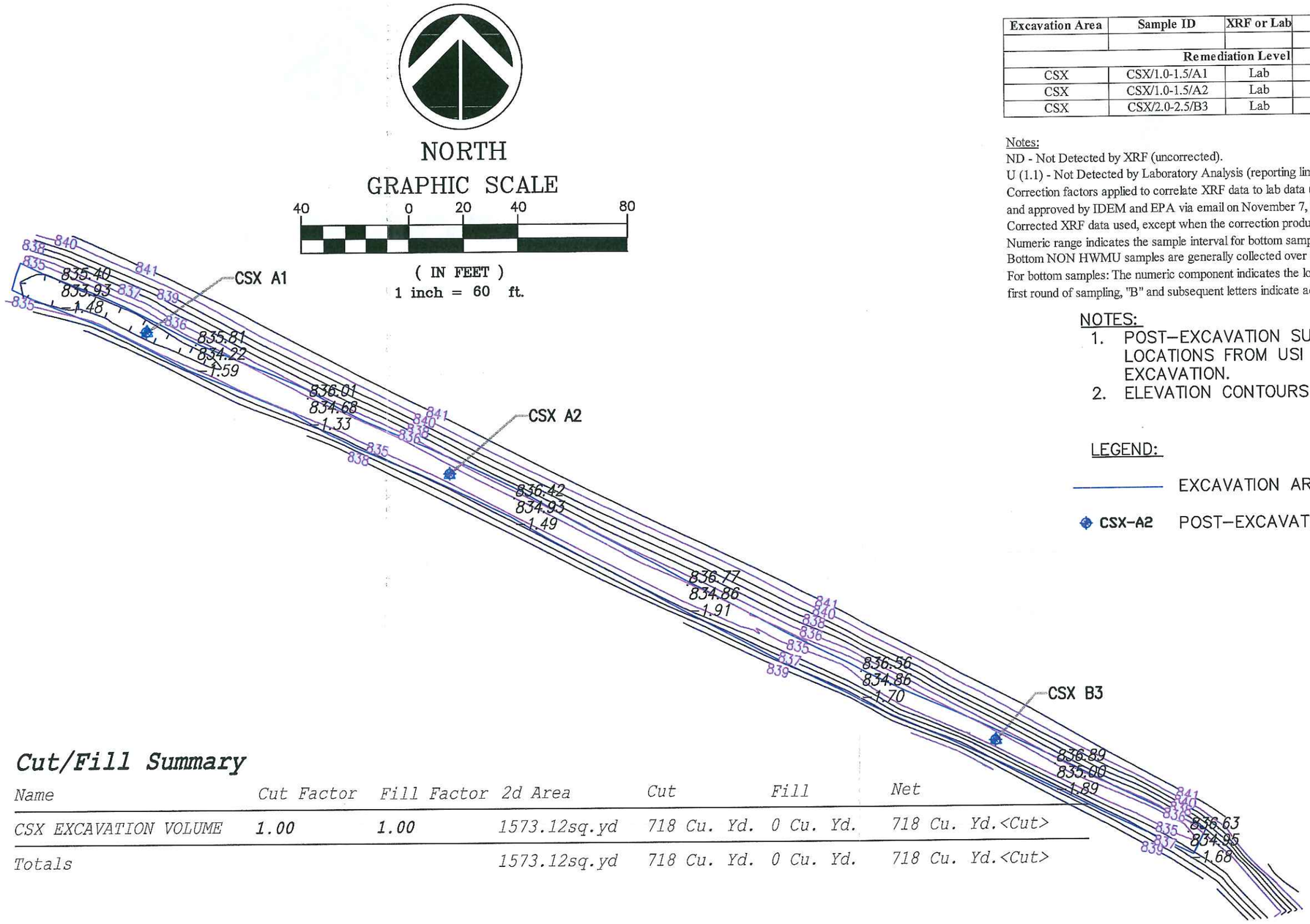
FIGURE 28

F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\AA-6 EXCAVATION VOLUME DRAWING-Model.dwg

NON- HWMU Area CSX Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
		Remediation Level	400
CSX	CSX/1.0-1.5/A1	Lab	27.6
CSX	CSX/1.0-1.5/A2	Lab	19.4
CSX	CSX/2.0-2.5/B3	Lab	11.1

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014
and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grad
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the
first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.



NOTES:
1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, CSX EXCAVATION.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

CSX–A2 POST–EXCAVATION SAMPLE LOCATION

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
CSX EXCAVATION VOLUME	1.00	1.00	1573.12sq.yd	718 Cu. Yd.	0 Cu. Yd.	718 Cu. Yd.<Cut>
Totals			1573.12sq.yd	718 Cu. Yd.	0 Cu. Yd.	718 Cu. Yd.<Cut>

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3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
CSX

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Revision Number:	0

FIGURE 29

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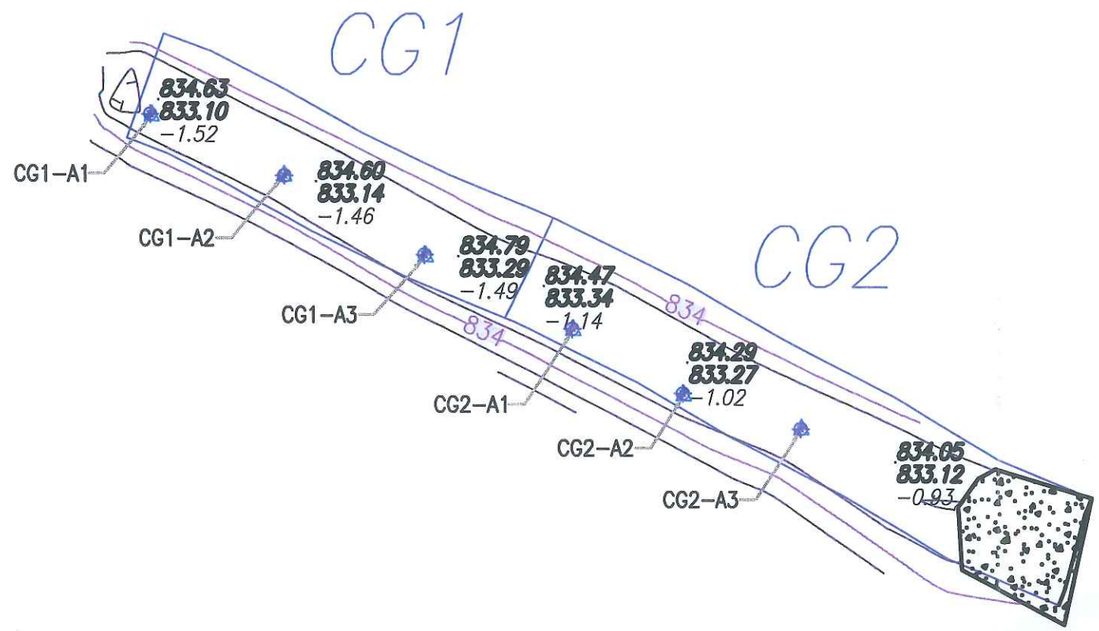
NORTH

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
CG2 EXCAVATION	1.00	1.00	338.34sq.yd	121 Cu. Yd.	0 Cu. Yd.	121 Cu. Yd.<Cut>
CG1 EXCAVATION	1.00	1.00	277.73sq.yd	113 Cu. Yd.	0 Cu. Yd.	113 Cu. Yd.<Cut>
Totals			616.07sq.yd	234 Cu. Yd.	0 Cu. Yd.	234 Cu. Yd.<Cut>

NON- HWMU Area CG1 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
		Remediation Level	400
CG1	CG1/0.5-1.0/A1	Lab	36.1
CG1	CG1/0.5-1.0/A2	Lab	33.9
CG1	CG1/0.5-1.0/A3	Lab	20.1

NON- HWMU Area CG2 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
		Remediation Level	400
CG2	CG2/1.0-1.5/A1	Lab	8.9
CG2	CG2/1.0-1.5/A2	Lab	32.8
CG2	CG2/1.0-1.5/A3	Lab	19.9

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation gra
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, CG 1–2 EXCAVATION.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

CG2-A3 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
CG1 & CG2

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Sheet No:	30 OF 33
Revision Number:	0

FIGURE 30

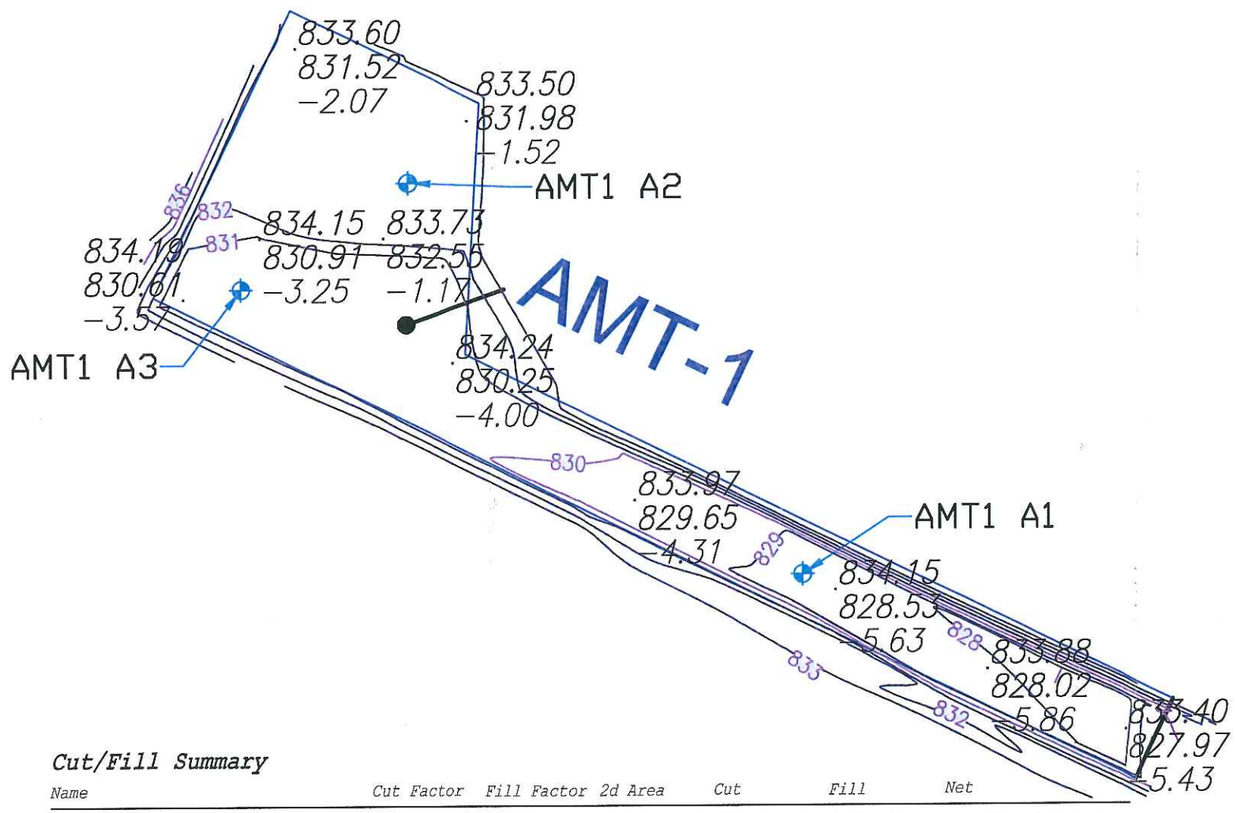
F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\CG 1-2 EXCAVATION.dwg

NORTH

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
AMT-1 EXCAVATION VOLUME SURFACE	1.00	1.00	374.54sq.yd	394 Cu. Yd.	0 Cu. Yd.	394 Cu. Yd.<Cut>
Totals			374.54sq.yd	394 Cu. Yd.	0 Cu. Yd.	394 Cu. Yd.<Cut>

NON- HWMU Area AMT1 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
		Remediation Level	400
AMT1	AMT-1/0.5-1.0/A1	Lab	15.1
AMT1	AMT-1/0.5-1.0/A2	Lab	37.3
AMT1	AMT-1/0.5-1.0/A3	Lab	152.0

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:
1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, AMT–1 EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

AMT1-A1 POST–EXCAVATION SAMPLE LOCATION

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

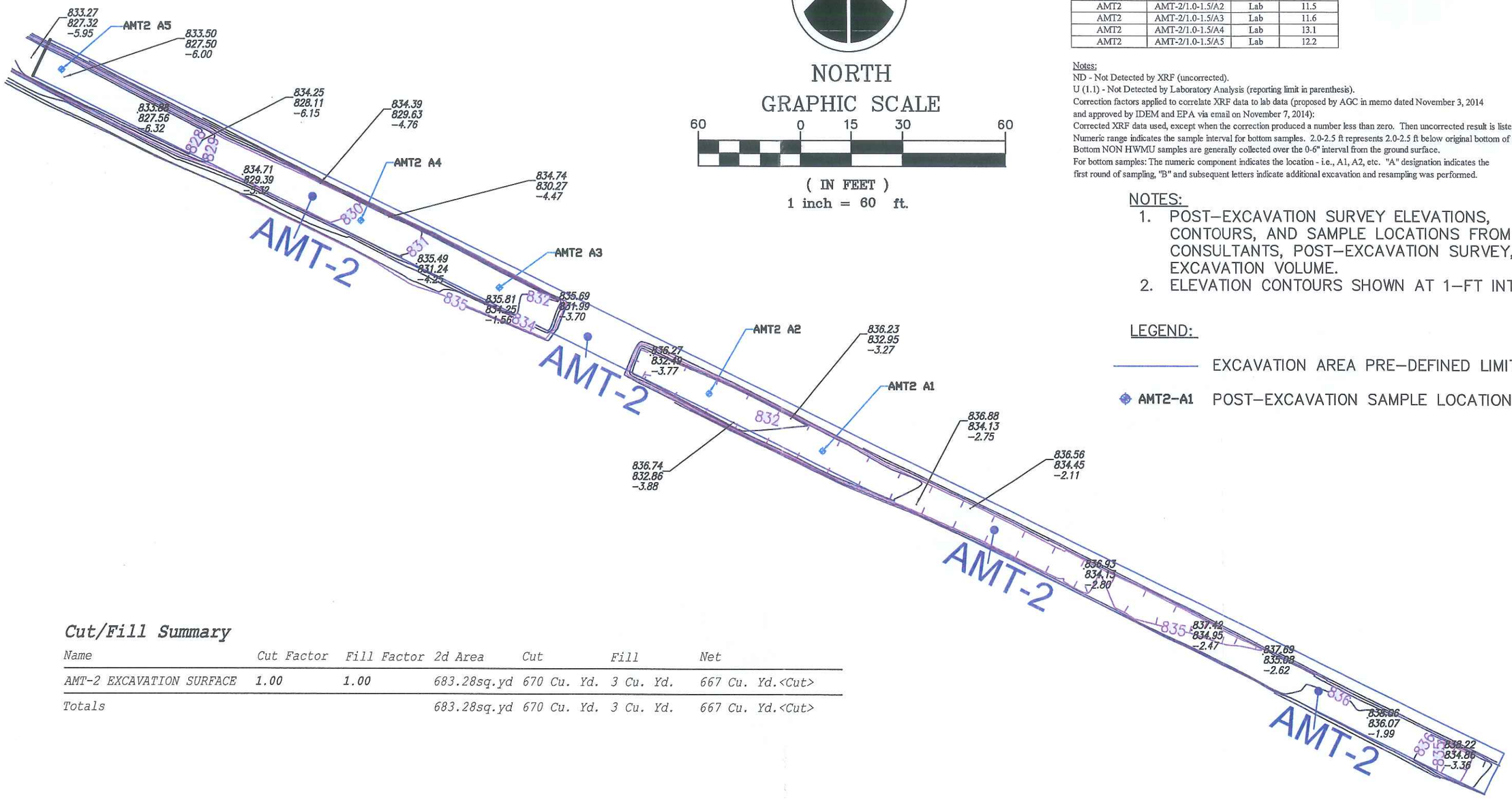
EXCAVATION CONDITIONS
AMT1

ADVANCED GeoServices
Engineering for the Environment. Planning for People.™
1055 ANDREW DRIVE, SUITE A
WEST CHESTER, PENNSYLVANIA 19380
Tel: 610.840.9100 Fax: 610.840.9199 Web: www.advancedgeoservices.com

Scale:	1" = 20'
Drawn By:	JSD/SDW
Checked By:	PGS
Project Mgr:	JSD
Originated By:	PGS
Project No:	2003-1046
Drawing Date:	7/18/2016
Sheet No:	31 OF 33
Revision Number:	0

FIGURE 31

F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\AMT-1 EXCAVATION VOLUME-Model.dwg



NON- HWMU Area AMT2 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
		Remediation Level	400
AMT2	AMT-2/1.0-1.5/A1	Lab	14.0
AMT2	AMT-2/1.0-1.5/A2	Lab	11.5
AMT2	AMT-2/1.0-1.5/A3	Lab	11.6
AMT2	AMT-2/1.0-1.5/A4	Lab	13.1
AMT2	AMT-2/1.0-1.5/A5	Lab	12.2

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, AMT–2 EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

AMT2–A1 POST–EXCAVATION SAMPLE LOCATION

Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
AMT-2 EXCAVATION SURFACE	1.00	1.00	683.28sq.yd	670 Cu. Yd.	3 Cu. Yd.	667 Cu. Yd.<Cut>
Totals			683.28sq.yd	670 Cu. Yd.	3 Cu. Yd.	667 Cu. Yd.<Cut>

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
AMT2

ADVANCED GeoServices
Engineering for the Environment. Planning for People.™
1055 ANDREW DRIVE, SUITE A
WEST CHESTER, PENNSYLVANIA 19380
Tel: 610.840.9100 Fax: 610.840.9199 Web: www.advancedgeoservices.com

Scale:	1" = 30'
Drawn By:	JSD/SDW
Checked By:	PGS
Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003–1046
Drawing Date:	7/18/2016
Sheet No.:	32 OF 33
Revision Number:	0

FIGURE 32

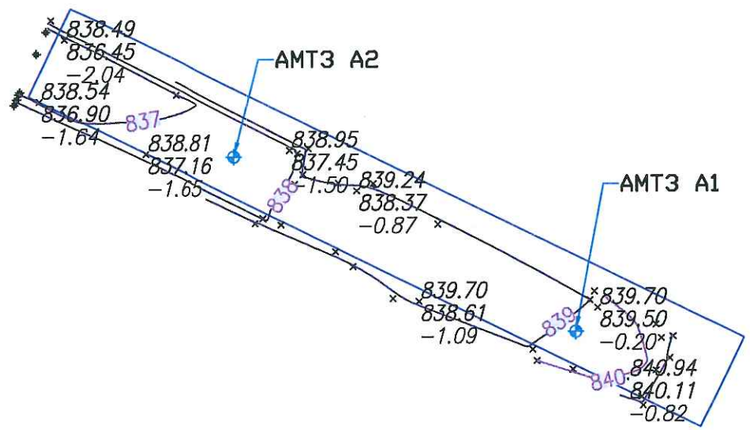
F:\Projects\2003\20031046-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\AMT-2 EXCAVATION VOLUME-Model.dwg

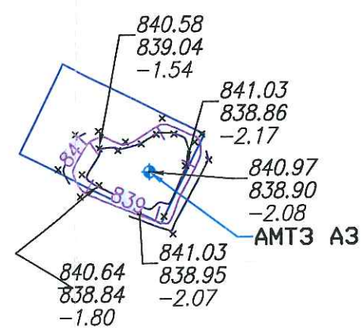
NORTH

GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.





Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
AMT-3 EXCAVATION VOLUME SURFACE	1.00	1.00	119.74sq.yd	43 Cu. Yd.	0 Cu. Yd.	42 Cu. Yd.<Cut>
AMT 3 EAST EXCAVATION VOLUME	1.00	1.00	21.50sq.yd	10 Cu. Yd.	0 Cu. Yd.	10 Cu. Yd.<Cut>
Totals			141.24sq.yd	53 Cu. Yd.	0 Cu. Yd.	53 Cu. Yd.<Cut>

NON- HWMU Area AMT3 Post-Excavation Data Summary (Final Conditions)

Excavation Area	Sample ID	XRF or Lab	Results
			Lead
		Remediation Level	400
AMT3	AMT-3/0.5-1.0/A1	Lab	13.2
AMT3	AMT-3/0.5-1.0/A2	Lab	16.6
AMT3	AMT-3/0.5-1.0/A3	Lab	13.2

Notes:
ND - Not Detected by XRF (uncorrected).
U (1.1) - Not Detected by Laboratory Analysis (reporting limit in parenthesis).
Correction factors applied to correlate XRF data to lab data (proposed by AGC in memo dated November 3, 2014 and approved by IDEM and EPA via email on November 7, 2014):
Corrected XRF data used, except when the correction produced a number less than zero. Then uncorrected result is listed
Numeric range indicates the sample interval for bottom samples. 2.0-2.5 ft represents 2.0-2.5 ft below original bottom of excavation grade
Bottom NON HWMU samples are generally collected over the 0-6" interval from the ground surface.
For bottom samples: The numeric component indicates the location - i.e., A1, A2, etc. "A" designation indicates the first round of sampling, "B" and subsequent letters indicate additional excavation and resampling was performed.

NOTES:

1. POST–EXCAVATION SURVEY ELEVATIONS, CONTOURS, AND SAMPLE LOCATIONS FROM USI CONSULTANTS, POST–EXCAVATION SURVEY, AMT–3 EXCAVATION VOLUME.
2. ELEVATION CONTOURS SHOWN AT 1–FT INTERVALS.

LEGEND:

EXCAVATION AREA PRE–DEFINED LIMITS

AMT3-A1 POST–EXCAVATION SAMPLE LOCATION

BASEMAP SOURCE: POST–EXCAVATION SURVEY AMT–3 EXCAVATION VOLUME, USI Consultants

REFINED METALS CORPORATION
3700 SOUTH ARLINGTON AVENUE
BEECH GROVE, INDIANA

POST–EXCAVATION CONDITIONS
AMT3

ADVANCED GeoServices
Engineering for the Environment. Planning for People.™
1055 ANDREW DRIVE, SUITE A
WEST CHESTER, PENNSYLVANIA 19380
Tel: 610.840.9100 Fax: 610.840.9199 Web: www.advancedgeoservices.com

Scale:	1" = 20'
Drawn By:	JSD/SDW
Checked By:	PGS
Project Mgr.:	JSD
Originated By:	PGS
Project No.:	2003-1046
Drawing Date:	7/18/2016
Sheet No.:	33 OF 33
Revision Number:	0

FIGURE 33

F:\Projects\2003\2003104G-RMC Beech Grove Corr Measures Study\Cad\Op-tech Issued Drawings\CMI Report\NON HWMU\AMT-3 EXCAVATION VOLUME-ModelLdwg

CMD DRAWINGS

CMI DRAWINGS

APPENDIX A

Construction Progress Meeting Minutes
(Provided on Disc)

APPENDIX B

Op-Tech Weekly Reports
(Provided on Disc)

APPENDIX C

Water Treatment and Discharge
(Provided on Disc)

APPENDIX D

Permitting
(Provided on Disc Also)

Department of Code Enforcement
Indianapolis
Gregory A. Ballard, Mayor

June 4, 2014

Mr. Paul Stratman, P.E.
Advanced Geoservices
1055 Andrew Dr., Suite A
West Chester, PA 19830-4923

RE: Refined Metals – Revision Review
3700 S. Arlington Ave.
DRN11-00784

NOTICE
OF
DRAINAGE APPROVAL
This is Not a Permit

Dear Mr. Stratman:

The Department of Code Enforcement (DCE) has reviewed the proposed construction plans, drainage calculations, and Storm Water Permit Application for the above referenced project. We have found that the submitted documents appear to be in substantial compliance with Chapter 561, Drainage and Sediment Control Ordinance, Code of Indianapolis and Marion County, Indiana and the Flood Control District Zoning Ordinance of Marion County, Indiana Chapter 735. We therefore, grant storm water drainage approval for this project. We have based our approval upon the accuracy of the proposed plan, specifications, and proper certification. If modifications or addendums to the proposed construction project are required by the Owner(s), a revised set of construction plans that accurately delineate all changes and/or amendments must be submitted and approved by this Department prior to the commencement of the site construction activity.

The overall Stormwater Permit submittal for this project is approved for general conformity to applicable design criteria, permit issuance procedures and the above referenced limiting condition. The full responsibility of the Owner(s) is in no way relieved by this approval.

You should not construe this letter of approval to be a building permit or a waiver of any other applicable provisions of local zoning ordinances, utility regulations or building codes. In addition, the issuance of this letter of approval does not relieve the property owner of the responsibility to obtain all other applicable permits, easements, or approvals that may be required for this project.

As a requirement of the State's regulation governing storm water runoff and construction site erosion and sediment control (327 IAC 15-5) you are required to submit an erosion and sediment control plan, a copy of this letter and a copy of the Notice of Intent to the Marion County SWCD, and a Notice of Intent (and any required fees and application) to the Indiana Department of Environmental Management (IDEM) prior to the initiation of land disturbing activities. Land disturbing activities under state law mean any manmade change of the land surface, including the removal of vegetative cover, excavating, filling, transporting and grading. Submittal of your DCE-approved erosion and sediment control plan to the Marion County SWCD prior to engaging in any

land disturbing activity will fulfill the State's requirement to submit a soil erosion and sediment control plan (though you are still required to submit the Notice of Intent to IDEM pursuant to 327 IAC 15-5-5). By state law, you are also required to notify the Marion County SWCD within 48 hours of actual construction start-up activity at the site.

I. DESIGN APPROVAL AND PERMIT ISSUANCE

The City of Indianapolis hereby notifies the Owner that the plans are in general conformity to applicable design criteria established by City Ordinance, Standards and Specifications and are hereby approved. All detail dimensions and quantities have not been completely checked. The full responsibility of the Owner and their Agent(s) is not relieved by this approval.

If modification or addendum to the proposed construction project is required by the Owner(s), a revised set of construction plans that accurately delineate all changes and/or amendments must be submitted and approved by this Department before the commencement of construction activity.

NOTICE: Before a permit may be obtained you must:

1. Submit Four (4) sets of Final Construction Plans to the Permit Coordinator at the address listed below. Please be sure these plans note the latest revision date and are titled "Final Construction Plans."

2. **Please pay the Final Drainage Review fee of $000.00.** This fee represents the total review fee less the fees paid to date ($301.00 - $301.00). Checks should be made payable to the "City of Indianapolis". Payment is due immediately upon receipt of this letter. Please be advised that the Permit Division has no knowledge regarding contractual obligations for payment of fees amongst various parties of a project, and therefore holds the person/firm issued the approval responsible for payment of review fees.

3. Please pay the initial stormwater quality inspection three (3) year fee of **$2,115.00** which is $705.00 per BMP utilized in this project.

4. Please submit a recorded copy of a Grant of Perpetual Drainage Easement and Right-of-Way.

5. Please submit a fully executed AGREEMENT FOR CONSTRUCTION OF STORMWATER DRAINAGE SYSTEM UNDER PRIVATE CONTRACT (With the System to Remain Private)with notarized signatures of legal Owner and Contractor.

6. Please submit two (2) signed copies of the BMP O & M Manual.

7. A copy of the O&M manual must be submitted in digital format, i.e. CD, disk, etc.

8. Please submit a completed Indemnification Agreement (Drainage).

9. Obtain the **Drainage and/or Flood Permit** from the Department of Code Enforcement.

II. CONSTRUCTION ACTIVITIES

Construction activities may not begin before completion of the following:

1. Owner or Contractor will schedule and attend a **pre-construction conference**. Contact myself to schedule a meeting time and place. The Inspecting Engineer will be assigned at this meeting. Contractor attendance is mandatory.

   The **inspection fee** for this project is based upon an inspection-billing rate of $65.00 per hour with average inspection time between twenty (20) and thirty (30) hours per week of construction. The actual inspection cost is dependent on site conditions. Inspection costs will be invoiced directly by the Inspecting Engineer on a monthly basis.

2. An Improvement Location Permit(s) may be required by the Department of Code Enforcement for this project. The items to be submitted should include (but are not limited to):

   - A completed ILP Application
   - 2 copies of the legal description for the site
   - 2 copies of the site plan drawn to scale, showing all information necessary for ILP review.
   - 2 copies of the landscape plan
   - Any approved Letters of Petition which include rezoning, variance and or approval case.

3. Complete the **"Agreement for Construction for a Stormwater Drainage System Under Private Contract"** to be submitted at the pre-construction meeting.

4. Submit the name of person(s) responsible for the installation and maintenance of erosion and sediment control practices, their business address and their daytime telephone number.

For Additional information regarding the above, please call 327-8700 and request a detailed checklist.

III. PROJECT ACCEPTANCE:

The following must be completed during/after project construction/completion:

1. A **Completed Improvement Stormwater Drainage Project Contractor Affidavit** must be processed with this office. Contact myself to obtain a copy of this form for processing.

2. Submit one (1) set of **"As-Built" mylars** (i.e. title page, site/development plan(s), specification(s), and detail(s)), All numbers and letters must be a minimum 1/4" in height (deliver originals to myself).
   Also submit a copy of the "As-Built" in digital form. The file format will be AutoCAD Drawing Interchange File (DXF) format.

To expedite the permitting process, please bring this letter with you when obtaining your permit.

If you have any question regarding this approval, please call me at 327-8461.

Sincerely,

George Krack III

George Krack III
Supervisor - Project Compliance Analyst,
Department of Code Enforcement
City of Indianapolis

cc: File

CITY OF INDIANAPOLIS
DEPARTMENT OF CODE ENFORCEMENT
RIGHT OF WAY PERMIT
Excavation
1200 MADISON AVE., SUITE 100, INDIANAPOLIS, IN 46225
Phone:(317) 327-8700
www.indy.gov

Permit No **ROW14-05015** Issued: **09/18/2014**

Location: **3700 S ARLINGTON AVE** Expired: **09/30/2014**

Township: FRANKLIN

CONTRACTOR
OP-TECH ENVIRONMENTAL SERVICES INC
1 ADLER DRIVE
EAST SYRACUSE, NE 13057
315-437-2065

OWNER
Refined Metals Corp %thomson Property Tax Services
251 N Illinois St Ste 810
Indianapolis, IN 46204

APPLICANT
JOE NASELLI
OP-TECH ENVIRONMENTAL SERVICES INC
1 ADLER DRIVE
EAST SYRACUSE, NE 13057
315-437-2065

PROJECT DESCRIPTION: REMOVE AND REPLACE 6" TO 18" OF TOPSOIL THAT IS CONTAMINATED WITH LEAD FROM ROAD EDGE TO FENCE LINE FROM RAILROAD SOUTH TO BIG FOUR RD FROM 9/9/14 THRU 9/30/14; EMERGENCY CONTACT: JOE WASELLI 518-775-0537

Detour Route:

Certified Utilities: **No**
Emergency **No**
Start/Finish Dates: **09/09/2014** Thru **09/30/2014**
# of Meters Blocked:

City Project : **No**
City Project #: **N/A**
City Manager: **N/A**
City Mgr Phone#: **N/A**

Minimum Traffic Control Devices Required
CONES
FLAGGERS
ARROWBOARDS

AREA AFFECTED

Type	Street Names	Location	Start Date	StartTime	End Date	End Time	Special Hours
Partial Closure Thouroughfare	S ARLINGTON AVE	FROM RR TO BIG FOUR RD	09/09/2014	8:00 AM	09/30/2014	4:00 PM	

METERS

Meter #:	Street Name:	Start Date:	Start Time:	End Date:	End Time:

EXCAVATIONS

Surface Type:	# of Excavations:
NON-PAVEMENT	2

FEES

Application Fee	$32.00
Right of Way Permit Review Fee	$85.00
Non-Pavement Excavation	$192.00
Total Due:	$309.00
Balance:	$0.00

CITY OF INDIANAPOLIS
DEPARTMENT OF CODE ENFORCEMENT
RIGHT OF WAY PERMIT
Excavation
1200 MADISON AVE., SUITE 100, INDIANAPOLIS, IN 46225
Phone:(317) 327-8700
www.indy.gov

Permit No **ROW14-05015** Issued: **09/18/2014**

Location: **3700 S ARLINGTON AVE** Expired: **09/30/2014**

Township: FRANKLIN

CONDITIONS:

• TO REQUEST AN INSPECTION, CALL (317) 327-5525.

HTTP://WWW.INDY.GOV/PERMITS

• A right of way permit which includes excavation must be activated by the permit holder and construction may not begin until the permit is activated. The permit must be posted on site.
The work must begin within three (3) working days of activation of permit. If, after activating the ROW permit, the work will not be started within the three (3) working days, the permit holder shall contact the inspector assigned to the township where the work will be located to deactivate the permit. ROW Regulations Sec. 17.03

• Applicant must have permit on work site to be valid. Applicant must use proper traffic control & activate excavation permits. All contractors and utilities are required to contact Indiana Underground Plant Protection Service (IUPPS) at 1-800-382-5544 to have Utilities Located. Contractor must use flowable fill and full lane restoration on asphalt cuts. All concrete sidewalk cuts require full panel restoration that is ADA acceptable. All concrete street cuts on major thoroughfares will require full lane restoration.

CITY OF INDIANAPOLIS
DEPARTMENT OF CODE ENFORCEMENT
RIGHT OF WAY PERMIT
Excavation
1200 MADISON AVE., SUITE 100, INDIANAPOLIS, IN 46225
Phone:(317) 327-8700
www.indy.gov

Permit No **ROW15-04344** Issued: **09/04/2015**

Location: **3700 S ARLINGTON AVE** Expired: **10/15/2015**

Township: FRANKLIN

CONTRACTOR
OP-TECH ENVIRONMENTAL SERVICES INC
1 ADLER DRIVE
EAST SYRACUSE, NE 13057
315-437-2065

OWNER
Consolidated City of Indianapolis and Marion County, Indiana
200 E. Washington Street
Indianapolis, IN 46204

APPLICANT
JOE NASELLI
OP-TECH ENVIRONMENTAL SERVICES INC
1 ADLER DRIVE
EAST SYRACUSE, NE 13057
315-437-2065

PROJECT REMOVE AND REPLACE 6" TO 24" OF TOPSOIL THAT IS CONTAMINATED WITH LEAD FROM ROAD EDGE TO FENCE LINE FROM RAILROAD SOUTH TO BIG FOUR RD FROM 9/3/15 THRU 10/15/15 EMERGENCY CONTACT: JOE NASELLI 518-775-0537

Detour Route:

Certified Utilities: **No**
Emergency **No**
Start/Finish Dates: **09/03/2015** Thru **10/15/2015**
# of Meters Blocked:

City Project : **No**
City Project #: **N/A**
City Manager: **N/A**
City Mgr Phone#: **N/A**

Minimum Traffic Control Devices Required
CONES
FLAGGERS
ARROWBOARDS

CEG: **CEG Project#:**

AREA AFFECTED

Type	Street Names	Location	Start Date	StartTime	End Date	End Time	Special Hours
Partial Closure Thouroughfare	S ARLINGTON AVE	FROM RR TO BIG FOUR RD	09/03/2015	8:00 AM	10/15/2015	4:00 PM	

METERS

Meter #:	Street Name:	Start Date:	Start Time:	End Date:	End Time:

EXCAVATIONS

Surface Type:	# of Excavations:
NON-PAVEMENT	2

FEES

Application Fee	$32.00
Right of Way Permit Review Fee	$85.00
Non-Pavement Excavation	$192.00
Total Due:	$309.00
Balance:	$0.00

CITY OF INDIANAPOLIS
DEPARTMENT OF CODE ENFORCEMENT
RIGHT OF WAY PERMIT
Excavation
1200 MADISON AVE., SUITE 100, INDIANAPOLIS, IN 46225
Phone:(317) 327-8700
www.indy.gov

Permit No **ROW15-04344** Issued: **09/04/2015**

Location: **3700 S ARLINGTON AVE** Expired: **10/15/2015**

Township: FRANKLIN

CONDITIONS:

• TO REQUEST AN INSPECTION, CALL (317) 327-5525.

HTTP://WWW.INDY.GOV/PERMITS

• A right of way permit which includes excavation must be activated by the permit holder and construction may not begin until the permit is activated. The permit must be posted on site.
The work must begin within three (3) working days of activation of permit. If, after activating the ROW permit, the work will not be started within the three (3) working days, the permit holder shall contact the inspector assigned to the township where the work will be located to deactivate the permit. ROW Regulations Sec. 17.03

• Applicant must have permit on work site to be valid. Applicant must use proper traffic control & activate excavation permits. All contractors and utilities are required to contact Indiana Underground Plant Protection Service (IUPPS) at 1-800-382-5544 to have Utilities Located. Contractor must use flowable fill and full lane restoration on asphalt cuts. All concrete sidewalk cuts require full panel restoration that is ADA acceptable. All concrete street cuts on major thoroughfares will require full lane restoration.

RULE 5 - NOTICE OF INTENT (NOI)

State Form 47487 (R5 / 10-05)
Indiana Department of Environmental Management
Office of Water Quality
Approved by State Board of Accounts, 2005

Type of Submittal (Check Appropriate Box):
☒ Initial ☐ Amendment ☐ Renewal

Permit Number:

(Note: The initial submittal does not require a permit number; the Department will assign a number. A permit number is required when filing an amendment, applying for renewal, or correspondence related to this permit).

Note: Submission of this Notice of Intent letter constitutes notice that the project site owner is applying for coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit Rule for Storm Water Discharges Associated with Construction Activity. Permitted project site owners are required to comply with all terms and conditions of the General Permit Rule 327 IAC 15-5 (Rule 5).

Project Name and Location

Project Name:
Corrective Measures - Refined Metals Corporation, Beech Grove, Indiana

County:
Marion

Brief Description of Project Location:
The site, which occupies approximately 24 acres, is located at 3700 South Arlington Avenue in Beech Grove, Marion County, Indiana and approximately four miles south-southeast of downtown Indianapolis. Work will also be conducted at the adjacent Citizens Gas Co., 5900 Big Four Road, Beech Grove, Indiana.

Project Location: *Describe location in Latitude and Longitude (Degrees, Minutes, and Seconds or Decimal representation) and by legal description (Section, Township, and Range, Civil Township)*

Latitude: **39.715944 N**

Longitude: **86.064197 W**

Quarter: Section: **27** Township: **15** Range: **4** Civil Township:

Does ☐ all or ☐ part of this project lie within the jurisdictional boundaries of a Municipal Separate Storm Sewer System (MS4) as defined in 327 IAC 15-13?
☒ Yes ☐ No If yes, name the MS4(s):
City of Beech Grove

Project Site Owner and Project Contact Information

Company Name *(If Applicable)*:
Refined Metals Corporation

Project Site Owner's Name: *(An Individual)*
Matthew Love

Title/Position:
Dir., Global Env. Remediation

Address:
c/o Exide Technologies, PO Box 14294

City: **Reading**
State: **PA**
ZIP Code: **19612**

Phone: **(610) 921-4054**
FAX: **(610) 921-4062**
E-Mail Address: *(If Available)* **matt.love@exide.com**

Ownership Status *(check one)*:
Governmental Agency: ☐ Federal ☐ State ☐ Local Non-Governmental: ☐ Public ☒ Private ☐ Other: *(Explain)*

Contact Person:
Paul G. Stratman

Company Name: *(If Applicable)*
Advanced GeoServices Corporation

Affiliation to Project Site Owner:
Consultant/Engineer

Address: *(if different from above)*
1055 Andrew Drive, Suite A

City: **West Chester**
State: **PA**
ZIP Code: **19380**

Phone: **(610) 840-9122**
FAX: **(610) 840-9199**
E-Mail Address: *(If Available)* **pstratman@advancedgeoservices.com**

Project Information

Project Description:
☐ Residential-Single Family ☐ Residential-Multi-Family ☐ Commercial ☐ Industrial ☒ Other: *(Explain)* **Remediation**

Name of Receiving Water:
Unnamed tributary discharging to Beech Creek
(Note: If applicable, name of municipal operator of storm sewer and the ultimate receiving water. If a retention pond is present on the property, the name of the nearest possible receiving water receiving discharge must be provided).

Project Acreage
Total Acreage: **24** Proposed Land Disturbance: *(in acres)* **16.7 acres (14 acres RMC, 2.7 acres Citizens Gas)**
Total Impervious Surface Area: *(in square feet, estimated for completed project)* **46,140 sf (existing asphalt), 259,410 sf gravel**

Project Duration

Estimated Start Date: 8/19/13	Estimated End Date for all Land Disturbing Activity: 6/30/2014

(Continued on Reverse Side)

Construction Plan Certification

By signing this Notice of Intent letter, I certify the following:

A. The storm water quality measures included in the Construction Plan comply with the requirements of 327 IAC 15-5-6.5, 327 IAC 15-5-7, and 327 IAC 15-5-7.5;
B. the storm water pollution prevention plan complies with all applicable federal, state, and local storm water requirements;
C. the measures required under 327 IAC 15-5-7 and 327 IAC 15-5-7.5 will be implemented in accordance with the storm water pollution prevention plan;
D. if the projected land disturbance is One (1) acre or more, the applicable Soil and Water Conservation District or other entity designated by the Department, has been sent a copy of the Construction Plan for review;
E. storm water quality measures beyond those specified in the storm water pollution prevention plan will be implemented during the life of the permit if necessary to comply with 327 IAC 15-5-7; and
F. implementation of storm water quality measures will be inspected by trained individuals.

In addition to this form, I have enclosed the following required information:

☒ Verification by the reviewing agency of acceptance of the Construction Plan.

☒ Proof of publication in a newspaper of general circulation in the affected area that notified the public that a construction activity is to commence, including all required elements contained in 327 IAC 15-5-5 (9). The Proof of Publication **Must** include company name and address, project name, address/location of the project, and the receiving stream to which storm water will be discharged. Following is a sample Proof of Publication:

"XERT Development Inc. (10 Willow Lane, Indianapolis, Indiana 46206) is submitting a Notice of Intent to the Indiana Department of Environmental Management of our intent to comply with the requirements of 327 IAC 15-5 to discharge storm water from construction activities associated with Water Garden Estates located at 24 Washout Lane, Indianapolis, Indiana 46206. Runoff from the project site will discharge to the White River. Questions or comments regarding this project should be directed to Walter Water of XERT Development Inc."

☒ $100 check or money order payable to the Indiana Department of Environmental Management. A permit fee is required for all NOI submittals (initial and renewal). A fee is not required for amendments.

Project Site Owner Responsibility Statement

By signing this Notice of Intent letter, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information or violating the provisions of 327 IAC 15-5, including the possibility of fine and imprisonment for knowing violations.

Printed Name of Project Owner: BRAD S. KALTER

Signature of Project Owner: _____ Date: 6/25/13

This Notice of Intent must be signed by an individual meeting the signatory requirements in 327 IAC 15-4-3(g).
All NOI submittals must include an original signature (FAX and photo copies are not acceptable).

Note: Within 48 hours of the initiation of construction activity, the project site owner must notify the appropriate plan review agency and IDEM, Office of Water Quality of the actual project start date if it varies from the date provided above.

Note: A permit issued under 327 IAC 15-5 is granted by the commissioner for a period of five (5) years from the date coverage commences. Once the five (5) year permit term duration is reached, a general permit issued under this rule will be considered expired, and as necessary for construction activity continuation, a new Notice of Intent letter (Renewal) is required to be submitted ninety (90) days prior to the termination of coverage. The submittal must include the NOI Letter, Proof of Publication, Fee, and verification that the plan for the project was approved (original verification of plan approval is acceptable provided the scope of the project has not changed from the original submittal).

Mail this form to: Indiana Department of Environmental Management
Cashiers Office - Mail Code 50-10C
100 North Senate Avenue
Indianapolis., IN 46204-2251

327 IAC 15-5-6 (a) also requires a copy of the completed Notice of Intent letter be submitted to the local Soil and Water Conservation District or other entity designated by the Department, where the land disturbing activity is to occur.

Questions regarding the development or implementation of the Construction Plan/Storm Water Pollution Prevention Plan should be directed to the local county Soil and Water Conservation District (SWCD). If you are unable to reach the SWCD or have other questions please direct those inquiries to the IDEM Rule 5 Coordinator at 317/233-1864 or 800/451-6027 ext.3-1864.
For information and forms visit:http://www.in.gov/idem/permits/water/wastewater/wetwthr/storm/rule5.html

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov
Michael R. Pence
Governor
Thomas W. Easterly
Commissioner

August 22, 2013

65-42 WQS/RJB
Matthew Love
Refined Metals Corporation
c/o Exide Technoligies PO Box 14294
Reading, PA 19612

Dear Mr Love:

Re: **Notice of Sufficiency**
INR10H070
Corrective Measures - Refined Metals Corporation, Beech Grove, Indiana

Marion County

The Notice of Intent (NOI) letter submitted for the project referenced above has been reviewed by the Indiana Department of Environmental Management (IDEM) to determine compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit for storm water discharge associated with construction activity (327 IAC 15-5). The items contained in the NOI are sufficient. This letter is being issued for 327 IAC 15-5 and does not constitute approval to conduct activities that are related to other local, state, or federal permits.

An NPDES general permit identification number has been assigned to this project. This number and the above referenced project name should be included on any correspondence or amended NOI information submitted to IDEM pertaining to this project. The general permit number assigned to this project is: **INR10H070**.

It is important that all activities associated with your site are in compliance with the requirements of 327 IAC 15-5 (Rule 5) and any local storm water permits. In accordance with 327 IAC 15-5-10, you are required to implement your construction plan, implement and maintain all storm water quality measures, and monitor the effectiveness of the storm water quality measures until the project is complete.

All Notices of Intent submitted for Rule 5 NPDES general permit coverage are automatically limited to a maximum term length of 5 years (327 IAC 15-5-12). The General Permit issued for the project referenced above will expire on **8/13/2018**. If this project requires coverage beyond this date the applicant must reapply for a new permit 90 days prior to the expiration date.

Upon completion of the project, you are required to terminate the permit. Information for termination can be found in 327 IAC 15-5-8. To expedite this process, it is recommended that you first receive verification from the plan review entity prior to submittal of the Notice of Termination.

Any questions regarding this letter or the enclosed materials should be directed to the Storm Water Permits Coordinator at 317-233-1864 or 800-451-6027, ext. 3-1864.

Questions regarding the development or implementation of the Construction Plan/Storm Water Pollution Prevention Plan should be directed to the local plan review authority (Soil and Water Conservation District (SWCD) or the local Municipal Separate Storm Sewer entity). If you are unable to reach the SWCD or have other questions please direct those inquiries to the IDEM Storm Water Permits Coordinator at 317-233-1864 or 800-451-6027 ext.3-1864. For more information on the storm water program and forms please visit: www.idem.IN.gov/4896.htm.

Sincerely,

Randy J. Braun

Randy J. Braun, CPESC, CMS4S
Section Chief
Storm Water and Wetlands Section
Office of Water Quality

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

ISOLATED WETLAND INDIVIDUAL PERMIT

VIA CERTIFIED MAIL: 91 7190 0005 2710 0028 1326

PERMIT NO.: IWIP 2013-180-49-SKG-A

PROJECT NAME: Refined Metals Corrective Measures

AUTHORITY: IC 13-18-22-3

DATE OF ISSUANCE: June 25, 2013

DATE OF EXPIRATION: June 25, 2015

APPROVED: Mary E. Hollingsworth, Branch Chief
Surface Water, Operations & Enforcement Branch
Office of Water Quality

APPLICANT AND PERMITTEE: Matthew Love
Refined Metals Corporation
P.O.Box 14294
Reading, PA 19612

AGENT: Paul Stratman
Advanced GeoServices
1055 Andrew Drive Suite A
West Chester, PA 19380

PROJECT LOCATION: Marion County

Section 27, Township 15 North, Range 4 East, Beech Grove USGS Quad

The project is located at 3700 South Arlington Avenue in Beech Grove.

ISOLATED WETLANDS ON PROPERTY:	Wetland 1	Class II	0.20 acre	Forested
	Total acreage:		**0.20 acre**	

ISOLATED WETLANDS EXEMPT: None

REGULATED ISOLATED WETLAND IMPACTS:	Wetland 1	Class II	0.11 acre	Forested
	Total regulated impact:		**0.11 acre**	

PERMITTED ACTIVITY: The excavation of 0.11 acre of Wetland 1 (Class II) to create an area for storm water management purposes. Impacts to jurisdictional wetlands will be permitted under a separate 401 Individual Permit (2013-180-49-SKG-A)

MITIGATION: Creation of 0.17 acre of a Class II wetland at the project site.

MITIGATION LOCATION: Marion County

Section 27, Township 15 North, Range 4 East, Beech Grove USGS Quad

The mitigation is located at 3700 South Arlington Avenue in Beech Grove.

MITIGATION RATIOS:
Class of Wetland Impacts: II
Type of Wetland Impacts: Forested
Class of Wetland Replacement: II
Type of Wetland Replacement: Forested
Onsite Mitigation
Required Ratio: 1.5:1

Total Class II Mitigation: 0.17 acre

GENERAL CONDITIONS OF THE INDIVIDUAL PERMIT:

You shall:

1. Install erosion control methods prior to any soil disturbance to prevent soil from leaving the construction site. Appropriate erosion control methods include, but are not limited to, straw bale barriers, silt fencing, erosion control blankets, phased construction sequencing, and earthen berms. Monitor and maintain erosion control structures and devices regularly, especially after rain events, until all soils disturbed by construction activities have been permanently stabilized.

2. Install silt fence or other erosion control measures around the perimeter of any wetlands and/or other waterbodies to remain undisturbed at the project site.

3. Execute the project as proposed in the application dated March 21, 2013, and received March 26, 2013.

4. Implement the mitigation plan as described in (a) the application received March 26, 2013, (referred to collectively hereinafter as the "mitigation plan"), and as modified by the conditions of this permit. The wetland(s) created or restored pursuant to the mitigation plan shall be referred to hereinafter as the "mitigation wetland" or "mitigation wetlands."

5. Complete all activities necessary to create the mitigation wetland within one (1) year of the effective date of this permit, unless IDEM grants a written extension upon request. These activities include excavation, grading, installation of hydrologic controls, and planting.

6. Clearly identify on-site all mitigation wetlands after construction of the mitigation wetlands. Install survey markers to identify the boundaries of the wetlands. If the mitigation wetlands being created are adjacent to or near existing wetlands, then the survey markers must distinguish the created wetland from the existing wetland.

7. Monitor the mitigation wetland annually for a minimum period of three (3) continuous years to determine if it is meeting the success criteria specified in **Condition 9**. If the site does not meet the specified success criteria for two consecutive years in this three year period, then you will monitor the site for an additional two years for a total of five years. The monitoring must start no later than one full growing season after construction, and monitoring reports must be submitted to this office by December 31 of each year until released from monitoring by this office. These reports shall contain information concerning what steps you have taken to create the mitigation wetland and

whether the wetland is achieving each of the success criteria specified in **Condition 9**. The reports shall include the following:

a) The IDEM identification number.
b) As-built plans (in the first year's report).
c) Discussion of hydrology at the mitigation site.
d) Discussion of plant community development at the mitigation wetland site.
e) Discussion of methods or means used to determine compliance with the success criteria.
f) Photographs representative of the mitigation wetland site and sampling points.
g) Identification of any problems with meeting the success criteria.
h) Recommendations for correcting any problems identified.
i) Wetland delineation for the mitigation wetland in the final monitoring report.

For IDEM to release the mitigation site you must demonstrate to IDEM, through your monitoring reports, that the site meets or exceeds the success criteria for at least two (2) consecutive years. Once you believe that the site meets or exceeds all of the success criteria, you may submit a proposed final monitoring report to IDEM and suspend monitoring. If IDEM confirms that the mitigation site meets or exceeds all of the success criteria, then IDEM shall notify you that the mitigation is complete and that you may permanently discontinue monitoring. If the site fails to meet the success criteria then corrective actions and extended monitoring will be required. Extended monitoring may constitute the sole corrective action if IDEM believes that the site needs more time to meet the success criteria. These corrective actions may also include additional grading, planting, relocation, or other actions deemed necessary by IDEM to meet the success criteria.

8. Include a delineation of all mitigation wetlands in the final monitoring report. The delineation must be conducted on-site using the hydrology and vegetation parameters from the United States Army Corps of Engineers Wetland Delineation Manual, Technical Report Y-87-1 (January 1987). The delineation report must include data sheets and a survey, map or drawing with area measurements (in acres) of all mitigation wetland boundaries.

9. Ensure that the mitigation wetland meets all of the following success criteria at the end of monitoring:

a) The area of wetland established, as measured by a wetland delineation, must meet or exceed the 0.17 acre of wetland compensatory mitigation required.
b) Greater than 50% of the dominant vegetation species must have a wetland indicator of FAC (i.e., facultative) or wetter.
c) The hydrology at the mitigation wetland site must meet the wetland

hydrology criteria contained in the United States Army Corps of Engineers Wetland Delineation Manual, Technical Report Y-87-1 (January, 1987).

d) The combined surface areal coverage of *Phalaris arundinacea* (reed canary grass) and *Typha spp.* (cattail) shall not exceed 15% of the mitigation wetland.

e) The mitigation wetland is free of the following exotic species: *Lythrum salicara* (purple loosestrife), *Phragmites australis* (common reed), and *Myriophyullum spicatum* (water milfoil).

f) Native plant species excluding *Typha spp.* (cattail) must have an areal cover of at least:

   i) 70% in saturated tree, shrub, sedge meadow, or wet prairie communities.

   ii) 50% in inundated tree or shrub, and shallow emergent communities.

   iii) 30% in deep emergent communities. Average water depth>8 inches.

   iv) 10% in floating aquatic communities. Average water depth>1.5 feet.

g) No more than 10% of the surface area coverage of the mitigation wetland may be open water, bare ground, or a combination of the two. Open water and bare ground are defined as areas with less than 10% areal vegetative cover.

h) Any additional success criteria specified in the mitigation plan or subsequent certifications.

10. Submit as-built plans with the first year's monitoring report for the mitigation wetland(s). As-built plans shall include the final grade elevations at one foot contours, including a plan view and cross sections, including cross-sections along the primary axis and secondary axis of the mitigation wetland(s). In addition, as-built plans shall include locations and elevations of structures (e.g., culvert inverts, outfalls, inlets, berms, piezometers, wells, etc.). As-built plans shall also include the species and quantities of each species that were planted. *Deviations from the approved mitigation plan must be highlighted and explained.*

11. File a signed and recorded environmental notice, which describes the compensatory mitigation contained in the mitigation plan, with the department within sixty (60) days of the release from monitoring requirements. You may substitute a copy of a properly recorded deed restriction or conservation easement protecting the mitigation site(s) to satisfy this condition.

12. Clearly mark the construction limits at the project site during construction.

13. Contact the IDEM Storm Water permits section at 317-233-1864 concerning the possible need for 327 IAC 15-5 (Rule 5) permits if you plan to disturb greater than one (1) acre of soil during construction.

14. Contact the Indiana Department of Natural Resources at 317-232-4160, or toll free at 877-928-3755, for possible Construction in a Floodway Permit requirements.

15. Complete all approved discharges no later than two (2) years of the date of issuance of this Isolated Wetland Individual Permit. You may request a one (1) year extension to the Isolated Wetland Individual Permit by submitting a written request ninety (90) days prior to the deadline stated above. The written request shall contain an account of which discharges and mitigation have been completed and list the reasons an extension is requested.

16. Allow the commissioner or an authorized representative of the commissioner (including an authorized contractor), upon the presentation of credentials:

    a. to enter your property;
    b. to have access to and copy at reasonable times any records that must be kept under the conditions of this permit;
    c. to inspect, at reasonable times, any monitoring or operational equipment or method; collection, treatment, pollution management or discharge facility or device; practices required by this permit; and any mitigation wetland site;
    d. to sample or monitor any discharge of pollutants or any mitigation wetland site.

This permit approval does not relieve you from the responsibility of obtaining any other permits or authorizations that may be required for this project or related activities from IDEM or any other agency or person. You may wish to contact the Indiana Department of Natural Resources at 317-232-4160, or toll free at 877-928-3755, concerning the possible requirement of a Natural Freshwater Lake or Construction in a Floodway Permit, or the IDEM Storm Water Permits Section at 317-233-1864 concerning the possible need for 327 IAC 15-5 (Rule 5) permits if you plan to disturb greater than one (1) acre of soil during construction.

This permit does not:

(1) authorize impacts or activities outside the scope of this permit;
(2) authorize any injury to persons or private property or invasion of other private rights, or any infringement of federal, state or local laws or regulations;
(3) convey any property rights of any sort, or any exclusive privileges;
(4) preempt any duty to obtain federal, state or local permits or authorizations required by law for the execution of the project or related activities; or

(5) authorize changes in the plan design detailed in the application.

Failure to comply with the terms and conditions of this permit may result in enforcement action against you. If an enforcement action is pursued, you could be assessed up to $25,000 per day in civil penalties. You may also be subject to criminal liability if it is determined that the permit was violated willfully or negligently.

This permit is effective 18 days from the mailing of this notice unless a petition for review and a petition for stay of effectiveness are filed within this 18-day period. If a petition for review and a petition for stay of effectiveness are filed within this period, any part of the permit within the scope of the petition for stay is stayed for 15 days, unless or until an Environmental Law Judge further stays the permit in whole or in part.

APPEALS PROCEDURES:

This decision may be appealed in accordance with IC 4-21.5, the Administrative Orders and Procedures Act. The steps that must be followed to qualify for review are:

1. You must petition for review in writing that states facts demonstrating that you are either the person to whom this decision is directed, a person who is aggrieved or adversely affected by the decision, or a person entitled to review under any law.

2. You must file the petition for review with the Office of Environmental Adjudication (OEA) at the following address:

   Office of Environmental Adjudication
   100 North Senate Avenue
   IGCN Room N501
   Indianapolis, IN 46204

3. You must file the petition within eighteen (18) days of the mailing date of this decision. If the eighteenth day falls on a Saturday, Sunday, legal holiday, or other day that the OEA offices are closed during regular business hours, you may file the petition the next day that the OEA offices are open during regular business hours. The petition is deemed filed on the earliest of the following dates: the date it is personally delivered to OEA; the date that the envelope containing the petition is postmarked if it is mailed by United States mail; or, the date it is shown to have been deposited with a private carrier on the private carrier's receipt, if sent by private carrier.

Identifying the permit, decision, or other order for which you seek review by number, name of the permittee, location, or date of this notice will expedite review of the petition.

Note that if a petition for review is granted pursuant to IC 4-21.5-3-7, the petitioner will, and any other person may, obtain notice of any prehearing conferences, preliminary hearings, hearings, stays, and any orders disposing of the proceedings by requesting copies of such notices from OEA.

If you have procedural questions regarding filing a petition for review you may contact OEA at 317-232-8591. If you have any questions about this permit, please contact Mrs. Samantha Groce, Project Manager, of my staff at 317-234-6233, or you may contact the Office of Water Quality through the IDEM Environmental Helpline (1-800-451-6027).

cc: Scott Pruitt, USFWS
Christie Stanifer, IDNR
Mr. Paul Stratman, Advanced GeoServices

RECEIVED
JUN 28 2013

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, LOUISVILLE
CORPS OF ENGINEERS
INDIANAPOLIS REGULATORY OFFICE
8902 OTIS AVENUE, SUITE S106B
INDIANAPOLIS, INDIANA 46216-1055
FAX: 317-547-4526

May 9, 2013

Operations Division
Regulatory Branch (North)
ID No. LRL-2012-107-lcl

Mr. Matthew Love
Refined Metals Corporation
c/o Exide Technologies
Post Office Box 14294
Reading, PA 19612

Dear Mr. Love:

This is in regard to your application dated March 19, 2013, for a Department of the Army permit to authorize the proposed remediation at the Refined Metals former secondary lead smelting facility. The remediation is being performed as a consent order requirement under the Resource Conservation and Recovery Act by the U.S. Environmental Protection Agency and the Indiana Department of Environmental Management. The project would permanently fill 0.07 acre of wetlands, and temporarily impact 0.19 acre of wetlands, adjacent to an unnamed tributary to Beech Creek. The project is located at 3700 South Arlington Avenue, in Section 27, Township 15 North, Range 4 East, Beech Grove, Marion County, Indiana. We have reviewed the submitted data relative to Section 404 of the Clean Water Act.

We have determined that the proposed project is authorized under the provisions of our Nationwide Permit (NWP) 33 CFR 330 (38) for Cleanup of Hazardous and Toxic Waste as published in the Federal Register on February 21, 2012. We do require compliance with the enclosed Terms, General, and Regional Conditions of the NWP.

However, since the IDEM has denied the required Section 401 CWA Water Quality Certification (WQC) for NWP 38, you must apply for and obtain an individual WQC for this project from the IDEM. The responsibility for obtaining the state WQC rests with the applicant. You may contact IDEM as follows:

IDEM-OWQ (Groce)
Section 401 WQC Program
100 North Senate Avenue
Indianapolis, IN 46204
Telephone: 317-234-6233

Once you obtain your WQC from IDEM and furnish a copy to us, you are authorized under this NWP and may proceed without further contact or verification from us. If IDEM issues an individual WQC, you must comply with any conditions imposed in the WQC as it is part of your NWP authorization.

This verification is valid until March 18, 2017. The enclosed Compliance Certification should be signed and returned when the project is completed.

If you have any questions concerning this matter, please contact me by writing to the above address, or by calling 317-543-9424. Any correspondence should reference our assigned Identification Number LRL-2012-107-lcl.

Sincerely,

Laban C. Lindley
Team Leader
Indianapolis Regulatory Office

Enclosures
Copy Furnished: IDEM (Groce)
Advanced GeoServices (Stratman)

79 91445

DULY ENTERED
FOR [illegible]

Nov 27 1979 056064

COUNTY AUDITOR

Henry L. [illegible]

CORPORATE WARRANTY DEED

THIS INDENTURE WITNESSETH, That NL INDUSTRIES, INC., formerly known as National Lead Company, ("Grantor"), a corporation organized and existing under the laws of the State of New Jersey, CONVEYS AND WARRANTS to REFINED METALS CORPORATION, a corporation organized and existing under the laws of the State of Delaware, having an office at 5 Penn Center Plaza, Philadelphia, Pennsylvania, for the sum of One Dollar ($1.00) and other valuable consideration, the receipt of which is hereby acknowledged, the following described real estate in Marion County, in the State of Indiana:

Part of the Northeast Quarter and part of the Southeast Quarter of Section 27, Township 15 North, Range 4 East, Marion County, Indiana, being more particularly described as follows:

> Commencing at the Southeast corner of said Northeast Quarter; thence North 0° 04' 08" West, on and along the East line of said Northeast Quarter, 27.83 feet measured (27.8 feet deed) to the Southwesterly line of the original 80 foot right of way line of the C. C. C. & St. L. R. R.; thence North 49° 57' 00" West, on and along said right of way line, 19.61 feet measured (19.60 feet deed) to the point of beginning of this description; thence South 0° 04' 08" East, parallel to and 15.00 feet from said East line, 40.45 feet; thence South 0° 00' 00" West, parallel to and 15.00 feet from the East line of said Southeast Quarter, 1527.23 feet to the Northeasterly line of Big Four Road; thence North 49° 57' 00" West, on and along said Northeasterly line, 1150.00 feet; thence North 40° 03' 00" East 80.00 feet; thence North 49° 57' 00" West, parallel to said Northeasterly line, 280.24 feet; thence North 40° 02' 50" East measured (North 40° 03' East deed) 1120.00 feet to said Southwesterly railroad right of way line; thence South 49° 57' 00" East, on and along said right of way line, 421.53 feet to the point of beginning.

5 Penn Center Plaza
Philadelphia, Pa

RECEIVED FOR RECORD
LUCIA [illegible]
RECORDER [illegible]
Nov 27 12 21 PM '79

SUBJECT TO:

a. Taxes for the year 1979 and subsequent years.

b. Zoning, building and building line restrictions, regulations and ordinances of the city, county, or town in which the Premises is situated.

79 91445

c. Such state of facts shown on that certain survey certified August 29, 1979 by Frank M. Hahn & Associates, Inc., Surveyors, including easement for existing railroad spur; and easement for public utilities as evidenced by the water and overhead power lines along the east portion of the Premises; and any subsequent changes thereto.

d. Right of way grant in favor of Marion County, Indiana recorded April 27, 1967 as Instrument #67-17171, and by grant recorded June 23, 1967, as Instrument # 67-27556.

e. Railroad side track agreements affecting the Premises.

f. License Agreement, dated October 2, 1967 between National Lead Company and The New York Central Railroad Company.

g. Letter Agreement dated March 12, 1971 between Penn Central Transportation Company and NL Industries, Inc.

h. Lease dated April 1, 1967 between New York Central Railroad Company and NL Industries, Inc.

i. Any easements, reservations, covenants, agreements and restrictions of record.

The undersigned persons executing this deed on behalf of Grantor represent and certify that they are duly elected officers of Grantor and have been duly empowered, by proper resolution of the Board of Directors of Grantor, to execute and deliver this deed; that Grantor has full corporate capacity to convey the real estate described herein; and that all necessary corporate action for the making of such conveyance has been taken and done.

Grantor certifies under oath that no Indiana Gross Income Tax is due or payable in respect to the transfer made by this Deed.

IN WITNESS WHEREOF, Grantor has caused this deed to be executed this 21st day of November, 1979.

NL INDUSTRIES, INC.

By Edward J. Galvin
EDWARD J. GALVIN
Vice President

ATTEST:

By John T. Kiffney
JOHN T. KIFFNEY
Assistant Secretary

79 91445

STATE OF NEW YORK)
)ss.:
COUNTY OF NEW YORK)

Before me, a Notary Public in and for said County and State, personally appeared EDWARD J. CALVIN, Vice President and JOHN T. RAFFERTY, Assistant Secretary, respectively, of NL INDUSTRIES, INC., who acknowledged execution of the foregoing Deed for and on behalf of said grantor, and who, having been duly sworn, stated that the representations therein contained are true, including the statement with respect to the exemption from payment of the Indiana Gross Income Tax.

Witness my hand and Notarial Seal this 21st day of November, 1979.

Notary Public

MAUREEN A. MURPHY
Notary Public, State of New York
No. 24-4652192 Qual. in Nassau Co.
Certificate filed in New York County
Commission Expires March 30, 1981

This instrument was prepared by: Fred Floersheimer, Attorney
1230 Avenue of the Americas
New York, New York 10020
(212) 399-9452

79_ 91445

U.S. ARMY CORPS OF ENGINEERS

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT

33 CFR 325. The proponent agency is CECW-CO-R.

OMB APPROVAL NO. 0710-0003
EXPIRES: 28 FEBRUARY 2013

Public reporting for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and/or instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (agent is not required)
First - Matthew Middle - Last - Love	First - Paul Middle - G Last - Stratman
Company - Refined Metals Corporation	Company - Advanced GeoServices
E-mail Address - matt.love@exide.com	E-mail Address - pstratman@advancedgeoservices.com
6. APPLICANT'S ADDRESS:	9. AGENT'S ADDRESS:
Address- c/o Exide Technologies, PO Box 14294	Address- 1055 Andrew Drive, Suite A
City - Reading State - PA Zip - 19612 Country - USA	City - West Chester State - PA Zip - 19380 Country - USA
7. APPLICANT'S PHONE NOs. w/AREA CODE	10. AGENTS PHONE NOs. w/AREA CODE
a. Residence b. Business c. Fax	a. Residence b. Business c. Fax
610 921 4054 610 921 4062	610 840 9122 610 840 9199

STATEMENT OF AUTHORIZATION

11. I hereby authorize, Paul G. Stratman to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

Matthew A. Love — 3/19/13

SIGNATURE OF APPLICANT — DATE

MATTHEW A. LOVE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)

Corrective Measures - Refined Metals Corporation, Beech Grove Indiana

13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
Wetlands discharging to Beech Creek	Address 3700 South Arlington Avenue
15. LOCATION OF PROJECT	City - Beech Grove State- IN Zip- 46107
Latitude: -N 39.715944 Longitude: -W 86.064167	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)

State Tax Parcel ID 49-10-27-107-002.000-302 Municipality Marion County/City of Beech Grove

Section - 27 Township - 15 Range - 4

17. DIRECTIONS TO THE SITE

From I-74 / I-465, take Exit 52 (Emerson Avenue). Take ramp toward Beech Grove. Travel 0.2 mile, turn left onto S Emerson Avenue. Travel 0.1 mile, turn right onto Elmwood Avenue. Travel 1.2 mile, turn left onto South Arlington Avenue. Travel 0.4 mile, the Site is on the left at 3700 South Arlington Avenue.

18. Nature of Activity (Description of project, include all features)

The Refined Metals Corporation facility is a former secondary lead smelting and refining site that is planned for remediation. The remediation is being performed under the requirements of the Resource Conservation and Recovery Act (RCRA) and the jurisdiction of the United States Environmental Protection Agency (USEPA) and Indiana Department of Environmental Management (IDEM). Work activities include excavation of approximately 18,000 cy of contaminated soils and sediment, consolidation into an approximately 57,500 sf on-site containment cell, containment cell capping, restoration, and installation of stormwater management features. Work activities will permanently disturb 0.07 acres of jurisdictional wetlands. 0.17 acres of wetland mitigation will be conducted. Jurisdictional ditches will also be remediated and restored. Additional information is provided in the attached Wetland Mitigation Plan.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The remediation is required by USEPA and IDEM. Work activities are scheduled for late spring and summer 2013.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

Fill material will be placed into existing wetlands during construction of the containment cell, access road and stormwater management features and backfill of waste excavation areas. 0.07 acres will be permanently disturbed.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Amount in Cubic Yards	Type Amount in Cubic Yards	Type Amount in Cubic Yards
Soil: 400 cy		

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres See attached

or

Linear Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions)

The area of wetland disturbance has been minimized by changing the containment cell configuration and reducing the containment cell size from 62,700 sf to 57,500 sf. Disturbance of the drainage ditch is necessary to allow remediation of lead contaminated soil and sediment. Compensation is provided by the proposed 0.17 acre wetland mitigation area.

24. Is Any Portion of the Work Already Complete? ☐ Yes ☒ No IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (If more than can be entered here, please attach a supplemental list).

a. Address- SEE ATTACHED

City - State - Zip -

b. Address-

City - State - Zip -

c. Address-

City - State - Zip -

d. Address-

City - State - Zip -

e. Address-

City - State - Zip -

26. List of Other Certificates or Approvals/Denials received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
See attached					

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for permit or permits to authorize the work described in this application. I certify that this information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

Matthew C. Love 3/19/13 3/19/13

SIGNATURE OF APPLICANT DATE SIGNATURE OF AGENT DATE

MATTHEW A. LOVE

The Application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

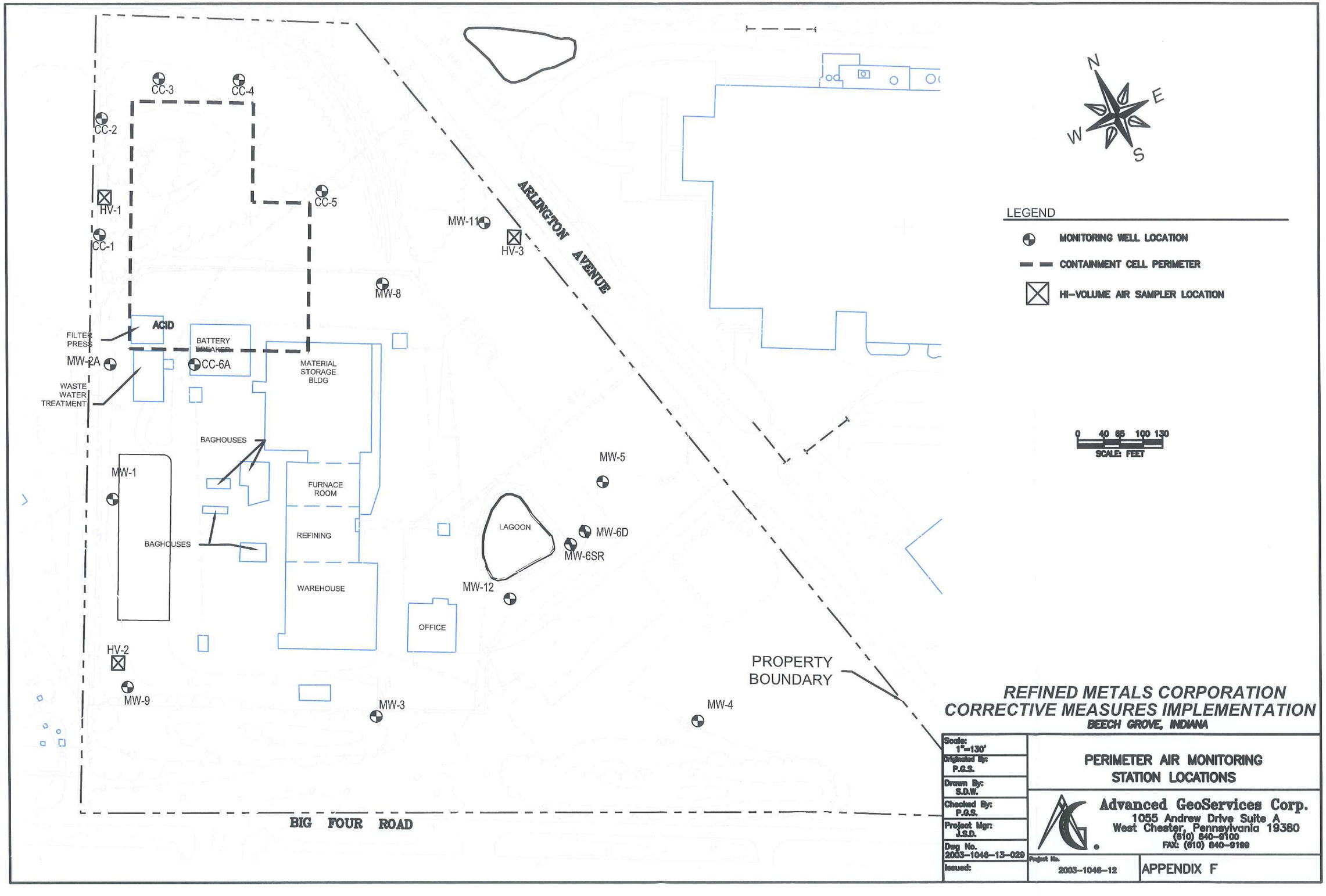
18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

APPENDIX E

Progress Photographs
(Provided on Disc)

APPENDIX F

Air Monitoring Data
(Provided on Disc Also)



F:\Projects\2003\20031046-..... Beech Grove Corr Measures Study\Cad\drawings\2003-1046-40\Drawing 6- Perimeter Air Monitoring Station Locations.dwg

REFINED METALS CMI
BEECH GROVE, INDIANA
CALCULATION OF 95% UCL FOR NON-WORKDAY SURROGATE AIR MONITORING VALUE

UCL Calculated based on air monitoring data for non-working days as provided by Op-Tech.
UCL calculated using Student's t normal distribution and bounding methods for non-detects as described in "Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites" (USEPA December 2002 OSWER 9285.6-10)

Lead Bounding = RAND()*RL
95% UCL = AVERAGE(*Range*)+TINV((1-0.95)*2,(*n* -1))*SQRT(VAR(F10:F15)/*n*)
n = 9

HV-1 DATA

Location	Date	TSP (ug/m^3)	Lead (ug/m^3)	RL (ug/m^3)	ND, Lead Bounding (ug/m^3)
HV-1	8/28/2014	35.3	ND	0.05	0.040067596
HV-1	8/29/2014	42.3	ND	0.05	0.007138687
HV-1	9/18/2014	26	ND	0.05	0.032727994
HV-1	9/19/2014	20.1	ND	0.05	0.046201378
HV-1	9/20/2014	21.8	ND	0.05	0.029906918
HV-1	10/16/2014	22.3	ND	0.05	0.029967954
HV-1	10/17/2014	34.2	ND	0.05	0.010129766
HV-1	10/18/2014	5.8	ND	0.05	0.029535133
HV-1	10/19/2014	17.4	ND	0.05	0.037410535

HV-1 95%, Lead UCL **HV-1 95%, TSP UCL**
0.037 ug/m^3 **31.809 ug/m^3**

HV-2 DATA

Location	Date	TSP (ug/m^3)	Lead (ug/m^3)	RL (ug/m^3)	ND, Lead Bounding (ug/m^3)
HV-2	8/28/2014	23	ND	0.05	0.020194105
HV-2	8/29/2014	25.6	ND	0.05	0.024586498
HV-2	9/18/2014	18.4	ND	0.05	0.017803208
HV-2	9/19/2014	18.2	ND	0.05	0.022940604
HV-2	9/20/2014	20.5	ND	0.05	0.021432637
HV-2	10/16/2014	41.9	ND	0.05	0.002188265
HV-2	10/17/2014	54.5	0.054	0.05	0.054
HV-2	10/18/2014	5.4	ND	0.05	0.047276944
HV-2	10/19/2014	12.4	ND	0.05	0.041169707

HV-2 95%, Lead UCL **HV-2 95%, TSP UCL**
0.038 ug/m^3 **33.758 ug/m^3**

HV-3 DATA

Location	Date	TSP (ug/m^3)	Lead (ug/m^3)	RL (ug/m^3)	ND, Lead Bounding (ug/m^3)
HV-3	8/28/2014	10.8	ND	0.05	0.027433134
HV-3	8/29/2014	124	ND	0.05	0.000932555
HV-3	9/18/2014	21.1	ND	0.05	0.031625246
HV-3	9/19/2014	26.9	ND	0.05	0.040490495
HV-3	9/20/2014	25.6	ND	0.05	0.002738887
HV-3	10/16/2014	7	ND	0.05	0.032502364
HV-3	10/17/2014	19.5	ND	0.05	0.017231059
HV-3	10/18/2014	1.8	ND	0.05	0.009788923
HV-3	10/19/2014	10	ND	0.05	0.033333545

HV-3 95%, Lead UCL **HV-2 95%, TSP UCL**
0.031 ug/m^3 **50.486 ug/m^3**

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2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-1

90 Day Rolling Average: 0.071
Weekly Average: 0.071 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additoinal Notes
HV-1 #1902	NEC	6062275	8/7/2014	14:55	8/8/2014	14:55		69.4	30.02	Quail Creek Station	32.20	Non-Detect	0.9	9	9	East	OVERCAST	Citizens performing construction adjacent to western limit; Utility company performing work adjacent to eastern limit - creating dust	Weed Wacking on Western Limit; Utility company working on Eastern Limit; Outside Site	Setting up trailer, surveyors on-site, electricians on site		
HV-1 #1902	NEC	6062276	8/8/2014	15:32	8/9/2014	15:32	35	72	30.05	Quail Creek Station	34.90	Non-Detect	0.7	9	9	ESE	.05 IN RAIN; OVERCAST		Setting up trailer, surveyors on-site, electricians on-site	Set-up Trailer		
HV-1 #1902	NEC	6062279	8/9/2014	15:39	8/10/2014	15:43	35	75.1	30.01	Quail Creek Station	30.40	Non-Detect	0.8	9	9	E	OVERCAST		Set-up Trailer	No work performed on-site		
HV-1 #1902	NEC	6062284	8/11/2014	11:15	8/12/2014	11:18	35.5	65	29.93	Quail Creek Station	32.10	Non-Detect	0.9	12	10	SW	RAIN .61 IN; OVERCAST	Citizens performing construction adjacent to western limit of site (excavating, hoe-ramming, skid steers) - creating dust	Set-up Construction Zones, Moved HV-1 to outer fencline area, Suveying, Removing Chainlink Fence from Norther Limit, Removing old silt fence	Removed silt fence & chainlink fence, Trenched for new silt fence, installed new silt fence, hammering holes in concrete with Cat 320		Moved HV-1 to outer fenceline area; Unplugged HV-1 to move Excavator by location
HV-1 #1902	NEC	6062287	8/12/2014	11:22	8/13/2014	11:35	35	68	29.97	Quail Creek Station	46.30	0.0890	1.7	13	13	SW	OVERCAST, LIGHT RAIN	Citizens & IPL working adjacent to western limit of site (hoe-ramming, installing pylons, skid steer) - creating dust	Removed silt fence & chainlink fence, Trenched for new silt fence, installed new silt fence, hammering holes in concrete with Cat 320	Clearing Nothern limit forest area, surveying, frak tanks delivered, water truck on-site, filled sandbags for site use		
HV-1 #1902	NEC	6062290	8/13/2014	11:39	8/14/2014	9:00	35	68	30.04	Quail Creek Station	103.00	0.4200	0.9	10	10	SSW	PT CLOUDY	Citizens & IPL working adjacent to western limit of site (hoe-ramming, installing pylons, skid steer, dumping gravel) - creating dust	Clearing Nothern limit forest area, surveying, frak tanks delivered, water truck on-site, filled sandbags for site use	Clearing Northern limit forest area, surveying, adler tanks shipped on-site, installed silt fence, removed rail road ties & track from northern forest area, hoe-ramming wall of old furnace room area	Water Truck & Sprinklers	Moved HV-1 south roughly 75-100 feet due to forest clearing activities; Stopped monitors around 9 AM to allow time for grabbing samples & morning pick-up
HV-1 #1902	NEC	6062291	8/14/2014	9:08	8/15/2014	9:08	35	73	30.05	Quail Creek Station	84.20	0.2300	0.8	11	12	N	PT CLOUDY	Citizens & IPL working adjacent to western limit of site (hoe-ramming, skid steer, dumping gravel, heavy traffic truck) - creating dust	Clearing Northern limit forest area, surveying, adler tanks shipped on-site, installed silt fence, removed rail road ties & track from northern forest area, hoe-ramming wall of old furnace room area	Clearing Northern limit forest area, removing rail road track & ties, stump removal, filling sand bags, cutting rebar with torch, pumping water from storm water basin into adler tanks	Water Truck & Sprinklers	
HV-1 #1902	NEC	6062294	8/15/2014	9:12	8/16/2014	9:12	35	63	30.11	Quail Creek Station	49.80	0.0650	0.6	8	8	WSW	PT CLOUDY	Citizens laying concrete adjacent to HV-2 & HV-3 with heavy truck traffic creating dust.	Clearing Northern limit forest area, surveying, adler tanks shipped on-site, installed silt fence, removed rail road ties & track from northern forest area, hoe-ramming wall of old furnace room area	Stump grinding in Northern limit forest area, removing railroad ties and track, assiting with stump grinding activities, demo of pumphous #4, filling sand bags for general use	Water Truck & Sprinklers	
HV-1 #1902	NEC	6062297	8/16/2014	9:13	8/17/2014	9:13	34	64	30.02	Quail Creek Station	42.30	Non-Detect	0.6	7	13	SSW	.34 IN RAIN	Citizens laying concrete adjacent to HV-2 & HV-3 with heavy truck traffic creating dust.	Stump grinding in Northern limit forest area, removing railroad ties and track, assiting with stump grinding activities, demo of pumphous #4, filling sand bags for general use	Air monitoring, set-up weather station	Water Truck & Sprinklers	
HV-1 #1902	NEC	6062300	8/17/2014	9:14	8/18/2014	9:14	34	74	29.99	Quail Creek Station; Op-Tech Weater Sation	47.70	Non-Detect	0.6	10	10	SE	OVERCAST; .02 IN RAIN	Utility Work adjacent to HV-1; Citizens performing construction activities adjacent to HV-2 & HV-3	Air monitoring, set-up weather station	Continued stump grinding activities & assisting from Op-Tech, Fuel Delivered, 2 Dozers shipped on-site, USI on-site surveying, reset pumps, set-up booms and filterbags at storm drains, continued breaking up concrete wall	Water Truck & Sprinklers	
HV-1 #1902	NEC	6062303	8/18/2014	9:15	8/19/2014	9:41	34	77	29.9	Quail Creek Station; Op-Tech Weater Sation	64.00	Non-Detect	0.5	8	8	NE	PT CLOUDY; HUMID	Citizens performing construction activities adjacent to HV-2 & HV-3; Firestone mowing lawn near HV-1	Continued stump grinding activities & assisting from Op-Tech, Fuel Delivered, 2 Dozers shipped on-site, USI on-site surveying, reset pumps, set-up booms and filterbags at storm drains, continued breaking up concrete wall	Continued stump grinding activities & assisting from Op-Tech, Set-up sprinkler system for dust mgt, Breaking up concrete wall with Cat 320, Hosing stump grinding activities, pumping water from lagoon to adler frak tanks	Water Truck & Sprinklers	
HV-1 #1902	NEC	6062306	8/19/2014	9:46	8/20/2014	9:46	35	83	29.87	Quail Creek Station; Op-Tech Weater Sation	45.10	Non-Detect	1.5	16	16	SW	PT CLOUDY; PM RAIN .55 IN	Citizens performing construction activities adjacent to HV-2 & HV-3	Continued stump grinding activities & assisting from Op-Tech, Set-up sprinkler system for dust mgt, Breaking up concrete wall with Cat 320, Hosing stump grinding activities, pumping water from lagoon to adler frak tanks	Continued stump grinding activities & started shipping mulch off-site, continued to break up concrete wall with Cat 320 hoe ram, temp shut-down due to Lightning, pumped water into Frak Tanks, RMC mowing grounds	Water Truck & Sprinklers	
HV-1 #1902	NEC	6062309	8/20/2014	9:50	8/21/2014	9:30	34	73	30.01	Quail Creek Station; Op-Tech Weater Sation	44.50	0.3300	0.8	12	14	SSW	RAIN & LIGHTNING; OVERCAST	Citizens performing construction activities adjacent to HV-2 & HV-3	Continued stump grinding activities & started shipping mulch off-site, continued to break up concrete wall with Cat 320 hoe ram, temp shut-down due to Lightning, pumped water into Frak Tanks, RMC mowing grounds	Shipping mulch off-site, breaking up concrete between former filter press & pumphouse #3 w/ Cat 320, Finished concrete wall breakup, pumping stormwater into lagoon, surveyor makring out cell, cutting rebar, temp lighting shutdown, heavy rain	Water Truck & Sprinklers	
HV-1 #1902	NEC	6062312	8/21/2014	9:32	8/22/2014	9:08	35	78	30.5	Quail Creek Station; Op-Tech Weater Sation	57.90	Non-Detect	1	12	16	S	.46 IN RAIN & LIGHTNING	Citizens performing construction activities adjacent to HV-2 & HV-3	Shipping mulch off-site, breaking up concrete between former filter press & pumphouse #3 w/ Cat 320, Finished concrete wall breakup, pumping stormwater into lagoon, surveyor makring out cell, cutting rebar, temp lighting shutdown, heavy rain	Grading Cell, Hydro-axe cutting fenceline brush, sealing abandoned wells, sampling frak tank & lagoon, cutting rebar, hoe-ramming concrete pads, separating concrete from rebar & metals, pumping stormwater	Water Truck & Sprinklers	
HV-1 #1902	NEC	6062315	8/22/2014	9:10	8/23/2014	12:23	34	80	30.02	Quail Creek Station; Op-Tech Weater Sation	32.40	Non-Detect	0.8	9	10	SW	SOME RAIN; PT CLOUDY		Grading Cell, Hydro-axe cutting fenceline brush, sealing abandoned wells, sampling frak tank & lagoon, cutting rebar, hoe-ramming concrete pads, separating concrete from rebar & metals, pumping stormwater	Grading Cell, Clearing brush with Hydro-axe, separating concrete from rebar & metal, pumping water into the lagoon, installed remaining silt fence along western limit towards the north limit, cleaning up debris, repaired john deer 350	Water Truck & Sprinklers	
HV-1 #1902	NEC	6062318	8/23/2014	12:25	8/24/2014	9:08	35	79	30.01	Quail Creek Station; Op-Tech Weater Sation	36.30	Non-Detect	0.4	13	13	SE	1 IN RAIN; HUMID		Grading Cell, Clearing brush with Hydro-axe, separating concrete from rebar & metal, pumping water into the lagoon, installed remaining silt fence along western limit towards the north limit, cleaning up debris, repaired john deer 350	No work performed on-site	Water Truck & Sprinklers	Hi-Vol 2 lost power due to faulty power cord; replaced power cord
HV-1 #1902	NEC	6062321	8/24/2014	9:10	8/25/2014	9:31	35	80	30.04	Quail Creek Station; Op-Tech Weater Sation	47.30	Non-Detect	0.6	9	9	S	OVERCAST	Citizens performing construction activities adjacent to HV-2 & HV-3	No work performed on-site	Grading Cell, Clearing brush with hydro-axe, hoe-ramming concrete w/sprinkler set-up, pumping water into lagoon, shipped mulch off-site, fiber optics stakeout, ipl shut down power to dormant monitoring station	Water Truck & Sprinklers	
HV-1 #1902	NEC	6062324	8/25/2014	9:33	8/26/2014	8:59	35	81	30.09	Quail Creek Station; Op-Tech Weater Sation	44.00	Non-Detect	0.5	15	15	SSW	PT CLOUDY .68 IN RAIN	Citizens performing construction activities adjacent to HV-2 & HV-3	Grading Cell, Clearing brush with hydro-axe, hoe-ramming concrete w/sprinkler set-up, pumping water into lagoon, shipped mulch off-site, fiber optics stakeout, ipl shut down power to dormant monitoring station	Grading cell, clearing brush with hydro-axe, fiber optics stakeout, pumping water into lagoon - POTW approved, took water samples, walked through hi-vol sampling with Cardno/ATC, temp lightning shutdown, roller shipped on-site, hoe-ramming concrete with sprinkler set up to mitigate dust	Water Truck & Sprinklers	

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2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-1

90 Day Rolling Average: 0.071

Weekly Average: 0.071 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additoinal Notes
HV-1 #1902	NEC	6062327	8/26/2014	9:01	8/27/2014	9:06		81	30.09	Quail Creek Station; Op-Tech Weater Sation	60.40	Non-Detect	0.5	12	12	NE	PT CLOUDY .68 IN RAIN; LIGHTNING	Citizens performing construction activities adjacent to HV-2 & HV-3	Grading cell, clearing brush with hydro-axe, fiber optics stakeout, pumping water into lagoon - POTW approved, took water samples, walked through hi-vol sampling with Cardno/ATC, temp lightning shutdown, roller shipped on-site, hoe-ramming concrete with sprinkler set up to mitigate dust	Grading, rolling, and surveying cell. Fencing installed along CSX North limit, Electrican on-site to discuss hi-vol power set-up, pumped water into lagoon & treated in Adler tank, pulled cattails from lagoon & stockpiled within poly, weekly call-in meeting, built stone access into cell area, hoe-ramming concrete with sprinklers to mitigate dust	Water Truck & Sprinklers	
HV-1 #1902	NEC	6062330	8/27/2014	9:08	8/28/2014	8:58	34	81	30.11	Quail Creek Station; Op-Tech Weater Sation	57.40	Non-Detect	0.7	8	10	NNE	PT CLOUDY	Citizens performing construction activities adjacent to HV-2 & HV-3	Grading, rolling, and surveying cell. Fencing installed along CSX North limit, Electrican on-site to discuss hi-vol power set-up, pumped water into lagoon & treated in Adler tank, pulled cattails from lagoon & stockpiled within poly, weekly call-in meeting, built stone access into cell area, hoe-ramming concrete with sprinklers to mitigate dust	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-1 #1902	NEC	6062333	8/28/2014	9:00	8/29/2014	9:00	35	76	30.1	Quail Creek Station; Op-Tech Weater Sation	35.30	Non-Detect	0.7	7	8	NE			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-1 #1902	NEC	6014693	8/29/2014	9:02	8/30/2014	9:02	36	75	30.1	Quail Creek Station; Op-Tech Weater Sation	42.30	Non-Detect	0.6	10	10	S			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-1 #1902	NEC	6014699	9/4/2014	13:30	9/5/2014	8:55	38	77	30.1	Quail Creek Station; Op-Tech Weater Sation	5.50	Non-Detect	1.2	8	13	SSW	PT CLOUDY		Finished Cell Bottom, Pumped water into laggoon, Compacted cell w/ testing , Hoe Ramming concrete with sprinkler system, pine on-site to repair air monitors, water truck used for dust suppression	Building Berm & Access road, Compacting Cell with testing, Hoe Ramming concrete with sprinkler system setup, excavating sewer line to locate blockage, water truck used for dust supression	Water Truck & Sprinklers	Technical difficulties changing brushes for HV 1 & HV effecting the pumps resulted in no data being collected from 9/3 to 9/4.
HV-1 #0014	NEC	6014702	9/5/2014	9:00	9/6/2014	8:56	36	80	30.1	Quail Creek Station; Op-Tech Weater Sation	31.10	Non-Detect	2.1	11	17	SSW	CLEAR SKIES - HUMID		Building Berm & Access road, Compacting Cell with testing, Hoe Ramming concrete with sprinkler system setup, excavating sewer line to locate blockage, water truck used for dust supression	Worked on berms and access road, located sewer manhole near mw-11, set-up discharges, hoe ramming concrete on north side of site with sprinkler setup, removing cattails from lagoon, water truck used for dust supression	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014705	9/6/2014	9:00	9/7/2014	9:16	37	68	30.16	Quail Creek Station; Op-Tech Weater Sation	6.50	Non-Detect	0.9	7	10	NNE	LIGHT RAIN		Worked on berms and access road, located sewer manhole near mw-11, set-up discharges, hoe ramming concrete on north side of site with sprinkler setup, removing cattails from lagoon, water truck used for dust supression	Non-Work Day	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014711	9/7/2014	9:16	9/8/2014	8:57	36	67	30.21	Quail Creek Station; Op-Tech Weater Sation	15.30	Non-Detect	0.6	7	11	NE	CLEAR SKIES		Non-Work Day	Finished Cell Berms, Breaking up concrete, finished removing cattails from lagoon, cutting rebar & railroad ties, building cell with dozer and roller, fit tests performed, cap soil delivered, ipl on-site due to power outage at HV-2 & HV-3 , dust suppression using sprinkers and water truck	Water Truck & Sprinklers	HV-2 & HV-3 lost power on Sunday and were hooked back up to power on Monday
HV-1 #0014	NEC	6014708	9/8/2014	8:57	9/9/2014	9:25	37	67	30.15	Quail Creek Station; Op-Tech Weater Sation	32.80	Non-Detect	0.5	7	10	NE	PT CLOUDY	Citizens and IPL pereforming work adjacent to HV-2 & 3	Finished Cell Berms, Breaking up concrete, finished removing cattails from lagoon, cutting rebar & railroad ties, building cell with dozer and roller, fit tests performed, cap soil delivered, ipl on-site due to power outage at HV-2 & HV-3 , dust suppression using sprinkers and water truck	Excavating NW location, breaking up concrete with hoeram, cutting rebar, treating water/pumping water, soil samples taken, air monitoring undergone, IPL working adjacent to HV-2 & Hv-3, dust suppression using water truck and sprinklers	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014717	9/9/2014	9:27	9/10/2014	9:11	36	67	30.1	Quail Creek Station; Op-Tech Weater Sation	36.00	Non-Detect	1	13	13	S	PT Cloudy	Citizens performing construction work adjacen to HV-2 & HV-3	Excavating NW location, breaking up concrete with hoeram, cutting rebar, treating water/pumping water, soil samples taken, air monitoring undergone, IPL working adjacent to HV-2 & Hv-3, dust suppression using water truck and sprinklers	Continued excavting NW area, breaking up concrete with hoeram, cutting rebar, pumping water, citizens gas confirmed pumphouse 4 gasline is abandoned, heavy rainfall & high winds, weekly meeting, HV2 & HV3 power short over-night roughtly 1/2 day of data collected, dust supression using h20 truck and sprinklres	Water Truck & Sprinklers	HV-2 & HV-3 lost power overnight and roughly 1/2 day of data was collected
HV-1 #0014	NEC	6014709	9/10/2014	9:14	9/11/2014	9:41	36	73	29.95	Quail Creek Station; Op-Tech Weater Sation	28.60	Non-Detect	3.3	18	23	S	.49 IN RAIN; OVERCAST	Citizens performing construction work adjacen to HV-2 & HV-3	Continued excavting NW area, breaking up concrete with hoeram, cutting rebar, pumping water, citizens gas confirmed pumphouse 4 gasline is abandoned, heavy rainfall & high winds, weekly meeting, HV2 & HV3 power short over-night roughtly 1/2 day of data collected, dust supression using h20 truck and sprinklres	Electricians on-site to restore power to transformers, hoeramming concrete, completed NW area excavation, surveyor on-site to markout south area of site and citizens property, citizens working adjacent to HV2 & HV3, Heritage on-site to sample unknown drum.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014714	9/11/2014	9:42	9/12/2014	9:39	36	64	30.2	Quail Creek Station; Op-Tech Weater Sation	8.60	Non-Detect	2.1	10	16	N	.05 in Rain	Citizens performing construction work adjacen to HV-2 & HV-3, Citizens street sweeping	Electricians on-site to restore power to transformers, hoeramming concrete, completed NW area excavation, surveyor on-site to markout south area of site and citizens property, citizens working adjacent to HV2 & HV3, Heritae on-site to sample unknown drum.	Electricians on-site to h/u transformers and power for hi-vols, excavating CSB-1 area, hoeramming concrete, grading cell, surveying citizens property, demo of pumphouses, soil samples taken by AGS, vac truck on-site to pump water from pumphouses	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014721	9/12/2014	9:41	9/13/2014	11:03	39	61	30.24	Quail Creek Station; Op-Tech Weater Sation	6.10	Non-Detect	1.2	7	12	NNE		Citizens working adjacent to HV-2 & HV-3	Electricians on-site to h/u transformers and power for hi-vols, excavating CSB-1 area, hoeramming concrete, grading cell, surveying citizens property, demo of pumphouses, soil samples taken by AGS, vac truck on-site to pump water from pumphouses	Continued Excavation from CSB-1 area to MSB2A and MSB1A, continued hoe-ramming concrete, demo of pumphouse 1, gaylor on-site for power h/u, vac truck on-site to pump slurry, continued grading cell	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014724	9/13/2014	11:05	9/14/2014	9:07	37	58	30.32	Quail Creek Station; Op-Tech Weater Sation	40.70	Non-Detect	1.3	8	12	N			Continued Excavation from CSB-1 area to MSB2A and MSB1A, continued hoe-ramming concrete, demo of pumphouse 1, gaylor on-site for power h/u, vac truck on-site to pump slurry, continued grading cell	Non-Work Day	Water Truck & Sprinklers	

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2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-1

90 Day Rolling Average: 0.071
Weekly Average: 0.071 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additoinal Notes
HV-1 #0014	NEC	6014727	9/14/2014	9:09	9/15/2014	9:25	37	58	30.32	Quail Creek Station; Op-Tech Weater Satlon	21.70	Non-Detect	0.5	7	9	SE	.56 IN RAIN; OVERCAST		Non-Work Day	Water samples taken, Continued excavation of concrete at MSB2A, continued hoe-ramming concrete, continued grading and rolling cell for compaction, continued demo of pumphouses, pumping water to POTW, early work shutdown at 1530 due to lightning	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014730	9/15/2014	9:30	9/16/2014	9:51	38	57	30.21	Quail Creek Station; Op-Tech Weater Satlon	9.70	Non-Detect	0.7	8	19	S	.56 IN RAIN; OVERCAST	Citizens performing work adjacent to HV-2 & HV-3	Water samples taken, Continued excavation of concrete at MSB2A, continued hoe-ramming concrete, continued grading and rolling cell for compaction, continued demo of pumphouses, pumping water to POTW, early work shutdown at 1530 due to lightning	Continued excavating MSB2A, grading cell, rolling for compaction, hoe-ramming concrete and demo of pumphouses. R&R ties shipped offsite. Dust cloud produced from road construction/Firestone near HV-1.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014756	9/16/2014	9:52	9/17/2014	9:33	37	58	30.2	Quail Creek Station; Op-Tech Weater Satlon	25.80	Non-Detect	0.8	6	9	N	.02 IN RAIN	Citizens working adjacent to HV-2 & HV-3; Dust cloud produced adjacent to HV-1 from Firestone/road construction.	Continued excavating MSB2A, grading cell, rolling for compaction, hoe-ramming concrete and demo of pumphouses. R&R ties shipped offsite. Dust cloud produced from road construction/Firestone near HV-1.	Continued excavating MSB2A, grading cell, rolling for compaction, hoe-ramming concrete and demo of pumphouses. Backfilling NW Area. Water samples taken. Weekly meeting. Site prep'd for travel.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014759	9/17/2014	9:40	9/18/2014	9:18	37	57	30.11	Quail Creek Station; Op-Tech Weater Satlon	36.20	Non-Detect	0.4	6	10	S	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Continued excavating MSB2A, grading cell, rolling for compaction, hoe-ramming concrete and demo of pumphouses. Backfilling NW Area. Water samples taken. Weekly meeting. Site prep'd for travel.	Crew Travel. Local crew pumping water and air monitoring. Services performed on equipment.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014762	9/18/2014	9:23	9/19/2014	9:26	38	62	30.13	Quail Creek Station; Op-Tech Weater Satlon	26.00	Non-Detect	0.5	6	11	NNE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Crew Travel. Local crew pumping water and air monitoring. Services performed on equipment.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014765	9/19/2014	9:31	9/20/2014	9:25	38	64	30.19	Quail Creek Station; Op-Tech Weater Satlon	20.10	Non-Detect	0.7	9	12	ESE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Local Crew on-site for air monitoring and pumping water.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014768	9/20/2014	9:29	9/21/2014	9:17	36	67	30.06	Quail Creek Station; Op-Tech Weater Satlon	21.80	Non-Detect	2.1	12	16	SSW	.03 IN RAIN		Local Crew on-site for air monitoring and pumping water.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014771	9/21/2014	9:21	9/22/2014	9:32	36	66	30.09	Quail Creek Station; Op-Tech Weater Satlon	15.00	0.0510	2.7	10	21	WSW	.03 IN RAIN	Citizens working adjacent to HV-2 & HV-3	Local Crew on-site for air monitoring and pumping water.	Continued Excavating MSBA2 concrete rubble, grading cell, continued hoe-ramming concrete, continued demo of pumphouses, backfilling	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014774	9/22/2014	9:35	9/23/2014	8:10	36	58	30.27	Quail Creek Station; Op-Tech Weater Satlon	28.20	Non-Detect	1.1	6	14	NNE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Continued Excavating MSBA2 concrete rubble, grading cell, continued hoe-ramming concrete, continued demo of pumphouses, backfilling	Grading cell, building berm, dem of pumphouse 1 and 2, excavating WP6A & B, backfilling, hoeramming concrete	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014777	9/23/2014	8:12	9/24/2014	9:17	37	60	30.35	Quail Creek Station; Op-Tech Weater Satlon	33.50	Non-Detect	0.5	7	8	NE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Grading cell, building berm, dem of pumphouse 1 and 2, excavating WP6A & B, backfilling, hoeramming concrete	Excavating WP6A & B, R&R ties picked up, grading cell, building berm, removed liner from lagoon, hoeramming concrete	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014780	9/24/2014	9:19	9/25/2014	9:24	38	63	30.36	Quail Creek Station; Op-Tech Weater Satlon	22.40	Non-Detect	0.4	7	9	ESE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Excavating WP6A & B, R&R ties picked up, grading cell, building berm, removed liner from lagoon, hoeramming concrete	Excavating WP6A & B, Hoeramming concrete, Removed Fencline around pit, hoeramming pit, grading cell, building berm	Water Truck & Sprinklers	Cease excavating & hoeramming in WP6A and MSBA1 and MSBA2 due to vapor odor
HV-1 #0014	NEC	6014783	9/25/2014	9:29	9/26/2014	9:21	38	67	30.31	Quail Creek Station; Op-Tech Weater Satlon	31.00	Non-Detect	0.3	6	7	SSE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Excavating WP6A & B, Hoeramming concrete, Removed Fencline around pit, hoeramming pit, grading cell, building berm	Excavating FL4B, hoeramming pit area, backfilling pit area, grading cell, power h/u for HV-1 to move PH3 off-line	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014786	9/26/2014	9:27	9/27/2014	9:39	37	69	30.26	Quail Creek Station; Op-Tech Weater Satlon	36.10	Non-Detect	0.4	6	9	E	PT CLOUDY		Excavating FL4B, hoeramming pit area, backfilling pit area, grading cell, power h/u for HV-1 to move PH3 off-line	Excavating FL4B and WP3A & B, hoeramming concrete, backfilling pit, cutting rebar	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014789	9/27/2014	9:41	9/28/2014	7:45	38	70	30.24	Quail Creek Station; Op-Tech Weater Satlon	32.80	Non-Detect	0.5	7	12	NE	PT CLOUDY		Excavating FL4B and WP3A & B, hoeramming concrete, backfilling pit, cutting rebar	Non Work Day	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014792	9/28/2014	7:47	9/29/2014	9:52	37	71	30.16	Quail Creek Station; Op-Tech Weater Satlon	46.50	Non-Detect	0.3	6	9	NNE	PT CLOUDY	Heavy Construction on Big Four Road causing a lot of dust	Non Work Day	Excavating FL4B, Hoe-ramming concrete, Grading Cell, Cutting Rebar, Heavy Construction on Big Four Road causing dust	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014795	9/29/2014	9:53	9/30/2014	8:42	38	68	30.05	Quail Creek Station; Op-Tech Weater Satlon	43.10	0.1300	0.4	8	12	NNE	PT CLOUDY	Heavy Construction on Big Four Road causing a lot of dust	Excavating FL4B, Hoe-ramming concrete, Grading Cell, Cutting Rebar, Heavy Cconstruction on Big Four Road causing dust	Continued excavating FL4B, Continued Hoe-ramming concrete, continued grading cell & compaction testing. Hoe-ramming concrete of lagoon & stockpiling. Cutting rebar. Gaylor disconnected power to PH3 & 4.	Water Truck & Sprinklers	

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2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-1

90 Day Rolling Average: 0.071

Weekly Average: 0.071 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additoinal Notes
HV-1 #0014	NEC	6014798	9/30/2014	8:45	10/1/2014	10:01	38	63	29.99	Quail Creek Station; Op-Tech Weater Sation	24.30	Non-Detect	0.9	6	11	NNE	PT Cloudy	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Continued excavating FL4B. Continued Hoe-ramming concrete, continued grading cell & compaction testing. Hoe-ramming concrete of lagoon & stockpiling. Cutting rebar. Gaylor disconnected power to PH3 & 4.	Excavating FL2, DW1, OE1, Lagoon, WP3A. Backfilling WP6A. Cutting Rebar. Demo of pumphouse 4. Continued grading cell.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014801	10/1/2014	10:05	10/2/2014	8:33	38	63	30.02	Quail Creek Station; Op-Tech Weater Sation	37.00	Non-Detect	0.5	6	8	ESE	PT CLOUDY	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Excavating FL2, DW1, OE1, Lagoon, WP3A. Backfilling WP6A. Cutting Rebar. Demo of pumphouse 4. Continued grading cell.	Excavating Lagoon, DW1, FL2, WP1D, & WP3A. Backfilling WP6A and rolling. Cutting Rebar. Grading Cell. Cleaning roadways and haul roads. HV1 power tripped overnight, restored power and restarted sampling.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014804	10/2/2014	8:35	10/2/2014	16:00	38	71	30.01	Quail Creek Station; Op-Tech Weater Sation	34.60	Non-Detect	2.1	11	16	S	.07 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Excavating Lagoon, DW1, FL2, WP1D, & WP3A. Backfilling WP6A and rolling. Cutting Rebar. Grading Cell. Cleaning roadways and haul roads. HV1 power tripped overnight, restored power and restarted sampling.	Excavating WP6A, Backfill of WP6A, WP6B and FL4B. Citizens on-site to de-mark waterlines tie-in. Demo Pumphouse 4. Grading and rolling cell. Pumping Water.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014807	10/3/2014	7:50	10/4/2014	8:15	38	59	29.86	Quail Creek Station; Op-Tech Weater Sation	5.20	Non-Detect	3	10	20	SSW	.47 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Excavating WP6A, Backfill of WP6A, WP6B and FL4B. Citizens on-site to de-mark waterlines tie-in. Demo Pumphouse 4. Grading and rolling cell. Pumping Water.	Excavating WP6A, MSB1A (Uncovered Rail Road Rail, Concrete Structures, and Batteries). Uncovered two tanks and wood debris in WP6A. Backfilling WP5A and FL4B. Sampled areas with PID for VOC; readings below 1 PPM. Cleaning up debris and cleaning haul roads.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014810	10/4/2014	8:17	10/4/2014	20:00	38	45	29.86	Quail Creek Station; Op-Tech Weater Sation	5.40	0.1500	3	11	19	SW	.02 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Excavating WP6A, MSB1A (Uncovered Rail Road Rail, Concrete Structures, and Batteries). Uncovered two tanks and wood debris in WP6A. Backfilling WP6A and FL4B. Sampled areas with PID for VOC; readings below 1 PPM. Cleaning up debris and cleaning haul roads.	Excavating WP6A, MSB1A (Uncovered Rail Road Rail, Concrete Structures, and Batteries). Uncovered two tanks and wood debris in WP6A. Backfilling WP6A and FL4B. Sampled areas with PID for VOC; readings below 1 PPM. Cleaning up debris and cleaning haul roads.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671902	10/6/2014	14:10	10/7/2014	10:14	36	55	29.81	Quail Creek Station; Op-Tech Weater Sation	5.20	Non-Detect	2.4	14	19	SSW	.08 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Continued Excavating WP6A, WP3A, and MSB1A. Backfilling FL4B. Sampling water, concrete, and personal lead. Cleaning debris around site. Hoe-ramming concrete. Pine on-site to replace HV1 pump & fix dust trak n2.	Continued excavating MSB1A (stockpiling concrete for sampling) and MSB1B. Continued grading cell. Cleaned 2 frak tanks. Continued pumping water. Collected concrete samples, soil samples (AGS), and personal lead samples. Cleaning site debris and haul roads.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671903	10/7/2014	10:16	10/7/2014	23:00	36	54	29.9	Quail Creek Station; Op-Tech Weater Sation	29.90	Non-Detect	1.6	8	17	SSW	.48 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Continued excavating MSB1A (stockpiling concrete for sampling) and MSB1B. Continued grading cell. Cleaned 2 frak tanks. Continued pumping water. Collected concrete samples, soil samples (AGS), and personal lead samples. Cleaning site debris and haul roads.	Continued excavating MSB1A (stockpiling concrete for sampling) and MSB1B. Continued grading cell. Cleaned 2 frak tanks. Continued pumping water. Collected concrete samples, soil samples (AGS), and personal lead samples. Cleaning site debris and haul roads.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671908	10/9/2014	14:30	10/10/2014	8:43	38	49	30.17	Quail Creek Station; Op-Tech Weater Sation	28.20	Non-Detect	0	2	7	NNE	.04 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, WP3A, Backfilling WP6A & FL4B, Building 2nd Haul Road into Cell, Hoe-ramming concrete, de-watering site, cleaning frak tanks, Replacing HV Pumps, Grading Cell	Excavating Lagoon, MSB1A and MSB2A, De-watering site, backfilling FL4B, grading cell, cleaning debris	Water Truck & Sprinklers	REPLACED HI-VOL PUMPS
HV-1 #0014	NEC	8671911	10/10/2014	8:45	10/11/2014	9:08	38	51	30.13	Quail Creek Station; Op-Tech Weater Sation	23.70	Non-Detect	0.9	7	9	NNE	.11 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, MSB1A and MSB2A, De-watering site, backfilling FL4B, grading cell, cleaning debris	Excavating MSB1A, MSB2A, Lagoon, and WP3A & B, Backfilling FL4B, Hoe-ramming sidewalls, water sampling, cleaning haul roads, cutting rebar, compaction testing	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671914	10/11/2014	9:10	10/12/2014	9:00	38	50	30.15	Quail Creek Station; Op-Tech Weater Sation	26.90	Non-Detect	1.5	7	10	NNE	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating MSB1A, MSB2A, Lagoon, and WP3A & B, Backfilling FL4B, Hoe-ramming sidewalls, water sampling, cleaning haul roads, cutting rebar, compaction testing	No work performed on-site	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671917	10/12/2014	9:03	10/12/2014	0:00	38	53	30.16	Quail Creek Station; Op-Tech Weater Sation	240.00	Non-Detect	0.8	12	12	SE	.27 IN RAIN		No work performed on-site	No work performed on-site	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671920	10/13/2014	10:10	10/14/2014	10:57	38	66	29.96	Quail Creek Station; Op-Tech Weater Sation	10.70	Non-Detect	2.8	22	22	SSE	1.09 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating MSB1A and MSB2A, De-watering site, grading cell, cutting rebar, cleaning debris, felled a tree near lagoon.	Excavating MSB2A & Lagoon, de-watering site, setting up pumps, lkd delivered, consolidating rebar.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671923	10/14/2014	11:01	10/15/2014	9:11	38	62	29.74	Quail Creek Station; Op-Tech Weater Sation	2.60	Non-Detect	3.1	19	19	S	.54 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating MSB2A & Lagoon, de-watering site, setting up pumps, lkd delivered, consolidating rebar.	Mixing lkd with excavated materials, grading cell, seeding around cell with winter rye and straw overlay, setting up hi-vols for travel, de-watering site, consolidating concrete, backfilling FL4B with granular fill.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671926	10/15/2014	9:13	10/16/2014	8:47	40	55	29.78	Quail Creek Station; Op-Tech Weater Sation	1.50	Non-Detect	1.1	8	12	SSE	.19 IN RAIN	Construction on Big Four Road near HV2 & HV3	Mixing lkd with excavated materials, grading cell, seeding around cell with winter rye and straw overlay, setting up hi-vols for travel, de-watering site, consolidating concrete, backfilling FL4B with granular fill.	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671929	10/16/2014	8:54	10/17/2014	9:02	38	58	29.86	Quail Creek Station; Op-Tech Weater Sation	22.30	Non-Detect	1.1	9	12	SW	.02 IN RAIN		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	

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2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-1

90 Day Rolling Average: 0.071
Weekly Average: 0.071 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additoinal Notes
HV-1 #0014	NEC	8671932	10/17/2014	3:11	10/18/2014	9:30	38	60	29.87	Quail Creek Station; Op-Tech Weater Sation	34.20	Non-Detect	2.4	12	16	SW	PT CLOUDY		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671935	10/18/2014	9:37	10/19/2014	8:54	38	51	30.18	Quail Creek Station; Op-Tech Weater Sation	5.80	Non-Detect	1.6	9	13	NNW	.05 IN RAIN		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671938	10/19/2014	9:00	10/20/2014	8:05	38	50	30.25	Quail Creek Station; Op-Tech Weater Sation	17.40	Non-Detect	1.3	9	10	SSW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	TRAVEL - NO WORK PERFORMED	Excavating MSB2A & B, and Lagoon. Dewatering site, cutting and consolidating rebar, cleaning roadways, mixing materials with lkd in cell, grading cell, surveyor on-site, soil and water samples taken.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671941	10/20/2014	9:00	10/21/2014	8:34	38	57	30.04	Quail Creek Station; Op-Tech Weater Sation	34.10	0.1100	1.9	15	15	SW	.05 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating MSB2A & B, and Lagoon. Dewatering site, cutting and consolidating rebar, cleaning roadways, mixing materials with lkd in cell, grading cell, surveyor on-site, soil and water samples taken.	Excavating Lagoon, Mixing with kiln dust, and MSB2A/B. Hammering concrete. Grading cell with kiln dust. De-watering site. Cleaning haul roads. Backfilling WP6A with cap fill clay dirt.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671944	10/21/2014	8:40	10/22/2014	8:57	38	51	30.21	Quail Creek Station; Op-Tech Weater Sation	21.00	Non-Detect	1	13	13	N	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, Mixing with kiln dust, and MSB2A/B. Hammering concrete. Grading cell with kiln dust. De-watering site. Cleaning haul roads. Backfilling WP6A with cap fill clay dirt.	Excavating Lagoon, mixing with kiln dust, and MSB1A/B re-digs and sidewalls. Cleaning haul roads. Compaction testing. Backfilling WP6A.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671947	10/22/2014	9:06	10/23/2014	9:45	38	48	30.34	Quail Creek Station; Op-Tech Weater Sation	39.50	0.0520	0.7	9	10	NNE	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, mixing with kiln dust, and MSB1A/B re-digs and sidewalls. Cleaning haul roads. De-watering. Compaction testing. Backfilling WP6A. Grading cell.	Excavating Lagoon, mixing with kiln dust, and MSB2B, MSB1A/B. Cutting rebar, cleaning haul raods, de-watering. Grading cell.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671950	10/23/2014	9:54	10/24/2014	9:20	38	47	30.28	Quail Creek Station; Op-Tech Weater Sation	47.50	Non-Detect	0.5	9	9	SSW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, mixing with kiln dust, and MSB2B, MSB1A/B. Cutting rebar, cleaning haul raods, de-watering. Grading cell.	Excavating Lagoon, MSB2A/B, MSB1B, and WP2C. De-watering. Cutting rebar.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671953	10/24/2014	9:26	10/25/2014	8:49	40	52	30.13	Quail Creek Station; Op-Tech Weater Sation	47.20	0.1000	0.5	9	9	SW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, MSB2A/B, MSB1B, and WP2C. De-watering. Cutting rebar.	Excavating WP2C and MSB2A. Grading cell. Dewatering. Hammering concrete and consolidating rebar. Cleaning roadways.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671956	10/25/2014	8:59	10/26/2014	8:08	38	63	30.04	Quail Creek Station; Op-Tech Weater Sation	58.70	0.2800	1.3	11	11	SW	PT CLOUDY		Excavating WP2C and MSB2A. Grading cell. Dewatering. Hammering concrete and consolidating rebar. Cleaning roadways.	No work performed on-site	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671961	10/26/2014	8:10	10/27/2014	8:26	38	54	30.05	Quail Creek Station; Op-Tech Weater Sation	28.40	Non-Detect	0.3	8	8	SSW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	No work performed on-site	Excavating WP2C and MSB2A and WP2B. Grading cell. Cutting rebar. Cleaning roadways. Built roadway for lagoon backfill.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671962	10/27/2014	8:33	10/28/2014	9:09	38	65	29.95	Quail Creek Station; Op-Tech Weater Sation	38.20	Non-Detect	2.8	18	19	S	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating WP2C and MSB2A and WP2B. Grading cell. Cutting rebar. Cleaning roadways. Built roadway for lagoon backfill.	Excavating WP1B, backfilling lagoon with concrete, de-watering, grading cell, consolidating rebar, moving frak tanks, cleaning haul roads.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671965	10/28/2014	9:17	10/29/2014	8:28	38	61	30.03	Quail Creek Station; Op-Tech Weater Sation	36.30	0.1200	3	10	23	SW	.22 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating WP1B, backfilling lagoon with concrete, de-watering, grading cell, consolidating rebar, moving frak tanks, cleaning haul roads.	Backfilling Lagoon with concrete, excavating oe-1, wp1b, wp1a, and wp1d. Rebuilding ramp entrance. Grading and rolling cell. Backfilling area east of FL5 and west of WP6A. Cleaning roadways. Cutting metal from decon pad.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671968	10/29/2014	8:30	10/30/2014	9:08	38	48	30.16	Quail Creek Station; Op-Tech Weater Sation	39.80	0.2300	1.3	9	13	WNW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Backfilling Lagoon with concrete, excavating oe-1, wp1b, wp1a, and wp1d. Rebuilding ramp entrance. Grading and rolling cell. Backfilling area east of FL5 and west of WP6A. Cleaning roadways. Cutting metal from decon pad.	Excavating WP1A, MSB1A, WP1DX. Backfilling area east of FL5 and west of WP6A. Grading and rolling cell. Consolidating rebar, dewatering site, cleaning roadways, excavating pipe in Lagoon area.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671971	10/30/2014	9:13	10/31/2014	8:24	38	44	30.17	Quail Creek Station; Op-Tech Weater Sation	33.10	Non-Detect	0.5	10	10	S	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1A, MSB1A, WP1DX. Backfilling area east of FL5 and west of WP6A. Grading and rolling cell. Consolidating rebar, dewatering site, cleaning roadways, excavating pipe in Lagoon area.	Excavating WP1A, WP1C, MSB1A, and MSB2A, WP1DX, and MSB1AX. Backfilling. De-watering. Moved adler tanks & treatment station toward PH3. Hammering Concrete. Grading Cell.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671974	10/31/2014	8:31	11/1/2014	9:39	38	40	30.15	Quail Creek Station; Op-Tech Weater Sation	6.80	Non-Detect	2.4	18	20	NW	.29 IN RAIN/SLEET	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1A, WP1C, MSB1A, and MSB2A, WP1DX, and MSB1AX. Backfilling. De-watering. Moved adler tanks & treatment station toward PH3. Hammering Concrete. Grading Cell.	Excavating WP3A, MSB2A, WP1C, WP1B, and WP1DX. Hammering Concrete. De-watering & treatment set-up. Grading & Rolling Cell.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671977	11/1/2014	9:41	11/2/2014	8:36	38	35	30.38	Quail Creek Station; Op-Tech Weater Sation	41.80	Non-Detect	2.8	19	19	NNW	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP3A, MSB2A, WP1C, WP1B, and WP1DX. Hammering Concrete. De-watering & treatment set-up. Grading & Rolling Cell.	Placing concrete in Lagoon from WP3A/B, WP2A/B. De-watering. Cleaning roadways. Setting up pumps.	Water Truck & Sprinklers	

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2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-1

90 Day Rolling Average: 0.071

Weekly Average: 0.071 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additoinal Notes
HV-1 #0014	NEC	8671980	11/2/2014	8:38	11/3/2014	8:50	38	36	30.45	Quail Creek Station; Op-Tech Weater Sation	19.20	0.0720	1.3	11	12	S	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Placing concrete in Lagoon from WP3A/B, WP2A/B. De-watering. Cleaning roadways. Setting up pumps.	Excavating WP3A, WP1B, and WP1D. Backfilling pipe trenchline. Hammering concrete. Grading Cell. Compaction Testing. De-watering. Cleaning Roadways. Monitoring Well Crew On-site to install wells.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671983	11/3/2014	8:51	11/4/2014	8:25	35	54	30.32	Quail Creek Station; Op-Tech Weater Sation	17.90	Non-Detect	3.2	23	23	S	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP3A, WP1B, and WP1D. Backfilling pipe trenchline. Hammering concrete. Grading Cell. Compaction Testing. De-watering. Cleaning Roadways. Monitoring Well Crew On-site to install wells.	Excavating WP1B, WP2C, MSB2A, MSB1A. Backfilling. De-watering. Cleaning Roadways. Monitoring Well Crew on-site to install wells. Hammering concrete in Lagoon area.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671986	11/4/2014	8:27	11/5/2014	8:02	38	51	30.18	Quail Creek Station; Op-Tech Weater Sation	21.20	Non-Detect	3.1	19	20	SW	.33 IN RAIN	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1B, WP2C, MSB2A, MSB1A. Backfilling. De-watering. Cleaning Roadways. Monitoring Well Crew on-site to install wells. Hammering concrete in Lagoon area.	Excavating WP1B, WP2C, WP2B, MSB2A, MSB1A. Backfilling. De-watering. Cleaning roadways. Drilling crew on-site installing wells. Grading Cell.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671989	11/5/2014	8:04	11/5/2014	16:24	39	47	30.23	Quail Creek Station; Op-Tech Weater Sation	28.60	0.0750	0.5	6	8	S	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1B, WP2C, WP2B, MSB2A, MSB1A. Backfilling. De-watering. Cleaning roadways. Drilling crew on-site installing wells. Grading Cell.	Excavating WP1DX, MSB1A, WP2B. Backfilling. De-watering. Cleaning roadways. Drilling Crew on-site installing wells. Grading Cell. Partial Crew Travel.	Water Truck & Sprinklers	
HV-1 #0014	NEC	N/A	11/6/2014	N/A	11/6/2014	N/A	N/A	44	30.16	Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	3.7	10	16	W	.16 IN RAIN	CREW OFF-SITE TRAVEL DAY				
HV-1 #0014	NEC	N/A	11/7/2014	N/A	11/7/2014	N/A	N/A	41	30.21	Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	1.4	7	13	W	PT CLOUDY	CREW OFF-SITE TRAVEL DAY				
HV-1 #0014	NEC	N/A	11/8/2014	N/A	11/8/2014	N/A	N/A	44	30.03	Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	2.5	12	15	SW	PT CLOUDY	CREW OFF-SITE TRAVEL DAY				
HV-1 #0014	NEC	N/A	11/9/2014	N/A	11/9/2014	N/A	N/A	40	30.02	Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	1.5	9	13	SSW	PT CLOUDY	CREW OFF-SITE TRAVEL DAY				
HV-1 #0014	NEC		11/10/2014		11/11/2014			50	29.94	Quail Creek Station; Op-Tech Weater Sation	32.60	Non-Detect	3.2	14	22	SSE	OVERCAST/PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP2B/2A, Heritage removed drums & bulbs from site, demo-ing Pumphouse 3, Grading & rolling cell, Backfilling, De-watering, Hammering Concrete, Clearing CSX property line with Hydro-axe, Drill crew on-site to finish wells.	Excavating WP2A, WP1A, MSB1AX. Backfilling, Grading & Rolling Cell, Finished clearing CSX property line with Hydro-Axe, Demo-ing Pumphouse 3, De-watering, Cutting Rebar, Hammering Concrete.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671995	11/11/2014	7:51	11/12/2014	7:51	38	48	30.09	Quail Creek Station; Op-Tech Weater Sation	16.60	Non-Detect	3.3	13	19	WSW	.13 IN RAIN	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP2A, WP1A, MSB1AX. Backfilling, Grading & Rolling Cell, Finished clearing CSX property line with Hydro-Axe, Demo-ing Pumphouse 3, De-watering, Cutting Rebar, Hammering Concrete.	Excavating WP2A, WP1A, MSB1AxX, MSB1A, MSB2A. Backfilling Lagoon, Grading Cell, Hammering Concrete, Cutting Rebar, Cleaning Haul Roads	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671998	11/12/2014	7:59	11/13/2014	7:42	38	31	30.3	Quail Creek Station; Op-Tech Weater Sation	19.40	0.0870	2.4	9	15	WNW	OVERCAST	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP2A, WP1A, MSB1AxX, MSB1A, MSB2A. Backfilling Lagoon, Grading Cell, Hammering Concrete, Cutting Rebar, Cleaning Haul Roads	Excavating WP1B, WP1D, MSB1AX, MSB1A. Backfilling lagoon, Grading cell, Hammering concrete, Cutting rebar, Cleaning roadways, De-watering	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671701	11/13/2014	7:50	11/14/2014	7:50	38	23	30.33	Quail Creek Station; Op-Tech Weater Sation	38.60	0.2300	2.4	8	11	WNW	OVERCAST	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1B, WP1D, MSB1AX, MSB1A. Backfilling lagoon, Grading cell, Hammering concrete, Cutting rebar, Cleaning roadways, De-watering	Excavating MSB1AX, WP1DX, WP2B. Backfilling MSB2B with clean concrete. Backfilling Lagoon. Grading & Rolling cell. Surveyor on-site. Cutting Rebar. Cleaning haul roads. De-watering.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671704	11/14/2014	8:00	11/15/2014	8:06	38	24	30.4	Quail Creek Station; Op-Tech Weater Sation	52.10	0.2400	1.3	9	12	WSW	OVERCAST	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating MSB1AX, WP1DX, WP2B. Backfilling MSB2B with clean concrete. Backfilling Lagoon. Grading & Rolling cell. Surveyor on-site. Cutting Rebar. Cleaning haul roads. De-watering.	Excavating WP2B, ND1, ND2. Pulling up concrete for backfill. Backfilling Lagoon. Grading & Rolling Cell.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671707	11/15/2014	8:08	11/16/2014	7:43	38	37	30.42	Quail Creek Station; Op-Tech Weater Sation	47.50	0.1700	1.2	7	13	S	OVERCAST	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP2B, ND1, ND2. Pulling up concrete for backfill. Backfilling Lagoon. Grading & Rolling Cell.	Excavating ND1, ND2, WP2BX. Consolidating rebar. De-watering. Cleaning roadways. Plowing snow.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671710	11/16/2014	7:49	11/17/2014	7:47	38	37	30.23	Quail Creek Station; Op-Tech Weater Sation	29.10	Non-Detect	0.7	9	9	SSW	1.11 in rain/snowmix	N/A	Excavating ND1, ND2, WP2BX. Consolidating rebar. De-watering. Cleaning roadways. Plowing snow.	Excavating WP2B, Existing Soil Pile. Created additional access road into cell. Grading and compacting cell. De-watering excavations. Plowing snow.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671713	11/17/2014	7:53	11/18/2014	7:49	38	37	30.23	Quail Creek Station; Op-Tech Weater Sation	30.90	0.2000	0.7	6	9	ssw	PT CLOUDY	N/A	Excavating WP2B, Existing Soil Pile. Created additional access road into cell. Grading and compacting cell. De-watering excavations. Plowing snow.	Excavating WP2B, ND1, MSB2A to WP2C, WP1DX to WP1C. Hammering concrete. Backfilling lagoon. Grading and rolling cell. Cutting rebar.	Water Truck & Sprinklers	

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2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-1

90 Day Rolling Average: 0.071
Weekly Average: 0.071 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additoinal Notes
HV-1 #0014	NEC	8671716	11/18/2014	7:56	11/19/2014	8:15	39	20	30.24	Quail Creek Station; Op-Tech Weater Sation	40.50	0.3400	5	23	23	WSW	OVERCAST	Citizens Working along Big Four	Excavating WP2B, ND1, MSB2A to WP2C, WP1DX to WP1C. Hammering concrete. Backfilling lagoon. Grading and rolling cell. Cutting rebar.	Excavating WP2C, WP1A. Grading cell, compaction testing. Topo of cell by surveyor. Cutting rebar. Drainage pipe delivered.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671720	11/19/2014	8:18	11/20/2014	7:58	38	38	30.21	Quail Creek Station; Op-Tech Weater Sation	31.10	0.1400	4.8	23	23	SW	.08 IN SNOW	Citizens Working along Big Four	Excavating WP2C, WP1A. Grading cell, compaction testing. Topo of cell by surveyor. Cutting rebar. Drainage pipe delivered.	Excavating WP2A, WP1A, WP1D. Backfilling WPB2X and rip-rap. Backfilling MSB2A and MSB2B and MSB1A. Cutting rebar. Filling sandbags. Grading cell, surveyor topo taken.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671723	11/20/2014	8:03	11/21/2014	8:00	39	35	30.49	Quail Creek Station; Op-Tech Weater Sation	45.60	0.2400	1.9	13	13	SE	PT Cloudy	Citizens Working along Big Four	Excavating WP2A, WP1A, WP1D. Backfilling WPB2X and rip-rap. Backfilling MSB2A and MSB2B and MSB1A. Cutting rebar. Filling sandbags. Grading cell, surveyor topo taken.	Clearing cell of jagged objects. Liner crew on-site to place geotextile and geomembrane. Testing conducted. Cutting rebar. Backfilling MSB Areas	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671725	11/21/2014	8:05	11/22/2014	8:17	40	35	30.49	Quail Creek Station; Op-Tech Weater Sation	23.60	0.0800	1.9	13	13	SE	PT Cloudy	Citizens Working along Big Four	Clearing cell of jagged objects. Liner crew on-site to place geotextile and geomembrane. Testing conducted. Cutting rebar. Backfilling MSB Areas	Liner crew repairing liner & performing destructive/non-destructive testing. Line crew de-mob post testing. Consolidating equipment into conex box by Op-Tech, backfilling MSB areas, cutting and consolidating rebar.	Salting roads	
HV-1 #0014	NEC	8671728	11/22/2014	8:30	11/23/2014	8:05	38	43	30.32	Quail Creek Station; Op-Tech Weater Sation	22.40	Non-Detect	3.9	12	20	S	.05 IN RAIN	Citizens Working along Big Four	Liner crew repairing liner & performing destructive/non-destructive testing. Line crew de-mob post testing. Consolidating equipment into conex box by Op-Tech, backfilling MSB areas, cutting and consolidating rebar.	Non-Work Day	Salting roads	
HV-1 #0014	NEC	8671731	11/23/2014	8:40	11/24/2014	8:05	38	51	30.02	Quail Creek Station; Op-Tech Weater Sation	2.90	Non-Detect	3.4	12	20	SSE	1.42 IN RAIN	N/A	Non-Work Day	De-mob rental equipment, cleaning adler tanks, de-watering site, reports.	Salting roads	
HV-1 #0014	NEC	8671735	11/24/2014	8:13	11/24/2014	8:20	38	47	29.91	Quail Creek Station; Op-Tech Weater Sation			7	28	28	SW	.14 IN RAIN	N/A	De-mob rental equipment, cleaning adler tanks, de-watering site, reports.	Crew Travel	Salting roads	
HV-1 #0014	NEC	N/A	11/25/2014	N/A	11/25/2014	N/A	N/A	35	30.14	Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	4.3	15	16	WSW	OVERCAST	CREW OFF-SITE TRAVEL DAY				
HV-1 #0014	NEC	N/A	11/26/2014	N/A	11/27/2014	N/A	N/A			Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	CREW OFF-SITE TRAVEL DAY									
HV-1 #0014	NEC	N/A	11/28/2014	N/A	11/28/2014	N/A	N/A			Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	CREW OFF-SITE TRAVEL DAY									
HV-1 #0014	NEC	N/A	11/29/2014	N/A	11/29/2014	N/A	N/A			Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	CREW OFF-SITE TRAVEL DAY									
HV-1 #0014	NEC	N/A	11/30/2014	N/A	11/30/2014	N/A	N/A			Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	CREW OFF-SITE TRAVEL DAY									
HV-1 #0014	NEC	8671738	12/1/2014	7:57	12/2/2014	8:03	0:00	39	33	Quail Creek Station; Op-Tech Weater Sation	23.70	Non-Detect	3.2	20	15	NNE	Cloudy and 0.1 In. of rain	Citizens Working along Big Four	Backfilling MSB areas and pumping water. Cleaning vessels. Mapping out liner seams and repairs.	No work performed on-site	Salting roads	
HV-1 #0014	NEC	8671741	12/2/2014	8:09	12/3/2014	8:11	39	29	29.5	Quail Creek Station; Op-Tech Weater Sation	3.30	Non-Detect	2.3	13	13	SSE	Cloudy and 0.02 In. of rain	Citizens Working along Big Four	None at this time.	No work performed on-site	None	
HV-1 #0014	NEC	8671744	12/3/2014	8:11	12/4/2014	8:13	38	34	30.37	Quail Creek Station; Op-Tech Weater Sation	51.70	0.1000	3.1	13	17	SW	Freezing rain with some snow	Citizens Working along Big Four	Backfilling MSB areas and pumping water.	No work performed on-site	None	
HV-1 #0014	NEC	8671747	12/4/2014	8:18	12/5/2014	8:19	40	29.3	30.22	Quail Creek Station; Op-Tech Weater Sation	29.50	0.0580	1.1	11	11	E	Freezing rain with some ice	Citizens Working along Big Four	Backfilling MSB areas and pumping water.	No work performed on-site	None	

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2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-1

90 Day Rolling Average: 0.071

Weekly Average: 0.071 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additoinal Notes
HV-1 #0014	NEC		12/5/2014		12/6/2014			35	30.17	Quail Creek Station; Op-Tech Weater Sation	ND	Non-Detect	7	20	16	ENE	Rain all day	Citizens Working along Big Four	Backfilling MSB areas and pumping water.	No work performed on-site	None	HI--vols were not set up due to filters out of stock.
HV-1 #0014	NEC	8671750	12/6/2014	8:15	12/7/2014	11:45	39	35	30.58	Quail Creek Station; Op-Tech Weater Sation	16.00	Non-Detect	14	32	25	NNE	Windy and cloudy	Citizens Working along Big Four	Pumping water	No work performed on-site	None	
HV-1 #0014	NEC	8671753	12/7/2014	11:57	12/8/2014	8:30	40	34	30.52	Quail Creek Station; Op-Tech Weater Sation	6.40	Non-Detect	10	20	16	ENE	Windy and cloudy	Citizens Working along Big Four	Pumping water	No work performed on-site	None	
HV-1 #0014	NEC	8671756	12/8/2014	8:36	12/9/2014	8:39	40	36.6	30.08	Quail Creek Station; Op-Tech Weater Sation	24.00	0.1000	2.3	18	N/A	WSW	Cloudy with light rain	Citizens Working along Big Four	Pumping water, backfilling WP areas, and lining side walls with poly	No work performed on-site	Used sweeper	
HV-1 #0014	NEC	8671759	12/9/2014	8:45	12/10/2014	9:10	40	35.1	30.29	Quail Creek Station; Op-Tech Weater Sation	15.70	Non-Detect	1.7	9	10	NW	Cloudy with no rain	None	Pumping water, backfilling WP areas, and sweeping roads	No work performed on-site	Used sweeper	
HV-1 #0014	NEC	8671762	12/10/2014	9:16	12/11/2014	8:30	40	30.7	30.25	Quail Creek Station; Op-Tech Weater Sation	22.60	0.0950	2	12	12	NW	INTERMITTENT CLOUDS	None	Back filling, lining side walls with poly	No work performed on-site	Used sweeper to lay water on roads	
HV-1 #0014	NEC	8671765	12/11/2014	8:36	12/12/2014	8:37	40	32.2	30.19	Quail Creek Station; Op-Tech Weater Sation	26.70	0.0680	1.9	12	12	WNW	Cloudy with no rain	None	Back filling, liner crew on site, working on dranage pipe, and load out concrete	No work performed on-site	Used sweeper to lay water on roads	
HV-1 #0014	NEC	8671768	12/12/2014	8:43	12/13/2014	8:42	40	28.6	30.26	Quail Creek Station; Op-Tech Weater Sation	39.80	0.0580	30.26	9	12	WSW	Cloudy and cold	Dump truck hit power line with box up	Back filling, liner crew on site, working on dranage pipe, and load out concrete	No work performed on-site	Used sweeper to lay water on roads	
HV-1 #0014	NEC	8671771	12/13/2014	8:48	12/14/2014	8:49	39	40.6	30.18	Quail Creek Station; Op-Tech Weater Sation	42.50	0.0760	2	8	9	SSW	Cloudy with light rain	None	Back filling, pumping water, cover cell with clay, pick up trash and sand bags	Installed temp fencing, sweeping roads, installed animal guards, covered south side of cell with cap fill	Used sweeper to lay water on roads	
HV-1 #0014	NEC	8671774	12/14/2014	8:56	12/15/2014	9:00	40	49	30.19	Quail Creek Station; Op-Tech Weater Sation	24.90	Non-Detect	2.1	8	11	S	Overcast	N/A	Installed temp fencing, sweeping roads, installed animal guards, covered south side of cell with cap fill	Washed adler tank, sweeping roads, air monitors shut down, hasled concrete off-site, covered top & east sides of cell with cap fill, compaction testing	Used sweepr and water	

Notes: **HV-1 located downwind along S. Arlington Avenue; HV-2 & HV-3 located upwind on the western limit of the site adjacent to Citizens Gas Co.**

Reporting limit for lead is .050 µg/m3; All Non-Detects are less than .050 µg/m3.

OP-TECH

2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-2

90 Day Rolling Average: 0.053

Weekly Average: 0.050 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additional Notes
HV-2 #0237	SWC	6062273	8/7/2014	15:05	8/8/2014	15:05		69.4	30.02	Quail Creek Station	27.80	Non-Detect	0.9	9	9	East	OVERCAST	Citizens performing construction adjacent to western limit; Utility company performing work adjacent to eastern limit - creating dust	Weed Wacking on Western Limit; Utility company working on Eastern Limit; Outside Site	Setting up trailer, surveyors on-site, electricians on-site		
HV-2 #0237	SWC	6062276	8/8/2014	15:49	8/9/2014	15:49	39	72	30.05	Quail Creek Station	29.20	Non-Detect	0.7	10	11	ESE	.05 IN RAIN; OVERCAST		Setting up trailer, surveyors on-site, electricians on-site	Set-up Trailer		
HV-2 #0237	SWC	6062281	8/9/2014	15:54	8/10/2014	15:53	43	75.1	30.01	Quail Creek Station	22.70	Non-Detect	0.8	9	9	E	OVERCAST		Set-up Trailer	No work performed on-site		
HV-2 #0237	SWC	6062282	8/11/2014	10:52	8/12/2014	10:53	41.5	63	29.93	Quail Creek Station	26.60	Non-Detect	0.9	12	10	SW	RAIN .61 IN; OVERCAST	Citizens performing construction adjacent to western limit of site (excavating, hoe-ramming, skid steers) - creating dust	Set-up Construction Zones, Moved HV-1 to outer fenceline area, Surveying, Removing Chainlink Fence from Norther Limit, Removing old silt fence	Removed silt fence & chainlink fence, Trenched for new silt fence, Installed new silt fence, hammering holes in concrete with Cat 320		Moved HV-1 to outer fenceline area; Unplugged HV-1 to move Excavator by location
HV-2 #0237	SWC	6062285	8/12/2014	11:00	8/13/2014	11:20	40	68	29.97	Quail Creek Station	41.00	Non-Detect	1.7	13	13	SW	OVERCAST, LIGHT RAIN	Citizens & IPL working adjacent to western limit of site (hoe-ramming, installing pylons, skid steer) - creating dust	Removed silt fence & chainlink fence, Trenched for new silt fence, Installed new silt fence, hammering holes in concrete with Cat 320	Clearing Northern limit forest area, surveying, frak tanks delivered, water truck on-site, filled sandbags for site use		
HV-2 #0237	SWC	6062288	8/13/2014	11:22	8/14/2014	9:16	39	68	30.04	Quail Creek Station	9.10	Non-Detect	0.9	10	10	SSW	PT CLOUDY	Citizens & IPL working adjacent to western limit of site (hoe-ramming, installing pylons, skid steer, dumping gravel) - creating dust	Clearing Northern limit forest area, surveying, frak tanks delivered, water truck on-site, filled sandbags for site use	Clearing Northern limit forest area, surveying, adler tanks shipped on-site, installed silt fence, removed rail road ties & track from northern forest area, hoe-ramming wall of old furnace room area	Water Truck & Sprinklers	Stopped monitors around 9 AM to allow time for grabbing samples & morning pick-up
HV-2 #0237	SWC	6062292	8/14/2014	9:18	8/15/2014	9:18	40	73	30.05	Quail Creek Station	103.00	0.0950	0.8	11	12	N	PT CLOUDY	Citizens & IPL working adjacent to western limit of site (hoe-ramming, skid steer, dumping gravel, heavy traffic truck) - creating dust	Clearing Northern limit forest area, surveying, adler tanks shipped on-site, Installed silt fence, removed rail road ties & track from northern forest area, hoe-ramming wall of old furnace room area	Clearing Northern limit forest area, removing rail road track & ties, stump removal, filling sand bags, cutting rebar with torch, pumping water from storm water basin into adler tanks	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062295	8/15/2014	9:20	8/16/2014	9:20	40	63	30.11	Quail Creek Station	16.60	Non-Detect	0.6	8	8	WSW	PT CLOUDY	Citizens laying concrete adjacent to HV-2 & HV-3 with heavy truck traffic creating dust.	Clearing Northern limit forest area, surveying, adler tanks shipped on-site, Installed silt fence, removed rail road ties & track from northern forest area, hoe-ramming wall of old furnace room area	Stump grinding in Northern limit forest area, removing rail road ties and track, assiting with stump grinding activities, demo of pumphous #4, filling sand bags for general use	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062298	8/16/2014	9:21	8/17/2014	9:21	38	64	30.02	Quail Creek Station	30.30	Non-Detect	0.6	7	13	SSW	.34 IN RAIN	Citizens laying concrete adjacent to HV-2 & HV-3 with heavy truck traffic creating dust.	Stump grinding in Northern limit forest area, removing railroad ties and track, assiting with stump grinding activities, demo of pumphous #4, filling sand bags for general use	Air monitoring, set-up weather station	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062301	8/17/2014	9:22	8/18/2014	9:22	39	74	29.99	Quail Creek Station; Op-Tech Weater Satlon	35.50	Non-Detect	0.6	10	10	SE	OVERCAST; .02 IN RAIN	Utility Work adjacent to HV-1; Citizens performing construction activities adjacent to HV-2 & HV-3	Air monitoring, set-up weather station	Continued stump grinding activities & assisting from Op-Tech, Fuel Delivered, 2 Dozers shipped on-site, USI on-site surveying, reset pumps, set-up booms and filterbags at storm drains, continued breaking up concrete wall	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062304	8/18/2014	9:23	8/19/2014	9:43	36	77	29.9	Quail Creek Station; Op-Tech Weater Satlon	66.90	Non-Detect	0.5	8	8	NE	PT CLOUDY; HUMID	Citizens performing construction activities adjacent to HV-2 & HV-3; Firestone mowing lawn near HV-1	Continued stump grinding activities & assisting from Op-Tech, Fuel Delivered, 2 Dozers shipped on-site, USI on-site surveying, reset pumps, set-up booms and filterbags at storm drains, continued breaking up concrete wall	Continued stump grinding activities & assisting from Op-Tech, Set-up sprinkler system for dust mgt, Breaking up concrete wall with Cat 320, Hosing stump grinding activities, pumping water from lagoon to adler frak tanks	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062307	8/19/2014	9:45	8/20/2014	10:00	42	83	29.97	Quail Creek Station; Op-Tech Weater Satlon	33.90	Non-Detect	1.5	16	16	SW	PT CLOUDY; PM RAIN .55 IN	Citizens performing construction activities adjacent to HV-2 & HV-3	Continued stump grinding activities & assisting from Op-Tech, Set-up sprinkler system for dust mgt, Breaking up concrete wall with Cat 320, Hosing stump grinding activities, pumping water from lagoon to adler frak tanks	Continued stump grinding activities & started shipping mulch off-site, continued to break up concrete wall with Cat 320 hoe ram, temp shut-down due to Lightning, pumped water into Frak Tanks, RMC mowing grounds	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062310	8/20/2014	10:00	8/21/2014	9:40	34	73	30.01	Quail Creek Station; Op-Tech Weater Satlon	32.30	Non-Detect	0.8	12	14	SSW	RAIN & LIGHTNING; OVERCAST	Citizens performing construction activities adjacent to HV-2 & HV-3	Shipping mulch off-site, breaking up concrete between former filter press & pumphouse #3 w/ Cat 320, Finished concrete wall breakup, pumping stormwater into lagoon, surveyor making out cell, cutting rebar, temp lighting shutdown, heavy rain grounds	Grading Cell, Hydro-axe cutting fenceline brush, sealing abandoned wells, sampling frak tank & lagoon, cutting rebar, hoe-ramming concrete pads, separating concrete from rebar & metals, pumping stormwater	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062313	8/21/2014	9:41	8/22/2014	9:14	42	78	30.5	Quail Creek Station; Op-Tech Weater Satlon	54.00	Non-Detect	1	12	16	S	.46 IN RAIN & LIGHTNING	Citizens performing construction activities adjacent to HV-2 & HV-3	Shipping mulch off-site, breaking up concrete between former filter press & pumphouse #3 w/ Cat 320, Finished concrete wall breakup, pumping stormwater into lagoon, surveyor making out cell, cutting rebar, temp lighting shutdown, heavy rain	Grading Cell, Hydro-axe cutting fenceline brush, sealing abandoned wells, sampling frak tank & lagoon, cutting rebar, hoe-ramming concrete pads, separating concrete from rebar & metals, pumping stormwater	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062316	8/22/2014	9:16	8/23/2014	12:28	42	80	30.02	Quail Creek Station; Op-Tech Weater Satlon	27.20	Non-Detect	0.8	9	10	SW	SOME RAIN; PT CLOUDY		Grading Cell, Hydro-axe cutting fenceline brush, sealing abandoned wells, sampling frak tank & lagoon, cutting rebar, hoe-ramming concrete pads, separating concrete from rebar & metals, pumping stormwater	Grading Cell, Clearing brush with Hydro-axe, separating concrete from rebar & metal, pumping water into the lagoon, Installed remaining silt fence along western limit towards the north limit, cleaning up debris, repaired john deer 350	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062319	8/23/2014	12:30	8/24/2014	9:13	39	79	30.01	Quail Creek Station; Op-Tech Weater Satlon	21.90	Non-Detect	0.4	13	13	SE	1 IN RAIN; HUMID		Grading Cell, Clearing brush with Hydro-axe, separating concrete from rebar & metal, pumping water into the lagoon, Installed remaining silt fence along western limit towards the north limit, cleaning up debris, repaired john deer 350	No work performed on-site	Water Truck & Sprinklers	HV-2 lost power due to faulty power cord; replaced power cord
HV-2 #0237	SWC	6062322	8/24/2014	9:15	8/25/2014	9:16	42	80	30.04	Quail Creek Station; Op-Tech Weater Satlon	29.30	Non-Detect	0.6	9	9	S	OVERCAST	Citizens performing construction activities adjacent to HV-2 & HV-3	No work performed on-site	Grading Cell, Clearing brush with hydro-axe, hoe-ramming concrete w/sprinkler set-up, pumping water into lagoon, shipped mulch off-site, fiber optics stakeout, ipl shut down power to dormant monitoring station	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062325	8/25/2014	9:39	8/26/2014	9:05	41	81	30.09	Quail Creek Station; Op-Tech Weater Satlon	32.80	Non-Detect	0.5	15	15	SSW	PT CLOUDY .68 IN RAIN	Citizens performing construction activities adjacent to HV-2 & HV-3	Grading Cell, Clearing brush with hydro-axe, hoe-ramming concrete w/sprinkler setup, pumping water into lagoon, shipped mulch off-site, fiber optics stakeout, ipl shut down power to dormant monitoring station	Grading cell, clearing brush with hydro-axe, fiber optics stakeout, pumping water into lagoon - POTW approved, took water samples, walked through hi-vol sampling with Cardno/ATC, temp lightning shutdown, roller shipped on-site, hoe-ramming concrete with sprinkler set up to mitigate dust	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062328	8/26/2014	9:07	8/27/2014	9:13	42	81	30.09	Quail Creek Station; Op-Tech Weater Satlon	43.40	Non-Detect	0.5	12	12	NE	PT CLOUDY .68 IN RAIN; LIGHTNING	Citizens performing construction activities adjacent to HV-2 & HV-3	Grading cell, clearing brush with hydro-axe, fiber optics stakeout, pumping water into lagoon - POTW approved, took water samples, walked through hi-vol sampling with Cardno/ATC, temp lightning shutdown, roller shipped on-site, hoe-ramming concrete with sprinkler set up to mitigate dust	Grading, rolling, and surveying cell. Fencing installed along CSX North limit, Electrican on-site to discuss hi-vol power set-up, pumped water into lagoon & treated in Adler tank, pulled cattails from lagoon & stockpiled within poly, weekly call-in meeting, built stone access into cell area, hoe-ramming concrete with sprinklers to mitigate dust	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062331	8/27/2014	9:15	8/28/2014	9:06	42	81	30.11	Quail Creek Station; Op-Tech Weater Satlon	34.70	Non-Detect	0.7	8	10	NNE	PT CLOUDY	Citizens performing construction activities adjacent to HV-2 & HV-3	Grading, rolling, and surveying cell. Fencing installed along CSX North limit, Electrican on-site to discuss hi-vol power set-up, pumped water into lagoon & treated in Adler tank, pulled cattails from lagoon & stockpiled within poly, weekly call-in meeting, built stone access into cell area, hoe-ramming concrete with sprinklers to mitigate dust	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062334	8/28/2014	9:08	8/29/2014	9:08	40	76	30.1	Quail Creek Station; Op-Tech Weater Satlon	23.00	Non-Detect	0.7	7	8	NE			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-2 #0237	SWC	6014894	8/29/2014	9:10	8/30/2014	9:08	40	75	30.1	Quail Creek Station; Op-Tech Weater Satlon	25.60	Non-Detect	0.6	10	10	S			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014700	9/4/2014	13:40	9/5/2014	9:03	40	77	30.1	Quail Creek Station; Op-Tech Weater Satlon	10.10	Non-Detect	1.2	8	13	SSW	PT CLOUDY		Finished Cell Bottom, Pumped water into lagoon, Compacted cell w/ testing, Hoe Ramming concrete with sprinkler system, pine on-site to repair air monitors, water truck used for dust suppression	Building Berm & Access road, Compacting Cell with testing, Hoe Ramming concrete with sprinkler system setup, excavating sewer line to locate blockage, water truck used for dust supression	Water Truck & Sprinklers	Technical difficulties changing brushes for HV 1 & HV effecting the pumps resulted in no data being collected from 9/3 to 9/4.
HV-2 #6200	SWC	6014703	9/5/2014	9:10	9/6/2014	9:06	44	80	30.1	Quail Creek Station; Op-Tech Weater Satlon	13.10	Non-Detect	2.1	11	17	SSW	CLEAR SKIES - HUMID		Building Berm & Access road, Compacting Cell with testing, Hoe Ramming concrete with sprinkler system setup, excavating sewer line to locate blockage, water truck used for dust supression	Worked on berms and access road, located sewer manhole near mw-11, set-up discharges, hoe ramming concrete on north side of site with sprinkler setup, removing cattails from lagoon, water truck used for dust supression	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014706	9/6/2014	9:10	9/7/2014	8:10	41	68	30.16	Quail Creek Station; Op-Tech Weater Satlon	4.90	Non-Detect	0.9	7	10	NNE	LIGHT RAIN		Worked on berms and access road, located sewer manhole near mw-11, set-up discharges, hoe ramming concrete on north side of site with sprinkler setup, removing cattails from lagoon, water truck used for dust supression	Non-Work Day	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014712	9/8/2014	10:13	9/9/2014	9:31	35	67	30.15	Quail Creek Station; Op-Tech Weater Satlon	NO	Non-Detect	0.5	7	10	NE	PT CLOUDY	Citizens and IPL performing work adjacent to HV-2 & 3	Finished Cell Berms, Breaking up concress, finished removing cattails from lagoon, cutting rebar & railroad ties, building cell with dozer and roller, fit tests performed, cap soil delivered, ipl on-site due to power outage at HV-2 & HV-3, dust suppression using sprinkers and water truck	Excavating NW location, breaking up concrete with hoeram, cutting rebar, treating water/pumping water, soil samples taken, air monitoring undergone, IPL working adjacent to HV-2 & HV-3, dust suppression using water truck and sprinklers	Water Truck & Sprinklers	

OP-TECH

2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-2

90 Day Rolling Average: 0.053

Weekly Average: 0.050 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activites End of Sampling	Dust Mitigation Efforts	Additoinal Notes
HV-2 #6200	SWC	6014718	9/9/2014	9:34	9/10/2014	9:40	43	67	30.1	Quail Creek Station; Op-Tech Weater Satlon	25.20	Non-Detect	1	13	13	S	PT Cloudy	Citizens performing construction work adjacen to HV-3 & HV-3	Excavating NW location, breaking up concrete with hoeram, cutting rebar, treating water/pumping water, soil samples taken, air monitoring undergone, IPI, working adjacent to HV-2 & Hv-3, dust supression using water truck and sprinklers	Continued excavating NW area, breaking up concrete with hoeram, cutting rebar, completed NW area excavation, surveyor on-site to markout south area of site and citizens property, citizens working adjacent to HV2 & HV3, Heritage on-site to sample unknown drum.	Water Truck & Sprinklers	HV-2 & HV-3 lost power overnight and roughly 1/2 day of data was collected
HV-2 #6200	SWC	6014710	9/10/2014	9:18 - 20:15	9/11/2014	9:45 - 9:1	40	73	29.95	Quail Creek Station; Op-Tech Weater Satlon	32.40	Non-Detect	3.3	18	23	S	.49 IN RAIN; OVERCAST	Citizens performing construction work adjacen to HV-2 & HV-3	Continued excavating NW area, breaking up concrete with hoeram, cutting rebar, pumping water, citizens gas confirmed pumphouse 4 gasline is abandoned, heavy rainfall & high winds, weekly meeting, HV2 & HV3 power short over-night roughly 1/2 day of data collected, dust supression using h20 truck and sprinklires	Electricians on-site to restore power to transformers, hoeramming concrete, completed NW area excavation, surveyor on-site to markout south area of site and citizens property, citizens working adjacent to HV2 & HV3, Heritage on-site to sample unknown drum.	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014715	9/11/2014	10:30	9/12/2014	9:30	38	64	30.2	Quail Creek Station; Op-Tech Weater Satlon	9.10	Non-Detect	2.1	10	16	N	.05 in Rain	Citizens performing construction work adjacen to HV-2 & HV-3, Citizens street sweeping	Electricians on-site to restore power to transformers, hoeramming concrete, completed NW area excavation, surveyor on-site to markout south area of site and citizens property, citizens working adjacent to HV2 & HV3, Heritae on-site to sample unknown drum.	Electricians on-site to h/u transformers and power for hi-vols, excavating CSB-1 area, hoeramming concrete, grading cell, surveying citizens property, demo of pumphouses, soil samples taken by AGS, vac truck on-site to pump water from pumphouses	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014722	9/12/2014	9:33	9/13/2014	10:42	37	61	30.24	Quail Creek Station; Op-Tech Weater Satlon	5.10	Non-Detect	1.2	7	12	NNE		Citizens working adjacent to HV-2 & HV-3	Electricians on-site to h/u transformers and power for hi-vols, excavating CSB-1 area, hoeramming concrete, grading cell, surveying citizens property, demo of pumphouses, soil samples taken by AGS, vac truck on-site to pump water from pumphouses	Continued Excavation from CSB-1 area to MSB2A and MSB1A, continued hoe-ramming concrete, demo of pumphouse 1, gaylor on-site for power h/u, vac truck on-site to pump slurry, continued grading cell	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014725	9/13/2014	10:45	9/14/2014	9:14	43	58	30.32	Quail Creek Station; Op-Tech Weater Satlon	7.20	0.0510	1.3	8	12	N			Continued Excavation from CSB-1 area to MSB2A and MSB1A, continued hoe-ramming concrete, demo of pumphouse 1, gaylor on-site for power h/u, vac truck on-site to pump slurry, continued grading cell	Non-Work Day	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014728	9/14/2014	9:16	9/15/2014	9:34	42	58	30.32	Quail Creek Station; Op-Tech Weater Satlon	11.40	Non-Detect	0.5	7	9	SE	.56 IN RAIN; OVERCAST		Non-Work Day	Water samples taken, Continued excavation of concrete at MSB2A, continued hoe-ramming concrete, continued grading and rolling cell for compaction, continued demo of pumphouses, pumping water to FOTW, early work shutdown at 1530 due to lighening	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014731	9/15/2014	9:38	9/16/2014	9:45	42	57	30.21	Quail Creek Station; Op-Tech Weater Satlon	11.20	0.0660	0.7	8	19	S	.56 IN RAIN; OVERCAST	Citizens performing work adjacent to HV-2 & HV-3	Water samples taken, Continued excavation of concrete at MSB2A, continued hoe-ramming concrete, continued grading and rolling cell for compaction, continued demo of pumphouses, pumping water to FOTW, early work shutdown at 1530 due to lightning	Continued excavating MSB2A, grading cell, rolling for compaction, hoe-ramming concrete and demo of pumphouses. R&R ties shipped offsite. Dust cloud produced from road construction/Firestone near HV-1.	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014757	9/16/2014	9:45	9/17/2014	9:43	43	58	30.2	Quail Creek Station; Op-Tech Weater Satlon	18.90	Non-Detect	0.8	6	9	N	.02 IN RAIN	Citizens working adjacent to HV-2 & HV-3; Dust cloud produced adjacent to HV-1 from Firestone/road construction.	Continued excavating MSB2A, grading cell, rolling for compaction, hoe-ramming concrete and demo of pumphouses. R&R ties shipped offsite. Dust cloud produced from road construction/Firestone near HV-1.	Continued excavating MSB2A, grading cell, rolling for compaction, hoe-ramming concrete and demo of pumphouses. Backfilling NW Area. Water samples taken. Weekly meeting. Site prep'd for travel.	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014760	9/17/2014	9:47	9/18/2014	9:27	45	57	30.11	Quail Creek Station; Op-Tech Weater Satlon	3.50	Non-Detect	0.4	6	10	S	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Continued excavating MSB2A, grading cell, rolling for compaction, hoe-ramming concrete and demo of pumphouses. Backfilling NW Area. Water samples taken. Weekly meeting. Site prep'd for travel.	Crew Travel. Local crew pumping water and air monitoring. Services performed on equipment.	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014763	9/18/2014	9:32	9/19/2014	9:35	41	62	30.13	Quail Creek Station; Op-Tech Weater Satlon	18.40	Non-Detect	0.5	6	11	NNE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Crew Travel. Local crew pumping water and air monitoring. Services performed on equipment.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014766	9/19/2014	9:41	9/20/2014	9:33	43	64	30.19	Quail Creek Station; Op-Tech Weater Satlon	18.20	Non-Detect	0.7	9	12	ESE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Local Crew on-site for air monitoring and pumping water.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014769	9/20/2014	9:37	9/21/2014	9:26	42	67	30.06	Quail Creek Station; Op-Tech Weater Satlon	20.50	Non-Detect	2.1	12	16	SSW	.03 IN RAIN		Local Crew on-site for air monitoring and pumping water.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014772	9/21/2014	9:29	9/22/2014	9:44	43	66	30.09	Quail Creek Station; Op-Tech Weater Satlon	6.90	Non-Detect	2.7	10	21	WSW	.03 IN RAIN	Citizens working adjacent to HV-2 & HV-3	Local Crew on-site for air monitoring and pumping water.	Continued Excavating MSBA2 concrete rubble, grading cell, continued hoe-ramming concrete, continued demo of pumphouses, backfilling	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014775	9/22/2014	9:46	9/23/2014	8:15	42	58	30.27	Quail Creek Station; Op-Tech Weater Satlon	14.40	Non-Detect	1.1	6	14	NNE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Continued Excavating MSBA2 concrete rubble, grading cell, continued hoe-ramming concrete, continued demo of pumphouses, backfilling	Grading cell, building berm, dem of pumphouse 1 and 2, excavating WP6A & B, backfilling, hoeramming concrete	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014778	9/23/2014	8:17	9/24/2014	9:22	43	60	30.35	Quail Creek Station; Op-Tech Weater Satlon	23.80	0.1600	0.5	7	8	NE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Grading cell, building berm, dem of pumphouse 1 and 2, excavating WP6A & B, backfilling, hoeramming concrete	Excavating WP6A & B, R&R ties picked up, grading cell, building berm, removed liner from lagoon, hoeramming concrete	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014781	9/24/2014	9:24	9/25/2014	9:34	43	63	30.36	Quail Creek Station; Op-Tech Weater Satlon	31.50	0.1600	0.4	7	9	ESE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Excavating WP6A & B, R&R ties picked up, grading cell, building berm, removed liner from lagoon, hoeramming concrete	Excavating WP6A & B, Hoeramming concrete, Removed Fencline around pit, hoeramming pit, grading cell, building berm	Water Truck & Sprinklers	Cease excavating & hoeramming in WP6A and MSBA1 and MSBA2 due to vapor odor
HV-2 #6200	SWC	6014784	9/25/2014	9:38	9/26/2014	9:36	43	67	30.31	Quail Creek Station; Op-Tech Weater Satlon	27.50	0.1200	0.3	6	7	SSE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Excavating WP6A & B, Hoeramming concrete, Removed Fencline around pit, hoeramming pit, grading cell, building berm	Excavating FL4B, hoeramming pit area, backfilling pit area, grading cell, power h/u for HV-1 to move PH3 off-line	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014787	9/26/2014	9:32	9/27/2014	9:48	44	69	30.26	Quail Creek Station; Op-Tech Weater Satlon	29.60	0.1100	0.4	6	9	E	PT CLOUDY		Excavating FL4B, hoeramming pit area, backfilling pit area, grading cell, power h/u for HV-1 to move PH3 off-line	Excavating FL4B and WP3A & B, hoeramming concrete, backfilling pit, cutting rebar	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014790	9/27/2014	9:50	9/28/2014	7:50	43	70	30.24	Quail Creek Station; Op-Tech Weater Satlon	30.70	0.1700	0.5	7	12	NE	PT CLOUDY		Excavating FL4B and WP3A & B, hoeramming concrete, backfilling pit, cutting rebar	Non Work Day	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014793	9/28/2014	7:52	9/29/2014	9:55	43	71	30.16	Quail Creek Station; Op-Tech Weater Satlon	48.90	Non-Detect	0.3	6	9	NNE	PT CLOUDY	Heavy Construction on Big Four Road causing a lot of dust	Non Work Day	Excavating FL4B, Hoe-ramming concrete, Grading Cell, Cutting Rebar, Heavy Construction on Big Four Road causing dust	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014796	9/29/2014	9:56	9/30/2014	8:48	43	68	30.05	Quail Creek Station; Op-Tech Weater Satlon	43.80	Non-Detect	0.4	8	12	NNE	PT CLOUDY	Heavy Construction on Big Four Road causing a lot of dust	Excavating FL4B, Hoe-ramming concrete, Grading Cell, Cutting Rebar, Heavy Construction on Big Four Road causing dust	Continued excavating FL4B, Continued Hoe-ramming concrete, continued grading cell & compaction testing. Hoe-ramming concrete of lagoon & stockpiling. Cutting rebar. Gaylor disconnected power to PH3 & 4.	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014799	9/30/2014	8:50	10/1/2014	10:12	41.5	63	29.99	Quail Creek Station; Op-Tech Weater Satlon	28.90	Non-Detect	0.9	8	11	NNE	PT Cloudy	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Continued excavating FL4B, Continued Hoe-ramming concrete, continued grading cell & compaction testing. Hoe-ramming concrete of lagoon & stockpiling. Cutting rebar. Gaylor disconnected power to PH3 & 4.	Excavating FL2, DWI, OE1, Lagoon, WP3A. Backfilling WP6A. Cutting Rebar. Demo of pumrhouse 4. Continued grading cell.	Water Truck & Sprinklers	

OP-TECH

2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-2

90 Day Rolling Average: 0.053

Weekly Average: 0.050 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additional Notes
HV-2 #6200	SWC	6014802	10/1/2014	10:17	10/2/2014	8:42	44	63	30.02	Quail Creek Station; Op-Tech Weater Sation	30.90	0.0690	0.5	6	8	ESE	PT Cloudy	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Excavating FL2, DW1, OE1, Lagoon, WP3A. Backfilling WP6A. Cutting Rebar. Grading Cell. Cleaning roadways and haul roads. HV1 power tripped overnight, restored power and restarted sampling.	Excavating Lagoon, DW1, FL2, WP1D, & WP3A. Backfilling WP6A and rolling. Cutting Rebar. Grading Cell. Cleaning roadways and haul roads. HV1 power tripped overnight, restored power and restarted sampling.	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014805	10/2/2014	8:44	10/3/2014	7:55	43	71	30.01	Quail Creek Station; Op-Tech Weater Sation	41.80	Non-Detect	2.1	11	16	S	.07 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Excavating Lagoon, DW1, FL2, WP1D, & WP3A. Backfilling WP6A and rolling. Cutting Rebar. Grading Cell. Cleaning roadways and haul roads. HV1 power tripped overnight, restored power and restarted sampling.	Excavating WP6A, Backfill of WP6A, WP6B and FL4B. Citizens on-site to de-mark waterlines tie-in. Demo Pumphouse 4. Grading and rolling cell. Pumping Water.	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014808	10/3/2014	7:56	10/4/2014	8:23	43	59	29.86	Quail Creek Station; Op-Tech Weater Sation	13.20	Non-Detect	3	10	20	SSW	.47 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Excavating WP6A, Backfill of WP6A, WP6B and FL4B. Citizens on-site to de-mark waterlines tie-in. Demo Pumphouse 4. Grading and rolling cell. Pumping Water.	Excavating WP6A, MSB1A (Uncovered Rail Road Rail, Concrete Structures, and Batteries). Uncovered two tanks and wood debris in WP6A. Backfilling WP6A and FL4B. Sampled areas with PID for VOC; readings below 1 PPM. Cleaning up debris and cleaning haul roads.	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014811	10/4/2014	8:25	10/5/2014	8:02	44	45	29.66	Quail Creek Station; Op-Tech Weater Sation	10.70	Non-Detect	3	11	19	SW	.02 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Excavating WP6A, MSB1A (Uncovered Rail Road Rail, Concrete Structures, and Batteries). Uncovered two tanks and wood debris in WP6A. Backfilling WP6A and FL4B. Sampled areas with PID for VOC; readings below 1 PPM. Cleaning up debris and cleaning haul roads.	No work performed on-site	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014814	10/5/2014	8:04	10/6/2014	9:19	38	51	29.87	Quail Creek Station; Op-Tech Weater Sation	20.00	Non-Detect	1.9	10	15	SSW	.18 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	No work performed on-site	Continued Excavating WP6A, WP3A, and MSB1A. Backfilling FL4B. Sampling water, concrete, and personal lead. Cleaning debris around site. Hoe-ramming concrete. Pine on-site to replace HV1 pump & fix dust trak n2.	Water Truck & Sprinklers	HV1 pump needs to be fixed.
HV-2 #6200	SWC	6014813	10/6/2014	9:21	10/7/2014	10:19	44	55	29.81	Quail Creek Station; Op-Tech Weater Sation	5.00	Non-Detect	2.4	14	19	SSW	.08 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Continued Excavating WP6A, WP3A, and MSB1A. Backfilling FL4B. Sampling water, concrete, and personal lead. Cleaning debris around site. Hoe-ramming concrete. Pine on-site to replace HV1 pump & fix dust trak n2.	Continued excavating MSB1A (stockpilling concrete for sampling) and MSB1B. Continued grading cell. Cleaned 2 frak tanks. Continued pumping water. Collected concrete samples, soil samples (AGS), and personal lead samples. Cleaning site debris and haul roads.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671904	10/7/2014	10:20	10/8/2014	8:45	42	54	29.9	Quail Creek Station; Op-Tech Weater Sation	8.70	Non-Detect	1.6	8	19	SSW	.48 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Continued excavating MSB1A (stockpilling concrete for sampling) and MSB1B. Continued grading cell. Cleaned 2 frak tanks. Continued pumping water. Collected concrete samples, soil samples (AGS), and personal lead samples. Cleaning site debris and haul roads.	Excavating MSB1A and Lagoon. Backfilling with granular fill at WP6A and FL4B. Hoe-ramming side walls per AGS instruction. All Pro picked up rebar roll off. Continued grading cell and rolled for compaction testing. Pumping water. HV-1 pump not working, pine working to replace it.	Water Truck & Sprinkler	HV-1 pump needs to be fixed
HV-2 #6200	SWC	8671906	10/8/2014	8:47	10/9/2014	10:13	42	55	30.09	Quail Creek Station; Op-Tech Weater Sation	78.90	Non-Detect	0.9	9	15	WSW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating MSB1A and Lagoon. Backfilling with granular fill at WP6A and FL4B. Hoe-ramming side walls per AGS instruction. All Pro picked up rebar roll off. Continued grading cell and rolled for compaction testing. Pumping water. HV-1 pump not working, pine working to replace it.	Excavating Lagoon & WP3A, Backfilling WP6A and FL4B, Grading Cell, Cleaning tanks, cleaning debris on-site	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671909	10/9/2014	10:15	10/10/2014	8:58	44	49	30.17	Quail Creek Station; Op-Tech Weater Sation	11.90	Non-Detect	0	2	7	NNE	.04 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon & WP3A, Backfilling WP6A and FL4B, Grading Cell, Cleaning tanks, cleaning debris on-site	Excavating Lagoon, MSB1A and MSB2A, De-watering site, backfilling FL4B, grading cell, cleaning debris	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671912	10/10/2014	9:00	10/11/2014	9:15	38	51	30.13	Quail Creek Station; Op-Tech Weater Sation	6.90	Non-Detect	0.9	7	9	NNE	.11 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, MSB1A and MSB2A, De-watering site, backfilling FL4B, grading cell, cleaning debris	Excavating MSB1A, MSB2A, Lagoon, and WP3A & B, Backfilling FL4B, Hoe-ramming sidewalls, water sampling, cleaning haul roads, cutting rebar, compaction testing	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671915	10/11/2014	9:17	10/12/2014	9:06	40	50	30.15	Quail Creek Station; Op-Tech Weater Sation	6.20	Non-Detect	1.5	7	10	NNE	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating MSB1A, MSB2A, Lagoon, and WP3A & B, Backfilling FL4B, Hoe-ramming sidewalls, water sampling, cleaning haul roads, cutting rebar, compaction testing	No work performed on-site	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671918	10/12/2014	9:08	10/13/2014	9:59	36	53	30.16	Quail Creek Station; Op-Tech Weater Sation	75.20	Non-Detect	0.8	12	12	SE	.27 IN RAIN		No work performed on-site	No work performed on-site	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671921	10/13/2014	10:02	10/14/2014	10:55	38	66	29.96	Quail Creek Station; Op-Tech Weater Sation	6.60	Non-Detect	2.8	22	22	SSE	1.09 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating MSB1A and MSB2A, De-watering site, grading cell, cutting rebar, cleaning debris, filled a tree near lagoon.	Excavating MSB2A & Lagoon, de-watering site, setting up pumps, lid delivered, consolidating rebar.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671924	10/14/2014	10:57	10/15/2014	9:21	39	62	29.74	Quail Creek Station; Op-Tech Weater Sation	ND	Non-Detect	3.1	19	19	S	.54 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating MSB2A & Lagoon, de-watering site, setting up pumps, lid delivered, consolidating rebar.	Mixing lid with excavated materials, grading cell, seeding around cell with winter rye and straw overlay, setting up N-vols for travel, de-watering site, consolidating concrete, backfilling FL4B with granular fill.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671927	10/15/2014	9:23	10/16/2014	9:05	40	55	29.78	Quail Creek Station; Op-Tech Weater Sation	ND	Non-Detect	1.1	8	12	SSE	.19 IN RAIN	Construction on Big Four Road near HV2 & HV3	Mixing lid with excavated materials, grading cell, seeding around cell with winter rye and straw overlay, setting up N-vols for travel, de-watering site, consolidating concrete, backfilling FL4B with granular fill.	TRAVEL - NO WORK PEAFORMED	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671930	10/16/2014	9:10	10/17/2014	9:17	32	56	29.86	Quail Creek Station; Op-Tech Weater Sation	41.90	Non-Detect	1.1	9	12	SW	.02 IN RAIN			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers
HV-2 #6200	SWC	8671933	10/17/2014	9:24	10/18/2014	9:43	40	60	29.87	Quail Creek Station; Op-Tech Weater Sation	54.50	0.0540	2.4	12	16	SW	PT CLOUDY			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers
HV-2 #6200	SWC	8671936	10/18/2014	9:47	10/19/2014	9:07	37	51	30.18	Quail Creek Station; Op-Tech Weater Sation	5.40	Non-Detect	1.6	9	13	NNW	.05 IN RAIN			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers
HV-2 #6200	SWC	8671939	10/19/2014	9:16	10/20/2014	9:07	36	50	30.25	Quail Creek Station; Op-Tech Weater Sation	12.40	Non-Detect	1.3	9	10	SSW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	TRAVEL - NO WORK PERFORMED	Excavating MSB2A & B, and Lagoon. Dewatering site, cutting and consolidating rebar, cleaning roadways, mixing materials with lid in cell, grading cell, surveyor on-site, soil and water samples taken.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671942	10/20/2014	9:15	10/21/2014	8:47	40	57	30.04	Quail Creek Station; Op-Tech Weater Sation	42.90	Non-Detect	1.9	15	15	SW	.05 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating MSB2A & B, and Lagoon. Dewatering site, cutting and consolidating rebar, cleaning roadways, mixing materials with lid in cell, grading cell, surveyor on-site, soil and water samples taken.	Excavating Lagoon, Mixing with kiln dust, and MSB2A/B. Hammering concrete. Grading cell with kiln dust. De-watering site. Cleaning haul roads. Backfilling WP6A with cap fill clay dirt.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671945	10/21/2014	8:53	10/22/2014	9:18	39	51	30.21	Quail Creek Station; Op-Tech Weater Sation	25.60	Non-Detect	1	13	13	N	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, Mixing with kiln dust, and MSB2A/B. Hammering concrete. Grading cell with kiln dust. De-watering site. Cleaning haul roads. Backfilling WP6A with cap fill clay dirt.	Excavating Lagoon, mixing with kiln dust, and MSB1A/B re-digs and sidewalls. Cleaning haul roads. De-watering. Compaction testing. Backfilling WP6A.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671948	10/22/2014	9:25	10/23/2014	10:07	40	48	30.34	Quail Creek Station; Op-Tech Weater Sation	16.70	Non-Detect	0.7	9	10	NNE	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, mixing with kiln dust, and MSB1A/B re-digs and sidewalls. Cleaning haul roads. De-watering. Compaction testing. Backfilling WP6A. Grading cell.	Excavating Lagoon, mixing with kiln dust, and MSB2B, MSB1A/B. Cutting rebar, cleaning haul roads, de-watering. Grading cell.	Water Truck & Sprinklers	

OP-TECH

2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-2

90 Day Rolling Average: 0.053

Weekly Average: 0.050 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additional Notes
HV-2 #6200	SWC	8671951	10/23/2014	10:14	10/24/2014	9:28	40	47	30.28	Quail Creek Station; Op-Tech Weater Sation	40.04	Non-Detect	0.5	9	9	SSW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, mixing with kiln dust, and MSB2B, MSB1A/B. Cutting rebar, cleaning haul roads, de-watering. Grading cell.	Excavating Lagoon, MSB2A/B, MSB1B, and WP3C. De-watering. Cutting rebar.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671954	10/24/2014	9:31	10/25/2014	9:08	41	52	30.13	Quail Creek Station; Op-Tech Weater Sation	18.30	Non-Detect	0.5	9	9	SW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, MSB2A/B, MSB1B, and WP2C. De-watering. Cutting rebar.	Excavating WP2C and MSB2A. Grading cell. Dewatering. Hammering concrete and consolidating rebar. Cleaning roadways.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671957	10/25/2014	9:14	10/26/2014	8:15	40	63	30.04	Quail Creek Station; Op-Tech Weater Sation	51.30	Non-Detect	1.3	11	11	SW	PT CLOUDY		Excavating WP2C and MSB2A. Grading cell. Dewatering. Hammering concrete and consolidating rebar. Cleaning roadways.	No work performed on-site	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671959	10/26/2014	8:17	10/27/2014	8:44	40	54	30.05	Quail Creek Station; Op-Tech Weater Sation	19.30	Non-Detect	0.3	8	8	SSW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	No work performed on-site	Excavating WP2C and MSB2A and WP2B. Grading cell. Cutting rebar. Cleaning roadways. Built roadway for lagoon backfill.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671963	10/27/2014	8:50	10/28/2014	9:27	39	65	29.95	Quail Creek Station; Op-Tech Weater Sation	43.30	Non-Detect	2.8	18	19	S	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating WP2C and MSB2A and WP2B. Grading cell. Cutting rebar. Cleaning roadways. Built roadway for lagoon backfill.	Excavating WP1B, backfilling lagoon with concrete, de-watering, grading cell, consolidating rebar, moving frak tanks, cleaning haul roads.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671966	10/28/2014	9:37	10/29/2014	8:42	39	61	30.03	Quail Creek Station; Op-Tech Weater Sation	48.40	Non-Detect	3	10	23	SW	.22 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating WP1B, backfilling lagoon with concrete, de-watering, grading cell, consolidating rebar, moving frak tanks, cleaning haul roads.	Backfilling Lagoon with concrete, excavating ce-1, wp1b, wp1a, and wp1d. Rebuilding ramp entrance. Grading and rolling cell. Backfilling area east of FLS and west of WP6A. Cleaning roadways. Cuttingmetal from decon pad.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671969	10/29/2014	8:49	10/30/2014	9:24	39	48	30.16	Quail Creek Station; Op-Tech Weater Sation	87.90	0.0560	1.3	9	13	WNW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Backfilling Lagoon with concrete, excavating ce-1, wp1b, wp1a, and wp1d. Rebuilding ramp entrance. Grading and rolling cell. Backfilling area east of FLS and west of WP6A. Cleaning roadways. Cuttingmetal from decon pad.	Excavating WP1A, MSB1A, WP1DX. Backfilling area east of FLS and west of WP6A. Grading and rolling cell. Consolidating rebar, dewatering site, cleaning roadways, excavating pipe in Lagoon area.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671972	10/30/2014	9:30	10/31/2014	9:48	37	44	30.17	Quail Creek Station; Op-Tech Weater Sation	43.70	Non-Detect	0.5	10	10	S	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1A, MSB1A, WP1DX. Backfilling area east of FLS and west of WP6A. Grading and rolling cell. Consolidating rebar, dewatering site, cleaning roadways, excavating pipe in Lagoon area.	Excavating WP1A, WP1C, MSB1A, and MSB2A, WP1DX, and MSB1AX. Backfilling. De-watering. Moved after tanks & treatment station toward PH3. Hammering Concrete. Grading Cell.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671975	10/31/2014	9:56	11/1/2014	9:48	39	40	30.15	Quail Creek Station; Op-Tech Weater Sation	3.30	Non-Detect	2.4	18	20	NW	.29 IN RAIN/SLEET	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1A, WP1C, MSB1A, and MSB2A, WP1DX, and MSB1AX. Backfilling. De-watering. Moved after tanks & treatment station toward PH3. Hammering Concrete. Grading Cell.	Excavating WP3A, MSB2A, WP1C, WP1B, and WP1DX. Hammering Concrete. De-watering & treatment set-up. Grading & Rolling Cell.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671978	11/1/2014	9:52	11/2/2014	8:41	40	35	30.38	Quail Creek Station; Op-Tech Weater Sation	17.60	Non-Detect	2.8	19	19	NNW	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP3A, MSB2A, WP1C, WP1B, and WP1DX. Hammering Concrete. De-watering & treatment set-up. Grading & Rolling Cell.	Placing concrete in Lagoon from WP3A/B, WP2A/B. De-watering. Cleaning roadways. Setting up pumps.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671981	11/2/2014	8:43	11/3/2014	8:58	37	36	30.45	Quail Creek Station; Op-Tech Weater Sation	17.70	0.0800	1.3	11	12	S	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Placing concrete in Lagoon from WP3A/B, WP2A/B. De-watering. Cleaning roadways. Setting up pumps.	Excavating WP3A, WP1B, and WP1D. Backfilling pipe trenchline. Hammering concrete. Grading Cell. Compaction Testing. De-watering. Cleaning Roadways. Monitoring Well Crew On-site to Install wells.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671984	11/3/2014	9:00	11/4/2014	8:33	40	54	30.32	Quail Creek Station; Op-Tech Weater Sation	20.20	Non-Detect	3.2	23	23	S	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP3A, WP1B, and WP1D. Backfilling pipe trenchline. Hammering concrete. Grading Cell. Compaction Testing. De-watering. Cleaning Roadways. Monitoring Well Crew On-site to Install wells.	Excavating WP1B, WP2C, MSB2A, MSB1A. Backfilling. De-watering. Cleaning Roadways. Monitoring Well Crew on-site to Install wells. Hammering concrete in Lagoon area.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671987	11/4/2014	8:35	11/5/2014	8:06	39	51	30.18	Quail Creek Station; Op-Tech Weater Sation	17.30	Non-Detect	3.1	19	20	SW	.33 IN RAIN	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1B, WP2C, MSB2A, MSB1A. Backfilling. De-watering. Cleaning Roadways. Monitoring Well Crew on-site to Install wells. Hammering concrete in Lagoon area.	Excavating WP1B, WP2C, WP2B, MSB2A, MSB1A. Backfilling. De-watering. Cleaning roadways. Drilling crew on-site Installing wells. Grading Cell.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671990	11/5/2014	8:10	11/5/2014	8:15	38	47	30.23	Quail Creek Station; Op-Tech Weater Sation	3.80	Non-Detect	0.5	6	8	S	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1B, WP2C, WP2B, MSB2A, MSB1A. Backfilling. De-watering. Cleaning roadways. Drilling crew on-site Installing wells. Grading Cell.	Excavating WP1DX, MSB1A, WP2B. Backfilling. De-watering. Cleaning roadways. Drilling Crew on-site Installing wells. Grading Cell. Partial Crew Travel.	Water Truck & Sprinklers	
HV-1 #0014	NEC	N/A	11/6/2014	N/A	11/6/2014	N/A	N/A	44	30.16	Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	3.7	10	16	W	.16 IN RAIN	CREW OFF-SITE TRAVEL DAY				
HV-1 #0014	NEC	N/A	11/7/2014	N/A	11/7/2014	N/A	N/A	41	30.21	Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	1.4	7	13	W	PT CLOUDY	CREW OFF-SITE TRAVEL DAY				
HV-1 #0014	NEC	N/A	11/8/2014	N/A	11/8/2014	N/A	N/A	44	30.03	Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	2.5	12	15	SW	PT CLOUDY	CREW OFF-SITE TRAVEL DAY				
HV-1 #0014	NEC	N/A	11/9/2014	N/A	11/9/2014	N/A	N/A	40	30.02	Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	1.5	9	13	SSW	PT CLOUDY	CREW OFF-SITE TRAVEL DAY				
HV-2 #6200	SWC		11/10/2014		11/11/2014			50	29.94	Quail Creek Station; Op-Tech Weater Sation	21.80	Non-Detect	3.2	14	22	SSE	OVERCAST/PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP2B/2A, Heritage removed drums & bulks from site, demo-ing Pumphouse 3, Grading & rolling cell, Backfilling, De-watering, Hammering Concrete, Clearing CSX property line with Hydro-axe, Drill crew on-site to finish wells.	Excavating WP2A, WP1A, MSB1AX. Backfilling, Grading & Rolling Cell, Finished clearing CSX property line with Hydro-Axe, Demo-ing Pumphouse 3, De-watering, Cutting Rebar, Hammering Concrete.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671996	11/11/2014	8:09	11/12/2014	8:12	36	48	30.09	Quail Creek Station; Op-Tech Weater Sation	16.20	Non-Detect	3.3	13	19	WSW	.13 IN RAIN	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP2A, WP1A, MSB1AX. Backfilling, Grading & Rolling Cell, Finished clearing CSX property line with Hydro-Axe, Demo-ing Pumphouse 3, De-watering, Cutting Rebar, Hammering Concrete.	Excavating WP2A, WP1A, MSB1AxX, MSB1A, MSB2A. Backfilling Lagoon, Grading Cell, Hammering Concrete, Cutting Rebar, Cleaning Haul Roads	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671999	11/12/2014	8:15	11/13/2014	8:13	40	31	30.3	Quail Creek Station; Op-Tech Weater Sation	57.10	Non-Detect	2.4	9	15	WNW	OVERCAST	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP2A, WP1A, MSB1AxX, MSB1A, MSB2A. Backfilling Lagoon, Grading Cell, Hammering Concrete, Cutting Rebar, Cleaning Haul Roads	Excavating WP1B, WP1D, MSB1AX, MSB1A. Backfilling lagoon, Grading cell, Hammering concrete, Cutting rebar, Cleaning roadways, De-watering	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671702	11/13/2014	8:20	11/14/2014	8:21	38	23	30.33	Quail Creek Station; Op-Tech Weater Sation	109.00	0.0600	2.4	8	11	WNW	OVERCAST	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1B, WP1D, MSB1AX, MSB1A. Backfilling lagoon, Grading cell, Hammering concrete, Cutting rebar, Cleaning roadways, De-watering	Excavating MSB1AX, WP1DX, WP2B. Backfilling MSB2B with clean concrete. Backfilling Lagoon. Grading & Rolling cell. Surveyor on-site. Cutting Rebar. Cleaning haul roads. De-watering.	Water Truck & Sprinklers	

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2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-2

90 Day Rolling Average: 0.053

Weekly Average: 0.050 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additional Notes
HV-2 #6200	SWC	8671705	11/14/2014	8:24	11/15/2014	8:09	41	24	30.4	Quail Creek Station; Op-Tech Weater Sation	74.60	Non-Detect	1.3	9	12	WSW	OVERCAST	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating MSB1AX, WP1DX, WP2B. Backfilling MSB2B with clean concrete. Backfilling Lagoon. Grading & Rolling cell. Surveyor on-site. Cutting Rebar. Cleaning haul roads. De-watering.	Excavating WP2B, ND1, ND2. Pulling up concrete for backfill. Backfilling Lagoon. Grading & Rolling Cell.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671708	11/15/2014	8:13	11/16/2014	8:09	38	37	30.42	Quail Creek Station; Op-Tech Weater Sation	28.70	Non-Detect	1.2	7	13	S	OVERCAST	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP2B, ND1, ND2. Pulling up concrete for backfill. Backfilling Lagoon. Grading & Rolling Cell.	Excavating ND1, ND2, WP2BX. Consolidating rebar. De-watering. Cleaning roadways. Plowing snow.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671711	11/16/2014	8:14	11/17/2014	8:13	36	37	30.23	Quail Creek Station; Op-Tech Weater Sation	19.80	Non-Detect	0.7	9	9	SSW	1.11 In rain/snowmix	N/A	Excavating ND1, ND2, WP2BX. Consolidating rebar. De-watering. Cleaning roadways. Plowing snow.	Excavating WP2B, Existing Soil Pile. Created additional access road into cell. Grading and compacting cell. De-watering excavations. Plowing snow.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671714	11/17/2014	8:16	11/18/2014	8:20	40	37	30.23	Quail Creek Station; Op-Tech Weater Sation	23.40	Non-Detect	0.7	6	9	SSW	PT CLOUDY	N/A	Excavating WP2B, Existing Soil Pile. Created additional access road into cell. Grading and compacting cell. De-watering excavations. Plowing snow.	Excavating WP2B, ND1, MSB2A to WP2C, WP1DX to WP1C. Hammering concrete. Backfilling lagoon. Grading and rolling cell. Cutting rebar.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671717	11/18/2014	8:02	11/19/2014	8:21	39	20	30.24	Quail Creek Station; Op-Tech Weater Sation	23.20	Non-Detect	5	23	23	WSW	OVERCAST	Citizens Working along Big Four	Excavating WP2B, ND1, MSB2A to WP2C, WP1DX to WP1C. Hammering concrete. Backfilling lagoon. Grading and rolling cell. Cutting rebar.	Excavating WP2C, WP1A. Grading cell, compaction testing. Topo of cell by surveyor. Cutting rebar. Drainage pipe delivered.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671721	11/19/2014	8:28	11/20/2014	8:10	40	38	30.21	Quail Creek Station; Op-Tech Weater Sation	26.50	Non-Detect	4.8	23	23	SW	.08 IN SNOW	Citizens Working along Big Four	Excavating WP2C, WP1A. Grading cell, compaction testing. Topo of cell by surveyor. Cutting rebar. Drainage pipe delivered.	Excavating WP2A, WP1A, WP1D. Backfilling WP82X and rip-rap. Backfilling MSB2A and MSB2B and MSB1A. Cutting rebar. Filling sandbags. Grading cell, surveyor topo taken.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671724	11/20/2014	8:16	11/21/2014	8:10	38	35	30.49	Quail Creek Station; Op-Tech Weater Sation	15.10	Non-Detect	1.9	13	13	SE	PT Cloudy	Citizens Working along Big Four	Excavating WP2A, WP1A, WP1D. Backfilling WP82X and rip-rap. Backfilling MSB2A and MSB2B and MSB1A. Cutting rebar. Filling sandbags. Grading cell, surveyor topo taken.	Clearing cell of jagged objects. Liner crew on-site to place geotextile and geomembrane. Testing conducted. Cutting rebar. Backfilling MSB Areas	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671726	11/21/2014	8:15	11/22/2014	8:36	42	35	30.49	Quail Creek Station; Op-Tech Weater Sation	27.50	0.1600	1.9	13	13	SE	PT Cloudy	Citizens Working along Big Four	Clearing cell of jagged objects. Liner crew on-site to place geotextile and geomembrane. Testing conducted. Cutting rebar. Backfilling MSB Areas	Liner crew repairing liner & performing destructive/non-destructive testing. Line crew-de-mob post testing. Consolidating equipment into conex box by Op-Tech, backfilling MSB areas, cutting and consolidating rebar.	Salting roads	
HV-2 #6200	SWC	8671729	11/22/2014	8:43	11/23/2014	8:43	42	43	30.32	Quail Creek Station; Op-Tech Weater Sation	15.90	Non-Detect	3.9	12	20	S	.05 IN RAIN	Citizens Working along Big Four	Liner crew repairing liner & performing destructive/non-destructive testing. Line crew de-mob post testing. Consolidating equipment into conex box by Op-Tech, backfilling MSB areas, cutting and consolidating rebar.	Non-Work Day	Salting roads	
HV-2 #6200	SWC	8671732	11/23/2014	8:45	11/24/2014	8:21	44	51	30.02	Quail Creek Station; Op-Tech Weater Sation	ND	Non-Detect	3.4	12	20	SSE	1.42 IN RAIN	N/A	Non-Work Day	De-mob rental equipment, cleaning adler tanks, de-watering site, reports.	Salting roads	
HV-2 #6200	SWC	8671736	11/24/2014	8:29	11/24/2014	8:24	44	47	29.91	Quail Creek Station; Op-Tech Weater Sation			7	28	28	SW	.14 IN RAIN	N/A	De-mob rental equipment, cleaning adler tanks, de-watering site, reports.	Crew Travel	Salting roads	
HV-2 #6200	SWC	N/A	11/25/2014	N/A	11/25/2014	N/A	N/A	35	30.14	Quail Creek Station; Op-Tech Weater Sation	33.76	0.0380	4.3	15	16	WSW	OVERCAST	CREW OFF-SITE TRAVEL DAY				
HV-2 #6200	SWC	N/A	11/26/2014	N/A	11/27/2014	N/A	N/A			Quail Creek Station; Op-Tech Weater Sation	33.76	0.0380	CREW OFF-SITE TRAVEL DAY									
HV-2 #6200	SWC	N/A	11/28/2014	N/A	11/28/2014	N/A	N/A			Quail Creek Station; Op-Tech Weater Sation	33.76	0.0380	CREW OFF-SITE TRAVEL DAY									
HV-2 #6200	SWC	N/A	11/29/2014	N/A	11/29/2014	N/A	N/A			Quail Creek Station; Op-Tech Weater Sation	33.76	0.0380	CREW OFF-SITE TRAVEL DAY									
HV-2 #6200	SWC	N/A	11/30/2014	N/A	11/30/2014	N/A	N/A			Quail Creek Station; Op-Tech Weater Sation	33.76	0.0380	CREW OFF-SITE TRAVEL DAY									
HV-2 #6200	SWC	8671739	12/1/2014	8:07	12/2/2014	8:16	45	33	30.49	Quail Creek Station; Op-Tech Weater Sation	10.00	Non-Detect	3.2	20	15	NNE	Clouded and 0.1 In. of rain	Citizens Working along Big Four	Backfilling MSB areas and pumping water. Cleaning vessels. Mapping out liner seams and repairs.	No work performed on-site	Salting roads	
HV-2 #6200	SWC	8671742	12/2/2014	8:22	12/3/2014	8:19	39	29.5	29.5	Quail Creek Station; Op-Tech Weater Sation	24.40	Non-Detect	2.3	13	13	SSE	Freezing rain with some Ice	Citizens Working along Big Four	Backfilling MSB areas and pumping water. Cleaning vessels. Mapping out liner seams and repairs.	No work performed on-site	None	
HV-2 #6200	SWC	8671745	12/3/2014	8:19	12/4/2014	8:23	40	29.5	29.5	Quail Creek Station; Op-Tech Weater Sation	38.60	Non-Detect	2.3	13	13	SSE	Freezing rain with some Ice	Citizens Working along Big Four	Backfilling MSB areas and pumping water. Cleaning vessels. Mapping out liner seams and repairs.	No work performed on-site	None	
HV-2 #6200	SWC	8671748	12/4/2014	8:28	12/5/2014	8:28	45	29.3	30.22	Quail Creek Station; Op-Tech Weater Sation	40.80	0.0800	1.1	11	11	E	Freezing rain with some Ice	Citizens Working along Big Four	Backfilling MSB areas and pumping water.	No work performed on-site		
HV-2 #6200	SWC		12/5/2014		12/6/2014			35	30.17	Quail Creek Station; Op-Tech Weater Sation	ND	Non-Detect	7	16	20	ENE	Rain all day.	Citizens Working along Big Four	Backfilling MSB areas and pumping water.	No work performed on-site	None	Hi-vols were not set up due to filters out of stock.
HV-2 #6200	SWC	8671751	12/6/2014	8:20	12/7/2014	11:57	45	34	30.33	Quail Creek Station; Op-Tech Weater Sation	9.30	Non-Detect	14	25	32	NNE	OVERCAST	Citizens Working along Big Four	Pumping water	No work performed on-site	None	

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2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-2

90 Day Rolling Average: 0.053

Weekly Average: 0.050 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additional Notes
HV-2 #6200	SWC	8671754	12/7/2014	12:03	12/8/2014	8:42	45	34	30.52	Quail Creek Station; Op-Tech Weater Satlon	4.20	Non-Detect	10	16	20	ENE	OVERCAST	Citizens Working along Big Four	Pumping water	No work performed on-site	None	
HV-2 #6200	SWC	8671757	12/8/2014	8:48	12/9/2014	8:51	44	36.6	30.08	Quail Creek Station; Op-Tech Weater Satlon	9.50	Non-Detect	18	18	N/A	WSW	Cloudy with light rain	Citizens Working along Big Four	Pumping water, backfilling WP areas, and lining side walls with poly	No work performed on-site	Used sweeper	
HV-2 #6200	SWC	8671760	12/9/2014	8:57	12/10/2014	9:22	44	35.1	30.29	Quail Creek Station; Op-Tech Weater Satlon	8.90	Non-Detect	1.7	9	10	NW	Cloudy with no rain	None	Pumping water, backfilling WP areas, and sweeping roads	No work performed on-site	Used sweeper to lay water on roads	
HV-2 #6200	SWC	8671763	12/10/2014	9:26	12/11/2014	8:42	44	30.7	30.25	Quail Creek Station; Op-Tech Weater Satlon	23.30	Non-Detect	2	12	12	NW	INTERMITTENT CLOUDS	None	backfilling WP areas, sweeping roads, and laying poly	No work performed on-site	Used sweeper to lay water on roads	
HV-2 #6200	SWC	8671766	12/11/2014	8:48	12/12/2014	8:49	44	32.2	30.19	Quail Creek Station; Op-Tech Weater Satlon	58.20	Non-Detect	1.9	12	12	WNW	Cloudy with no rain	None	Back filling, liner crew on site, working on drainage pipe, and load out concrete	No work performed on-site	Used sweeper to lay water on roads	
HV-2 #6200	SWC	8671769	12/12/2014	9:07	12/13/2014	8:56	45	28.6	30.26	Quail Creek Station; Op-Tech Weater Satlon	62.80	Non-Detect	2.1	9	12	WSW	Cloudy and cold	Dump truck Hit power line with box up	Back filling, liner crew on site, working on drainage pipe, and load out concrete	No work performed on-site	Used sweeper to lay water on roads	
HV-2 #6200	SWC	8671772	12/13/2014	9:03	12/14/2014	9:03	44	40.6	30.18	Quail Creek Station; Op-Tech Weater Satlon	42.00	Non-Detect	2	8	9	SSW	Cloudy with light rain	None	Back filling, pumping water, cover cell with clay, pick up trash and sand bags	Grading and rolling	Used sweeper to lay water on roads	
HV-2 #6200	SWC	8671775	12/14/2014	9:09	12/15/2014	9:09	30	49	30.19	Quail Creek Station; Op-Tech Weater Satlon	25.10	Non-Detect	2.1	8	11	S	Overcast	N/A	Installed temp fencing, sweeping roads, installed animal guards, covered south side of cell with cap fill	Washed adler tank, sweeping roads, air monitors shut-down, hauled concrete off-site, covered top & east sides of cell with cap fill, compaction testing	Used sweepr and water	

Notes: HV-1 located downwind along S. Arlington Avenue; HV-2 & HV-3 located upwind on the western limit of the site adjacent to Citizens Gas Co.
Reporting limit for lead is .050 µg/m3; All Non-Detects are less than .050 µg/m3.

OP-TECH

2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-3

90 Day Rolling Average: 0.084

Weekly Average: 0.051 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additional Notes
HV-3 #0857	NWC	6062274	8/7/2014	13:00	8/8/2014	15:00		69.4	30.02	Quail Creek Station	22.80	Non-Detect	0.9	9	9	East	OVERCAST	Citizens performing construction adjacent to western limit; Utility company performing work adjacent to eastern limit - creating dust	Weed Wacking on Western Limit; Utility company working on Eastern Limit; Outside Site	Setting up trailer, surveyors on-site, electricians on-site		
HV-3 #0857	NWC	6062277	8/8/2014	15:39	8/9/2014	15:41	38	72	30.05	Quail Creek Station	30.40	Non-Detect	0.7	10	11	ESE	.05 IN RAIN; OVERCAST		Setting up trailer, surveyors on-site, electricians on-site	Set-up Trailer		
HV-3 #0857	NWC	6062280	8/9/2014	15:46	8/10/2014	14:00 621	38	75.1	30.01	Quail Creek Station	26.40	Non-Detect	0.8	9	9	E	OVERCAST		Set-up Trailer	No work performed on-site		
HV-3 #0857	NWC	6062283	8/11/2014	11:06	8/12/2014	11:06	38	65	29.93	Quail Creek Station	33.10	Non-Detect	0.9	12	10	SW	RAIN .61 IN; OVERCAST	Citizens performing construction adjacent to western limit of site (excavating, hoe ramming, skid steers) - creating dust	Set-up Construction Zones, Moved HV-1 to outer fenceline area, Surveying, Removing Chainlink Fence from Norther Limit, Removing old silt fence	Removed silt fence & chainlink fence, Trenched for new silt fence, Installed new silt fence, hammering holes in concrete with Cat 320		Moved HV-1 to outer fenceline area; Unplugged HV-1 to move Excavator by location
HV-3 #0857	NWC	6062286	8/12/2014	11:09	8/13/2014	11:26	38	68	29.97	Quail Creek Station	30.20	Non-Detect	1.7	13	13	SW	OVERCAST, LIGHT RAIN	Citizens & IPL working adjacent to western limit of site (hoe-ramming, installing pylons, skid steer) - creating dust	Removed silt fence & chainlink fence, Trenched for new silt fence, Installed new silt fence, hammering holes in concrete with Cat 320	Clearing Nothern limit forest area, surveying, frak tanks delivered, water truck on-site, filled sandbags for site use		
HV-3 #0857	NWC	6062289	8/13/2014	11:28	8/13/2014	17:15	40	68	30.04	Quail Creek Station	286.00	0.1000	0.9	10	10	SSW	PT CLOUDY	Citizens & IPL working adjacent to western limit of site (hoe-ramming, installing pylons, skid steer, dumping gravel) - creating dust	Clearing Nothern limit forest area, surveying, frak tanks delivered, water truck on-site, filled sandbags for site use	Clearing Northern limit forest area, surveying, adler tanks shipped on-site, Installed silt fence, removed rail road ties & track from northern forest area, hoe-ramming wall of old furnace room area	Water Truck & Sprinklers	Monitor was left unplugged unintentionally & only ran from 11:28 to 17:15 on 8/13/14.
HV-3 #0857	NWC	6062293	8/14/2014	9:30	8/15/2014+PM	9:30	38	73	30.05	Quail Creek Station	66.50	0.1300	0.8	11	12	N	PT CLOUDY	Citizens & IPL working adjacent to western limit of site (hoe-ramming, skid steer, dumping gravel, heavy traffic truck) - creating dust	Clearing Northern limit forest area, surveying, adler tanks shipped on-site, Installed silt fence, removed rail road ties & track from northern forest area, hoe-ramming wall of old furnace room area	Clearing Northern limit forest area, removing rail road track & ties, stump removal, filling sand bags, cutting rebar with torch, pumping water from storm water basin into adler tanks	Water Truck & Sprinklers	
HV-3 #0857	NWC	6062296	8/15/2014	9:30	8/16/2014	9:30	38	63	30.11	Quail Creek Station	48.70	0.1500	0.6	8	8	WSW	PT CLOUDY	Citizens laying concrete adjacent to HV-2 & HV-3 with heavy truck traffic creating dust.	Clearing Northern limit forest area, surveying, adler tanks shipped on-site, Installed silt fence, removed rail road ties & track from northern forest area, hoe-ramming wall of old furnace room area	Stump grinding in Northern limit forest area, removing railroad ties and track, assiting with stump grinding activities, demo of pumphous #4, filling sand bags for general use	Water Truck & Sprinklers	
HV-3 #0857	NWC	6062299	8/16/2014	9:31	8/17/2014	9:31	38	64	30.02	Quail Creek Station	33.60	Non-Detect	0.6	7	13	SSW	.34 IN RAIN	Citizens laying concrete adjacent to HV-2 & HV-3 with heavy truck traffic creating dust.	Stump grinding in Northern limit forest area, removing railroad ties and track, assiting with stump grinding activities, demo of pumphous #4, filling sand bags for general use	Air monitoring, set-up weather station	Water Truck & Sprinklers	
HV-3 #0857	NWC	6062302	8/17/2014	9:32	8/18/2014	9:31	38	74	29.99	Quail Creek Station; Op-Tech Weater Satlon	42.10	Non-Detect	0.6	10	10	SE	OVERCAST; .02 IN RAIN	Utility Work adjacent to HV-1; Citizens performing construction activities adjacent to HV-2 & HV-3	Air monitoring, set-up weather station	Continued stump grinding activities & assisting from Op-Tech, Fuel Delivered, 2 Dozers shipped onsite, USI on-site surveying, reset pumps, set-up booms and filterbags at storm drains, continued breaking up concrete wall	Water Truck & Sprinklers	
HV-3 #0857	NWC	6062305	8/18/2014	9:33	8/19/2014	9:47	38	77	29.9	Quail Creek Station; Op-Tech Weater Satlon	61.80	0.0560	0.5	8	8	NE	PT CLOUDY; HUMID	Citizens performing construction activities adjacent to HV-2 & HV-3; Firestone mowing lawn near HV-1	Continued stump grinding activities & assisting from Op-Tech, Fuel Delivered, 2 Dozers shipped on-site, USI on-site surveying, reset pumps, set-up booms and filterbags at storm drains, continued breaking up concrete wall	Continued stump grinding activities & assisting from Op-Tech, Set-up sprinkler system for dust mgt, Breaking up concrete wall with Cat 320, Hosing stump grinding activities, pumping water from lagoon to adler frak tanks	Water Truck & Sprinklers	
HV-3 #0857	NWC	6062308	8/19/2014	9:48	8/20/2014	10:05	39	83	29.97	Quail Creek Station; Op-Tech Weater Satlon	30.40	Non-Detect	1.5	16	16	SW	PT CLOUDY; PM RAIN .55 IN	Citizens performing construction activities adjacent to HV-2 & HV-3	Continued stump grinding activities & assisting from Op-Tech, Set-up sprinkler system for dust mgt, Breaking up concrete wall with Cat 320, Hosing stump grinding activities, pumping water from lagoon to adler frak tanks	Continued stump grinding activities & started shipping mulch off-site, continued to break up concrete wall with Cat 320 hoe ram, temp shut-down due to Lightning, pumped water into Frak Tanks, RMC mowing grounds	Water Truck & Sprinklers	
HV-3 #0857	NWC	6062311	8/20/2014	10:07	8/21/2014	9:45	34	73	30.01	Quail Creek Station; Op-Tech Weater Satlon	34.90	Non-Detect	0.8	12	14	SSW	RAIN & LIGHTNING; OVERCAST	Citizens performing construction activities adjacent to HV-2 & HV-3	Continued stump grinding activities & started shipping mulch off-site, continued to break up concrete wall with Cat 320 hoe ram, temp shut-down due to Lightning, pumped water into Frak Tanks, RMC mowing grounds	Shipping mulch off-site, breaking up concrete between former filter press & pumphouse #3 w/ Cat 320, Finished concrete wall breakup, pumping stormwater into lagoon, surveyor marking out cell, cutting rebar, temp lighting shutdown, heavy rain	Water Truck & Sprinklers	
HV-3 #0857	NWC	6062314	8/21/2014	9:47	8/22/2014	9:18	38	76	30.5	Quail Creek Station; Op-Tech Weater Satlon	141.00	Non-Detect	1	12	18	S	.46 IN RAIN & LIGHTNING	Citizens performing construction activities adjacent to HV-2 & HV-3	Shipping mulch off-site, breaking up concrete between former filter press & pumphouse #3 w/ Cat 320, Finished concrete wall breakup, pumping stormwater into lagoon, surveyor marking out cell, cutting rebar, temp lighting shutdown, heavy rain	Grading Cell, Hydro-axe cutting fenceline brush, sealing abandoned wells, sampling frak tank & lagoon, cutting rebar, hoe-ramming concrete pads, separating concrete from rebar & metals, pumping stormwater	Water Truck & Sprinklers	
HV-3 #0857	NWC	6062317	8/22/2014	9:20	8/23/2014	12:33	38	80	30.02	Quail Creek Station; Op-Tech Weater Satlon	29.80	Non-Detect	0.8	9	10	SW	SOME RAIN; PT CLOUDY		Grading Cell, Hydro-axe cutting fenceline brush, sealing abandoned wells, sampling frak tank & lagoon, cutting rebar, hoe-ramming concrete pads, separating concrete from rebar & metals, pumping stormwater	Grading Cell, Clearing brush with Hydro-axe, separating concrete from rebar & metal, pumping water into the lagoon, Installed remaining silt fence along western limit towards the north limit, cleaning up debris, repaired john deer 350	Water Truck & Sprinklers	
HV-3 #0857	NWC	6062320	8/23/2014	12:35	8/24/2014	9:18	38	79	30.01	Quail Creek Station; Op-Tech Weater Satlon	30.60	Non-Detect	0.4	13	13	SE	1 IN RAIN; HUMID		Grading Cell, Clearing brush with Hydro-axe, separating concrete from rebar & metal, pumping water into the lagoon, Installed remaining silt fence along western limit towards the north limit, cleaning up debris, repaired john deer 350	No work performed on-site	Water Truck & Sprinklers	Hi-Vol 2 lost power due to faulty power cord; replaced power cord
HV-3 #0857	NWC	6062323	8/24/2014	9:20	8/25/2014	9:42	38	80	30.04	Quail Creek Station; Op-Tech Weater Satlon	32.60	Non-Detect	0.6	9	9	S	OVERCAST	Citizens performing construction activities adjacent to HV-2 & HV-3	No work performed on-site	Grading Cell, Clearing brush with hydro-axe, hoe-ramming concrete w/sprinkler set-up, pumping water into lagoon, shipped mulch off-site, fiber optics stakeout, ipl shut down power to dormant monitoring station	Water Truck & Sprinklers	
HV-3 #0857	NWC	6062326	8/25/2014	9:44	8/26/2014	9:11	39	81	30.09	Quail Creek Station; Op-Tech Weater Satlon	42.90	0.0630	0.5	15	15	SSW	PT CLOUDY .68 IN RAIN	Citizens performing construction activities adjacent to HV-2 & HV-3	Grading Cell, Clearing brush with hydro-axe, hoe-ramming concrete w/sprinkler set-up, pumping water into lagoon, shipped mulch off-site, fiber optics stakeout, ipl shut down power to dormant monitoring station	Grading cell, clearing brush with hydro-axe, fiber optics stakeout, pumping water into lagoon - POTW approved, took water samples, walked through hi-vol sampling with Cardno/ATC, temp lightning shutdown, roller shipped on-site, hoe-ramming concrete with sprinkler set up to mitigate dust	Water Truck & Sprinklers	
HV-3 #0857	NWC	6062329	8/26/2014	9:13	8/27/2014	9:20	38	61	30.09	Quail Creek Station; Op-Tech Weater Satlon	10.60	Non-Detect	0.5	12	12	NE	PT CLOUDY .68 IN RAIN; LIGHTNING	Citizens performing construction activities adjacent to HV-2 & HV-3	Grading cell, clearing brush with hydro-axe, fiber optics stakeout, pumping water into lagoon - POTW approved, took water samples, walked through hi-vol sampling with Cardno/ATC, temp lightning shutdown, roller shipped on-site, hoe-ramming concrete with sprinkler set up to mitigate dust	Grading, rolling, and surveying cell. Fencing installed along CSX North limit, Electrician on-site to discuss hi-vol power set-up, pumped water into lagoon & treated in Adler tank, pulled cattails from lagoon & stockpiled within poly, weekly call-in meeting, built stone access into cell area, hoe-ramming concrete with sprinklers to mitigate dust	Water Truck & Sprinklers	
HV-3 #0857	NWC	6062332	8/27/2014	9:22	8/28/2014	9:13	38	81	30.11	Quail Creek Station; Op-Tech Weater Satlon	42.90	0.0630	0.7	6	10	NNE	PT CLOUDY	Citizens performing construction activities adjacent to HV-2 & HV-3	Grading, rolling, and surveying cell. Fencing installed along CSX North limit, Electrician on-site to discuss hi-vol power set-up, pumped water into lagoon & treated in Adler tank, pulled cattails from lagoon & stockpiled within poly, weekly call-in meeting, built stone access into cell area, hoe-ramming concrete with sprinklers to mitigate dust	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014692	8/28/2014	9:15	8/29/2014	9:15	38	76	30.1	Quail Creek Station; Op-Tech Weater Satlon	10.80	Non-Detect	0.7	7	8	NE			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014695	8/29/2014	9:17	8/30/2014	9:10	38	75	30.1	Quail Creek Station; Op-Tech Weater Satlon	124.00	Non-Detect	0.6	10	10	S			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014697	9/3/2014	10:57	9/4/2014	10:56	38	74	30.08	Quail Creek Station; Op-Tech Weater Satlon	17.50	Non-Detect	0.9	8	9	SSW			No work performed on-site	Finished Cell Bottom, Pumped water into lagoon, Compacted cell w/ testing., Hoe Ramming concrete with sprinkler system, pine on-site to repair air monitors, water truck used for dust supression	Water Truck & Sprinklers	Technical difficulties changing brushes for HV 1 & HV effecting the pumps resulted in no data being collected from 9/3 to 9/4.
HV-3 #0857	NWC	6014701	9/4/2014	13:50	9/5/2014	9:15	38	77	30.1	Quail Creek Station; Op-Tech Weater Satlon	21.50	Non-Detect	1.2	8	13	SSW	PT CLOUDY		Finished Cell Bottom, Pumped water into lagoon, Compacted cell w/ testing., Hoe Ramming concrete with sprinkler system, pine on-site to repair air monitors, water truck used for dust supression	Building Berm & Access road, Compacting Cell with testing, Hoe Ramming concrete with sprinkler system setup, excavating sewer line to locate blockage, water truck used for dust supression	Water Truck & Sprinklers	Technical difficulties changing brushes for HV 1 & HV effecting the pumps resulted in no data being collected from 9/3 to 9/4.
HV-3 #0857	NWC	6014704	9/5/2014	9:20	9/6/2014	9:14	38	80	30.1	Quail Creek Station; Op-Tech Weater Satlon	57.90	0.0540	2.1	11	17	SSW	CLEAR SKIES - HUMID		Building Berm & Access road, Compacting Cell with testing, Hoe Ramming concrete with sprinkler system setup, excavating sewer line to locate blockage, water truck used for dust supression	Worked on berms and access road, located sewer manhole near mw-11, set-up discharges, hoe ramming concrete on northside of site with sprinkler setup, removing cattails from lagoon, water truck used for dust supression	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014707	9/6/2014	9:18	9/7/2014	8:18	39	68	30.16	Quail Creek Station; Op-Tech Weater Satlon	4.20	Non-Detect	0.9	7	10	NNE	LIGHT RAIN		Worked on berms and access road, located sewer manhole near mw-11, set-up discharges, hoe ramming concrete on northside of site with sprinkler setup, removing cattails from lagoon, water truck used for dust supression	Non-Work Day	Water Truck & Sprinklers	

OP-TECH

2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-3

90 Day Rolling Average: 0.084

Weekly Average: 0.051 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additoinal Notes
HV-3 #0857	NWC	6014713	9/8/2014	10:20	9/9/2014	9:18	40	67	30.15	Quail Creek Station; Op-Tech Weater Sation	10.20	Non-Detect	0.5	7	10	NE	PT CLOUDY	Citizens and IPL performing work adjacent to HV-2 & 3	Finished Cell Berms, Breaking up concrete, Finished removing cattails from lagoon, cutting rebar & railroad ties, building cell with dozer and roller, fit tests performed, cap soil delivered, lpl on-site due to power outage at HV-2 & HV-3 , dust suppression using sprinkers and water truck	Excavating NW location, breaking up concrete with hoeram, cutting rebar, treating water/pumping water, soil samples taken, air monitoring undergone, IPL working adjacent to HV-2 & Hv-3, dust suppression using water truck and sprinklers	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014719	9/9/2014	9:40	9/10/2014	9:22	38	67	30.1	Quail Creek Station; Op-Tech Weater Sation	46.50	Non-Detect	1	13	13	S	PT Cloudy	Citizens performing construction work adjacen to HV-2 & HV-3	Excavating NW location, breaking up concrete with hoeram, cutting rebar, treating water/pumping water, soil samples taken, air monitoring undergone, IPL working adjacent to HV-2 & Hv-3, dust suppression using water truck and sprinklers	Continued excavating NW area, breaking up concrete with hoeram, cutting rebar, pumping water, citizens gas confirmed pumphouse 4 gasline is abandoned, heavy rainfall & high winds, weekly meeting. HV2 & HV3 power short over-night roughtly 1/2 day of data collected, dust supression using h20 truck and sprinklres	Water Truck & Sprinklers	HV-2 & HV-3 lost power overnight and roughly 1/2 day of data was collected
HV-3 #0857	NWC	6014720	9/10/2014	:23 to 20:1	9/11/2014	:45 to 9:1	38	73	29.95	Quail Creek Station; Op-Tech Weater Sation	27.50	Non-Detect	3.3	18	23	S	.49 IN RAIN; OVERCAST	Citizens performing construction work adjacen to HV-2 & HV-3	Continued excavating NW area, breaking up concrete with hoeram, cutting rebar, pumping water, citizens gas confirmed pumphouse 4 gasline is abandoned, heavy rainfall & high winds, weekly meeting. HV2 & HV3 power short over-night roughtly 1/2 day of data collected, dust supression using h20 truck and sprinklres	Electricians on-site to restore power to transformers, hoeramming concrete, completed NW area excavation, surveyor on-site to markout south area of site and citizens property, citizens working adjacent to HV2 & HV3, Heritage on-site to sample unknown drum.	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014718	9/11/2014	10:28	9/12/2014	9:23	38	64	30.2	Quail Creek Station; Op-Tech Weater Sation	3.30	Non-Detect	2.1	10	16	N	.05 in Rain	Citizens performing construction work adjacen to HV-2 & HV-3, Citizens street sweeping	Electricians on-site to restore power to transformers, hoeramming concrete, completed NW area excavation, surveyor on-site to markout south area of site and citizens property, citizens working adjacent to HV2 & HV3, Heritae on-site to sample unknown drum.	Electricians on-site to h/u transformers and power for hi-vols, excavating CSB-1 area, hoeramming concrete, grading cell, surveying citizens property, demo of pumphouses, soil samples taken by AGS, vac truck on-site to pump water from pumphouses	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014723	9/12/2014	9:26	9/13/2014	11:00	38	61	30.24	Quail Creek Station; Op-Tech Weater Sation	ND	Non-Detect	1.2	7	12	NNE		Citizens working adjacent to HV-2 & HV-3	Electricians on-site to h/u transformers and power for hi-vols, excavating CSB-1 area, hoeramming concrete, grading cell, surveying citizens property, demo of pumphouses, soil samples taken by AGS, vac truck on-site to pump water from pumphouses	Continued Excavation from CSB-1 area to MSB2A and MSB1A, continued hoe-ramming concrete, demo of pumphouse 1, gaylor on-site for power h/u, vac truck on-site to pump slurry, continued grading cell	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014725	9/13/2014	11:00	9/14/2014	9:18	39	58	30.32	Quail Creek Station; Op-Tech Weater Sation	5.20	Non-Detect	1.3	9	12	N			Continued Excavation from CSB-1 area to MSB2A and MSB1A, continued hoe-ramming concrete, demo of pumphouse 1, gaylor on-site for power h/u, vac truck on-site to pump slurry, continued grading cell	Non-Work Day	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014729	9/14/2014	9:20	9/15/2014	9:41	38	58	30.32	Quail Creek Station; Op-Tech Weater Sation	ND	Non-Detect	0.5	7	9	SE	.56 IN RAIN; OVERCAST		Non-Work Day	Water samples taken, Continued excavation of concrete at MSB2A, continued hoe-ramming concrete, continued grading and rolling cell for compaction, continued demo of pumphouses, pumping water to POTW, early work shutdown at 1530 due to lightning	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014741	9/15/2014	9:45	9/16/2014	9:32	39	57	30.21	Quail Creek Station; Op-Tech Weater Sation	ND	0.1300	0.7	8	19	S	.55 IN RAIN; OVERCAST	Citizens performing work adjacent to HV-2 & HV-3	Water samples taken, Continued excavation of concrete at MSB2A, continued hoe-ramming concrete, continued grading and rolling cell for compaction, continued demo of pumphouses, pumping water to POTW, early work shutdown at 1530 due to lightning	Continued excavating MSB2A, grading cell, rolling for compaction, hoe-ramming concrete and demo of pumphouses. R&R ties shipped offsite. Dust cloud produced from road construction/Firestone near HV-1.	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014758	9/16/2014	9:37	9/17/2014	9:50	39	58	30.2	Quail Creek Station; Op-Tech Weater Sation	12.60	Non-Detect	0.8	6	9	N	.02 IN RAIN	Citizens working adjacent to HV-2 & HV-3; Dust cloud produced adjacent to HV-1 from Firestone/road construction.	Continued excavating MSB2A, grading cell, rolling for compaction, hoe-ramming concrete and demo of pumphouses. R&R ties shipped offsite. Dust cloud produced from road construction/Firestone near HV-1.	Continued excavating MSB2A, grading cell, rolling for compaction, hoe-ramming concrete and demo of pumphouses. Backfilling NW Area. Water samples taken. Weekly meeting. Site prep'd for travel.	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014761	9/17/2014	9:54	9/18/2014	9:35	38	57	30.11	Quail Creek Station; Op-Tech Weater Sation	27.80	Non-Detect	0.4	6	10	S	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Continued excavating MSB2A, grading cell, rolling for compaction, hoe-ramming concrete and demo of pumphouses. Backfilling NW Area. Water samples taken. Weekly meeting. Site prep'd for travel.	Crew Travel. Local crew pumping water and air monitoring. Services performed on equipment.	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014764	9/18/2014	9:40	9/19/2014	9:45	38	62	30.13	Quail Creek Station; Op-Tech Weater Sation	21.10	Non-Detect	0.5	6	11	NNE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Crew Travel. Local crew pumping water and air monitoring. Services performed on equipment.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014767	9/19/2014	9:49	9/20/2014	9:39	38	64	30.19	Quail Creek Station; Op-Tech Weater Sation	26.90	Non-Detect	0.7	9	12	ESE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Local Crew on-site for air monitoring and pumping water.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014770	9/20/2014	9:44	9/21/2014	9:33	38	67	30.06	Quail Creek Station; Op-Tech Weater Sation	25.60	Non-Detect	2.1	12	16	SSW	.03 IN RAIN		Local Crew on-site for air monitoring and pumping water.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014773	9/21/2014	9:37	9/22/2014	9:49	39	66	30.09	Quail Creek Station; Op-Tech Weater Sation	9.40	Non-Detect	2.7	10	21	WSW	.03 IN RAIN	Citizens working adjacent to HV-2 & HV-3	Local Crew on-site for air monitoring and pumping water.	Continued Excavating MSBA2 concrete rubble, grading cell, continued hoe-ramming concrete, continued demo of pumphouses, backfilling	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014776	9/22/2014	9:50	9/23/2014	8:20	38	58	30.27	Quail Creek Station; Op-Tech Weater Sation	18.00	Non-Detect	1.1	6	14	NNE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Continued Excavating MSBA2 concrete rubble, grading cell, continued hoe-ramming concrete, continued demo of pumphouses, backfilling	Grading cell, building berm, dem of pumphouse 1 and 2, excavating WP6A & B, backfilling, hoeramming concrete	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014779	9/23/2014	8:22	9/24/2014	9:27	38	60	30.35	Quail Creek Station; Op-Tech Weater Sation	22.70	0.1300	0.5	7	8	NE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Grading cell, building berm, dem of pumphouse 1 and 2, excavating WP6A & B, backfilling, hoeramming concrete	Excavating WP6A & B, R&R ties picked up, grading cell, building berm, removed liner from lagoon, hoeramming concrete	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014782	9/24/2014	9:29	9/25/2014	9:42	38	63	30.36	Quail Creek Station; Op-Tech Weater Sation	29.60	0.2200	0.4	7	9	ESE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Excavating WP6A & B, R&R ties picked up, grading cell, building berm, removed liner from lagoon, hoeramming concrete	Excavating WP6A & B, Hoeramming concrete, Removed Fencline around pit; hoeramming pit, grading cell, building berm	Water Truck & Sprinklers	Cease excavating & hoeramming in WP6A and MSBA1 and MSBA2 due to vapor odor
HV-3 #0857	NWC	6014785	9/25/2014	9:46	9/26/2014	9:36	38	67	30.31	Quail Creek Station; Op-Tech Weater Sation	39.60	0.5500	0.3	6	7	SSE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Excavating WP6A & B, Hoeramming concrete, Removed Fencline around pit; hoeramming pit, grading cell, building berm	Excavating FL4B, hoeramming pit area, backfilling pit area, grading cell, power h/u for HV-1 to move PH3 off-line	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014788	9/26/2014	9:36	9/27/2014	9:52	39	69	30.26	Quail Creek Station; Op-Tech Weater Sation	30.60	Non-Detect	0.4	6	9	E	PT CLOUDY		Excavating FL4B, hoeramming pit area, backfilling pit area, grading cell, power h/u for HV-1 to move PH3 off-line	Excavating FL4B and WP3A & B, hoeramming concrete, backfilling pit, cutting rebar	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014791	9/27/2014	9:54	9/28/2014	7:55	38	70	30.24	Quail Creek Station; Op-Tech Weater Sation	29.10	0.2900	0.5	7	12	NE	PT CLOUDY		Excavating FL4B and WP3A & B, hoeramming concrete, backfilling pit, cutting rebar	Non Work Day	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014794	9/28/2014	7:57	9/29/2014	9:58	39	71	30.16	Quail Creek Station; Op-Tech Weater Sation	39.10	Non-Detect	0.3	6	9	NNE	PT CLOUDY	Heavy Construction on Big Four Road causing a lot of dust	Non Work Day	Excavating FL4B, Hoe-ramming concrete, Grading Cell, Cutting Rebar, Heavy Construction on Big Four Road causing dust	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014797	9/29/2014	10:00	9/30/2014	8:54	39	68	30.05	Quail Creek Station; Op-Tech Weater Sation	43.90	Non-Detect	0.4	6	12	NNE	PT CLOUDY	Heavy Construction on Big Four Road causing a lot of dust	Excavating FL4B, Hoe-ramming concrete, Grading Cell, Cutting Rebar, Heavy Construction on Big Four Road causing dust	Continued excavating FL4B, Continued Hoe-ramming concrete, continued grading cell & compaction testing. Hoe-ramming concrete of lagoon & stockpiling. Cutting rebar. Baylor disconnected power to PH3 & 4.	Water Truck & Sprinklers	

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2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-3

90 Day Rolling Average: 0.084

Weekly Average: 0.051 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additional Notes
HV-3 #0857	NWC	6014800	9/30/2014	8:56	10/1/2014	10:22	38	63	29.99	Quail Creek Station; Op-Tech Weater Satlon	21.90	Non-Detect	0.9	6	11	NNE	PT Cloudy	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Continued excavating FL4B. Continued Hoe-ramming concrete, continued grading cell & compaction testing. Hoe-ramming concrete of lagoon & stockpiling. Cutting rebar. Gaylor disconnected power to PH3 & 4.	Excavating FL2, DW1, OE1, Lagoon, WP3A. Backfilling WP6A. Cutting Rebar. Demo of pumphouse 4. Continued grading cell.	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014803	10/1/2014	10:28	10/2/2014	8:50	39	63	30.02	Quail Creek Station; Op-Tech Weater Satlon	43.50	0.3200	0.5	6	8	ESE	PT Cloudy	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Excavating FL2, DW1, OE1, Lagoon, WP3A. Backfilling WP6A. Cutting Rebar. Demo of pumphouse 4. Continued grading cell.	Excavating Lagoon, DW1, FL2, WP1D, & WP3A. Backfilling WP6A and rolling. Cutting Rebar. Grading Cell. Cleaning roadways and haul roads. HV1 power tripped overnight, restored power and restarted sampling.	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014806	10/2/2014	8:52	10/3/2014	8:00	38	71	30.01	Quail Creek Station; Op-Tech Weater Satlon	34.40	0.1500	2.1	11	16	S	.07 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Excavating Lagoon, DW1, FL2, WP1D, & WP3A. Backfilling WP6A and rolling. Cutting Rebar. Grading Cell. Cleaning roadways and haul roads. HV1 power tripped overnight, restored power and restarted sampling.	Excavating WP6A, Backfill of WP6A, WP8B and FL4B. Citizens on-site to de-mark waterlines tie-in. Demo Pumphouse 4. Grading and rolling cell. Pumping Water.	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014809	10/3/2014	8:01	10/4/2014	8:33	38	59	29.86	Quail Creek Station; Op-Tech Weater Satlon	13.60	Non-Detect	3	10	20	SSW	.47 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Excavating WP6A, Backfill of WP6A, WP8B and FL4B. Citizens on-site to de-mark waterlines tie-in. Demo Pumphouse 4. Grading and rolling cell. Pumping Water.	Excavating WP6A, MSB1A (Uncovered Rail Road Rail, Concrete Structures, and Batteries). Uncovered two tanks and wood debris in WP6A. Backfilling WP6A and FL4B. Sampled areas with PID for VOC; readings below 1 PPM. Cleaning up debris and cleaning haul roads.	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014812	10/4/2014	8:35	10/5/2014	8:07	38	45	29.86	Quail Creek Station; Op-Tech Weater Satlon	11.30	Non-Detect	3	11	19	SW	.02 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Excavating WP6A, MSB1A (Uncovered Rail Road Rail, Concrete Structures, and Batteries). Uncovered two tanks and wood debris in WP6A. Backfilling WP6A and FL4B. Sampled areas with PID for VOC; readings below 1 PPM. Cleaning up debris and cleaning haul roads.	No work performed on-site	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014815	10/5/2014	8:09	10/6/2014	9:25	38	51	29.87	Quail Creek Station; Op-Tech Weater Satlon	75.00	Non-Detect	1.9	10	15	SSW	.18 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	No work performed on-site	Continued Excavating WP6A, WP3A, and MSB1A. Backfilling FL4B. Sampling water, concrete, and personal lead. Cleaning debris around site. Hoe-ramming concrete. Pine on-site to replace HV1 pump & fix dust trak n2.	Water Truck & Sprinklers	HV1 pump needs to be fixed.
HV-3 #0857	NWC	8671901	10/6/2014	9:27	10/7/2014	10:26	38	55	29.81	Quail Creek Station; Op-Tech Weater Satlon	10.60	Non-Detect	2.4	14	19	SSW	.08 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Continued Excavating WP6A, WP3A, and MSB1A. Backfilling FL4B. Sampling water, concrete, and personal lead. Cleaning debris around site. Hoe-ramming concrete. Pine on-site to replace HV1 pump & fix dust trak n2.	Continued excavating MSB1A (stockpiling concrete for sampling) and MSB1B. Continued grading cell. Cleaned 2 frak tanks. Continued pumping water. Collected concrete samples, soil samples (AGS), and personal lead samples. Cleaning site debris and haul roads.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671905	10/7/2014	10:28	10/8/2014	9:00	38	54	28.9	Quail Creek Station; Op-Tech Weater Satlon	19.10	Non-Detect	1.6	8	13	SSW	.48 IN RAIN; OVERCAST	Heavy Construction on Big Four Road causing a lot of dust; Citizens performing work adjacen to HV2 & HV3	Continued excavating MSB1A (stockpiling concrete for sampling) and MSB1B. Continued grading cell. Cleaned 2 frak tanks. Continued pumping water. Collected concrete samples, soil samples (AGS), and personal lead samples. Cleaning site debris and haul roads.	Excavating MSB1A and Lagoon. Backfilling with granular fill at WP6A and FL4B. Hoe-ramming side walls per AGS instruction. All Pro picked up rebar rolloff. Continued grading cell and rolled for compaction testing. Pumping water. HV-1 pump not working.	Water Truck & Sprinklers	HV-1 pump needs to be fixed
HV-3 #0857	NWC	8671907	10/8/2014	9:02	10/9/2014	10:20	38	55	30.09	Quail Creek Station; Op-Tech Weater Satlon	60.50	Non-Detect	0.9	9	15	WSW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating MSB1A and Lagoon. Backfilling with granular fill at WP6A and FL4B. Hoe-ramming side walls per AGS instruction. All Pro picked up rebar rolloff. Continued grading cell and rolled for compaction testing. Pumping water. HV-1 pump not working. pine working to replace it.	Excavating Lagoon & WP3A, Backfilling WP6A and FL4B, Grading Cell, Cleaning tanks, cleaning debris on-site	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671910	10/9/2014	10:22	10/10/2014	9:13	38	49	30.17	Quail Creek Station; Op-Tech Weater Satlon	15.70	Non-Detect	0	2	7	NNE	.04 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon & WP3A, Backfilling WP8A and FL4B, Grading Cell, Cleaning tanks, cleaning debris on-site	Excavating Lagoon, MSB1A and MSB2A, De-watering site, backfilling FL4B, grading cell, cleaning debris	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671913	10/10/2014	9:15	10/11/2014	9:21	38	51	30.13	Quail Creek Station; Op-Tech Weater Satlon	7.10	Non-Detect	0.9	7	9	NNE	.11 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, MSB1A and MSB2A, De-watering site, backfilling FL4B, grading cell, cleaning debris	Excavating Lagoon, MSB1A and MSB2A, De-watering site, backfilling FL4B, grading cell, cleaning debris	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671916	10/11/2014	9:23	10/12/2014	9:12	38	51	30.19	Quail Creek Station; Op-Tech Weater Satlon	11.00	Non-Detect	1.5	7	9	NNE	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, MSB1A and MSB2A, De-watering site, backfilling FL4B, grading cell, cleaning debris	Excavating MSB1A, MSB2A, Lagoon, and WP3A & B, Backfilling FL4B, Hoe-ramming sidewalls, water sampling, cleaning haul roads, cutting rebar, compaction testing	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671919	10/12/2014	9:14	10/13/2014	9:54	38	50	30.15	Quail Creek Station; Op-Tech Weater Satlon	30.90	Non-Detect	1.5	7	10	NNE	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating MSB1A, MSB2A, Lagoon, and WP3A & B, Backfilling FL4B, Hoe-ramming sidewalls, water sampling, cleaning haul roads, cutting rebar, compaction testing	No work performed on-site	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671922	10/13/2014	9:56	10/14/2014	11:01	38	53	30.16	Quail Creek Station; Op-Tech Weater Satlon	2.00	Non-Detect	0.8	12	12	SE	.27 IN RAIN		No work performed on-site	No work performed on-site	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671925	10/14/2014	11:03	10/15/2014	9:30	38	66	29.96	Quail Creek Station; Op-Tech Weater Satlon	3.50	Non-Detect	2.8	22	22	SSE	1.09 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating MSB1A and MSB2A, De-watering site, grading cell, cutting rebar, cleaning debris, felled a tree near lagoon.	Mixing lid with excavated materials, grading cell, seeding around cell with winter rye and straw overlay, setting up hi-vols for travel, de-watering site, consolidating concrete, backfilling FL4B with granular fill.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671928	10/15/2014	9:32	10/16/2014	9:19	38	62	29.74	Quail Creek Station; Op-Tech Weater Satlon	11.20	Non-Detect	3.1	19	19	S	.54 IN RAIN	Construction on Big Four Road near HV2 & HV3	Mixing lid with excavated materials, grading cell, seeding around cell with winter rye and straw overlay, setting up hi-vols for travel, de-watering site, consolidating concrete, backfilling FL4B with granular fill.	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671931	10/16/2014	9:32	10/17/2014	9:30	38	55	29.78	Quail Creek Station; Op-Tech Weater Satlon	7.00	Non-Detect	1.1	8	12	SSE	.19 IN RAIN	Construction on Big Four Road near HV2 & HV3	TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671934	10/17/2014	9:39	10/18/2014	9:53	38	58	29.86	Quail Creek Station; Op-Tech Weater Satlon	19.50	Non-Detect	1.1	9	12	SW	.02 IN RAIN		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671937	10/18/2014	10:00	10/19/2014	9:21	38	60	29.87	Quail Creek Station; Op-Tech Weater Satlon	1.80	Non-Detect	2.4	12	16	SW	PT CLOUDY		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671940	10/19/2014	9:30	10/20/2014	9:23	38	51	30.18	Quail Creek Station; Op-Tech Weater Satlon	10.00	Non-Detect	1.6	9	13	NNW	.05 IN RAIN		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671943	10/20/2014	9:30	10/21/2014	9:00	38	57	30.04	Quail Creek Station; Op-Tech Weater Satlon	17.90	Non-Detect	1.9	15	15	SW	.05 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating MSB2A & B, and Lagoon. Dewatering site, cutting and consolidating rebar, cleaning roadways, mixing materials with lid in cell, grading cell, surveyor on-site, soil and water samples taken.	Excavating Lagoon, Mixing with kiln dust, and MSB2A/B. Hammering concrete. Grading cell with kiln dust. De-watering site. Cleaning haul roads. Backfilling WP8A with cap fill clay dirt.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671946	10/21/2014	9:06	10/22/2014	9:30	38	51	30.21	Quail Creek Station; Op-Tech Weater Satlon	10.50	Non-Detect	1	13	13	N	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, Mixing with kiln dust, and MSB2A/B. Hammering concrete. Grading cell with kiln dust. De-watering site. Cleaning haul roads. Backfilling WP8A with cap fill clay dirt.	Excavating Lagoon, mixing with kiln dust, and MSB1A/B re-digs and sidewalls. Cleaning haul roads. De-watering. Compaction testing. Backfilling WP8A.	Water Truck & Sprinklers	

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2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-3

90 Day Rolling Average: 0.084

Weekly Average: 0.051 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additional Notes
HV-3 #0857	NWC	8671949	10/22/2014	9:37	10/23/2014	10:20	38	48	30.34	Quail Creek Station; Op-Tech Weater Sation	11.10	Non-Detect	0.7	9	10	NNE	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, mixing with kiln dust, and MSB1A/B re-digs and sidewalls. Cleaning haul roads. De-watering. Compaction testing. Backfilling WP6A. Grading cell.	Excavating Lagoon, mixing with kiln dust, and MSB2B, MSB1A/B. Cutting rebar, cleaning haul roads, de-watering. Grading cell.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671952	10/23/2014	10:26	10/24/2014	9:35	38	47	30.28	Quail Creek Station; Op-Tech Weater Sation	15.00	Non-Detect	0.5	9	9	SSW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, mixing with kiln dust, and MSB2B, MSB1A/B. Cutting rebar, cleaning haul roads, de-watering. Grading cell.	Excavating Lagoon, MSB2A/B, MSB1B, and WP2C. De-watering. Cutting rebar.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671955	10/24/2014	9:36	10/25/2014	9:26	38	52	30.13	Quail Creek Station; Op-Tech Weater Sation	16.40	Non-Detect	0.5	9	9	SW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating Lagoon, MSB2A/B, MSB1B, and WP2C. De-watering. Cutting rebar.	Excavating WP2C and MSB2A. Grading cell. Dewatering. Hammering concrete and consolidating rebar. Cleaning roadways.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671958	10/25/2014	9:30	10/26/2014	8:19	38	63	30.04	Quail Creek Station; Op-Tech Weater Sation	24.90	Non-Detect	1.3	11	11	SW	PT CLOUDY		Excavating WP2C and MSB2A. Grading cell. Dewatering. Hammering concrete and consolidating rebar. Cleaning roadways.	No work performed on-site	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671960	10/26/2014	8:19	10/27/2014	9:04	38	54	30.05	Quail Creek Station; Op-Tech Weater Sation	15.50	0.0630	0.3	8	8	SSW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	No work performed on-site	Excavating WP2C and MSB2A and WP2B. Grading cell. Cutting rebar. Cleaning roadways. Built roadway for lagoon backfill.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671964	10/27/2014	9:09	10/28/2014	9:44	38	65	29.95	Quail Creek Station; Op-Tech Weater Sation	31.90	0.4500	2.8	18	19	S	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Excavating WP2C and MSB2A and WP2B. Grading cell. Cutting rebar. Cleaning roadways. Built roadway for lagoon backfill.	Excavating WP1B, backfilling lagoon with concrete, de-watering, grading cell, consolidating rebar, moving frak tanks, cleaning haul roads.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671967	10/28/2014	9:53	10/29/2014	9:02	38	61	30.03	Quail Creek Station; Op-Tech Weater Sation	15.70	Non-Detect	3	10	23	SW	.22 IN RAIN	Construction on Big Four Road near HV2 & HV3	Excavating WP1B, backfilling lagoon with concrete, de-watering, grading cell, consolidating rebar, moving frak tanks, cleaning haul roads.	Backfilling Lagoon with concrete, excavating oe-1, wp1b, wp1a, and wp1d. Rebuilding ramp entrance. Grading and rolling cell. Backfilling area east of FLS and west of WP6A. Cleaning roadways. Cutting metal from decon pad.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671970	10/29/2014	9:04	10/30/2014	9:38	38	48	30.16	Quail Creek Station; Op-Tech Weater Sation	11.80	Non-Detect	1.3	9	13	WNW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	Backfilling Lagoon with concrete, excavating oe-1, wp1b, wp1a, and wp1d. Rebuilding ramp entrance. Grading and rolling cell. Backfilling area east of FLS and west of WP6A. Cleaning roadways. Cutting metal from decon pad.	Excavating WP1A, MSB1A, WP1DX. Backfilling area east of FLS and west of WP6A. Grading and rolling cell. Consolidating rebar, dewatering site, cleaning roadways, excavating pipe in Lagoon area.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671973	10/30/2014	9:44	10/31/2014	10:01	38	44	30.17	Quail Creek Station; Op-Tech Weater Sation	8.00	Non-Detect	0.5	10	10	S	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1A, MSB1A, WP1DX. Backfilling area east of FLS and west of WP6A. Grading and rolling cell. Consolidating rebar, dewatering site, cleaning roadways, excavating pipe in Lagoon area.	Excavating WP1A, WP1C, MSB1A, and MSB2A, WP1DX, and MSB1AX. Backfilling. De-watering. Moved adler tanks & treatment station toward PH3. Hammering Concrete. Grading Cell.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671976	10/31/2014	10:06	10/31/2014	23:15	38	40	30.15	Quail Creek Station; Op-Tech Weater Sation	ND	0.1800	2.4	18	20	NW	.29 IN RAIN/SLEET	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1A, WP1C, MSB1A, and MSB2A, WP1DX, and MSB1AX. Backfilling. De-watering. Moved adler tanks & treatment station toward PH3. Hammering Concrete. Grading Cell.	Excavating WP3A, MSB2A, WP1C, WP1B, and WP1DX. Hammering Concrete. De-watering & treatment set-up. Grading & Rolling Cell.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671979	11/1/2014	10:01	11/2/2014	8:47	38	35	30.38	Quail Creek Station; Op-Tech Weater Sation	12.40	Non-Detect	2.8	19	19	NNW	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP3A, MSB2A, WP1C, WP1B, and WP1DX. Hammering Concrete. De-watering & treatment set-up. Grading & Rolling Cell.	Placing concrete in Lagoon from WP3A/B, WP2A/B. De-watering. Cleaning roadways. Setting up pumps.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671982	11/2/2014	8:51	11/3/2014	9:03	38	36	30.45	Quail Creek Station; Op-Tech Weater Sation	18.30	Non-Detect	1.3	11	12	S	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Placing concrete in Lagoon from WP3A/B, WP2A/B. De-watering. Cleaning roadways. Setting up pumps.	Excavating WP3A, WP1B, and WP1D. Backfilling pipe trencliline. Hammering concrete. Grading Cell. Compaction Testing. De-watering. Cleaning Roadways. Monitoring Well Crew On-site to install wells.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671985	11/3/2014	9:05	11/4/2014	8:39	38	54	30.32	Quail Creek Station; Op-Tech Weater Sation	43.00	0.2700	3.2	23	23	S	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP3A, WP1B, and WP1D. Backfilling pipe trencliline. Hammering concrete. Grading Cell. Compaction Testing. De-watering. Cleaning Roadways. Monitoring Well Crew On-site to install wells.	Excavating WP1B, WP2C, MSB2A, MSB1A. Backfilling. De-watering. Cleaning Roadways. Monitoring Well Crew on-site to install wells. Hammering concrete in Lagoon area.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671988	11/4/2014	8:41	11/5/2014	8:13	38	51	30.18	Quail Creek Station; Op-Tech Weater Sation	26.90	0.0510	3.1	19	20	SW	.33 IN RAIN	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1B, WP2C, MSB2A, MSB1A. Backfilling. De-watering. Cleaning Roadways. Monitoring Well Crew on-site to install wells. Hammering concrete in Lagoon area.	Excavating WP1B, WP2C, WP2B, MSB2A, MSB1A. Backfilling. De-watering. Cleaning roadways. Drilling crew on-site installing wells. Grading Cell.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671991	11/5/2014	8:15	11/5/2014	16:35	38	47	30.23	Quail Creek Station; Op-Tech Weater Sation	29.70	0.0510	0.5	6	8	S	PT CLOUDY	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1B, WP2C, WP2B, MSB2A, MSB1A. Backfilling. De-watering. Cleaning roadways. Drilling crew on-site installing wells. Grading Cell.	Excavating WP1DX, MSB1A, WP2B. Backfilling. De-watering. Cleaning roadways. Drilling Crew on-site installing wells. Grading Cell. Partial Crew Travel.	Water Truck & Sprinklers	
HV-1 #0014	NEC	N/A	11/6/2014	N/A	11/6/2014	N/A	N/A	44	30.16	Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	3.7	10	16	W	.16 IN RAIN	CREW OFF-SITE TRAVEL DAY				
HV-1 #0014	NEC	N/A	11/7/2014	N/A	11/7/2014	N/A	N/A	41	30.21	Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	1.4	7	13	W	PT CLOUDY	CREW OFF-SITE TRAVEL DAY				
HV-1 #0014	NEC	N/A	11/8/2014	N/A	11/8/2014	N/A	N/A	44	30.03	Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	2.5	12	15	SW	PT CLOUDY	CREW OFF-SITE TRAVEL DAY				
HV-1 #0014	NEC	N/A	11/9/2014	N/A	11/9/2014	N/A	N/A	40	30.02	Quail Creek Station; Op-Tech Weater Sation	31.81	0.0370	1.5	9	13	SSW	PT CLOUDY	CREW OFF-SITE TRAVEL DAY				
HV-3 #0857	NWC	8671992	11/10/2014	7:47	11/11/2014	7:45	38	50	29.94	Quail Creek Station; Op-Tech Weater Sation	46.30	0.8600	3.2	14	22	SSE	OVERCAST/PT CLOUDY	Construction on Big Four Rc adjacent to HV-2 & HV-3	Excavating WP2B/2A, Heritage removed drums & bulbs from site, demo-ing Pumphouse 3, Grading & rolling cell, Backfilling, De-watering, Hammering Concrete, Clearing CSX property line with Hydro-axe, Drill crew on-site to British wells.	Excavating WP2A, WP1A, MSB1AX. Backfilling, Grading & Rolling Cell. Finished clearing CSX property line with Hydro-Axe, Demo-ing Pumphouse 3, De-watering, Cutting Rebar, Hammering Concrete.	Water Truck & Sprinklers	*Potential lab error in regards to HV-3 sample. Having the lab re-test the sample.
HV-3 #0857	NWC	8671997	11/11/2014	8:26	11/12/2014	8:30	37	48	30.09	Quail Creek Station; Op-Tech Weater Sation	15.60	0.1200	3.3	13	19	WSW	.13 IN RAIN	Construction on Big Four Rc adjacent to HV-2 & HV-3	Excavating WP2A, WP1A, MSB1AX. Backfilling, Grading & Rolling Cell, Finished clearing CSX property line with Hydro-Axe, Demo-ing Pumphouse 3, De-watering, Cutting Rebar, Hammering Concrete.	Excavating WP2A, WP1A, MSB1AxX, MSB1A, MSB2A. Backfilling Lagoon, Grading Cell, Hammering Concrete, Cutting Rebar, Cleaning Haul Roads	Water Truck & Sprinklers	
HV-3 #0857	NWC	8672000	11/12/2014	8:40	11/13/2014	8:36	38	31	30.3	Quail Creek Station; Op-Tech Weater Sation	8.20	Non-Detect	2.4	9	15	WNW	OVERCAST	Construction on Big Four Rc adjacent to HV-2 & HV-3	Excavating WP2A, WP1A, MSB1AxX, MSB1A, MSB2A. Backfilling Lagoon, Grading Cell, Hammering Concrete, Cutting Rebar, Cleaning Haul Roads	Excavating WP1B, WP1D, MSB1AX, MSB1A. Backfilling lagoon, Grading cell, Hammering concrete, Cutting rebar, Cleaning roadways, De-watering	Water Truck & Sprinklers	

OP-TECH

2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-3

90 Day Rolling Average: 0.084

Weekly Average: 0.051 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results ug/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additoinal Notes
HV-3 #0857	NWC	8671703	11/13/2014	8:43	11/14/2014	8:45	38	23	30.33	Quail Creek Station; Op-Tech Weater Satlon	23.70	Non-Detect	2.4	8	11	WNW	OVERCAST	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP1B, WP1D, MSB1AX, MSB1A. Backfilling lagoon, Grading cell, Hammering concrete, Cutting rebar, Cleaning roadways, De-watering	Excavating MSB1AX, WP1DX, WP2B. Backfilling MSB2B with clean concrete. Backfilling Lagoon. Grading & Rolling cell. Surveyor on-site. Cutting Rebar. Cleaning haul roads. De-watering.	Water Truck & Sprinklers	
	NWC	8671706	11/14/2014	9:02	11/15/2014	8:16	38	24	30.4	Quail Creek Station; Op-Tech Weater Satlon	37.20	Non-Detect	1.3	9	12	WSW	OVERCAST	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating MSB1AX, WP1DX, WP2B. Backfilling MSB2B with clean concrete. Backfilling Lagoon. Grading & Rolling cell. Surveyor on-site. Cutting Rebar. Cleaning haul roads. De-watering.	Excavating WP2B, ND1, ND2. Pulling up concrete for backfill. Backfilling Lagoon. Grading & Rolling Cell.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671709	11/15/2014	8:19	11/16/2014	8:25	38	37	30.42	Quail Creek Station; Op-Tech Weater Satlon	35.00	0.1000	1.2	7	13	S	OVERCAST	Construction on Big Four Rd adjacent to HV-2 & HV-3	Excavating WP2B, ND1, ND2. Pulling up concrete for backfill. Backfilling Lagoon. Grading & Rolling Cell.	Excavating ND1, ND2, WP2BX. Consolidating rebar. De-watering. Cleaning roadways. Plowing snow.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671712	11/16/2014	8:30	11/17/2014	8:31	38	37	30.23	Quail Creek Station; Op-Tech Weater Satlon	24.30	0.0510	0.7	7	9	SSW	1.11 in rain/snowmelt	N/A	Excavating ND1, ND2, WP2BX. Consolidating rebar. De-watering. Cleaning roadways. Plowing snow.	Excavating WP2B, Existing Soil Pile. Created additional access road into cell. Grading and compacting cell. De-watering excavations. Plowing snow.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671715	11/17/2014	8:36	11/18/2014	8:37	37	37	30.23	Quail Creek Station; Op-Tech Weater Satlon	30.30	Non-Detect	0.7	6	9	sow	PT CLOUDY	N/A	Excavating WP2B, Existing Soil Pile. Created additional access road into cell. Grading and compacting cell. De-watering excavations. Plowing snow.	Excavating WP2B, ND1, MSB2A to WP2C, WP1DX to WP1C. Hammering concrete. Backfilling lagoon. Grading and rolling cell. Cutting rebar.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671719	11/18/2014	8:12	11/19/2014	8:26	38	20	30.24	Quail Creek Station; Op-Tech Weater Satlon	24.90	0.1300	5	23	23	WSW	OVERCAST	Citizens Working along Big Four	Excavating WP2B, ND1, MSB2A to WP2C, WP1DX to WP1C. Hammering concrete. Backfilling lagoon. Grading and rolling cell. Cutting rebar.	Excavating WP2C, WP1A. Grading cell, compaction testing. Topo of cell by surveyor. Cutting rebar. Drainage pipe delivered.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671722	11/19/2014	8:38	11/20/2014	8:23	39	38	30.21	Quail Creek Station; Op-Tech Weater Satlon	26.30	0.1300	4.8	23	23	SW	.08 IN SNOW	Citizens Working along Big Four	Excavating WP2C, WP1A. Grading cell, compaction testing. Topo of cell by surveyor. Cutting rebar. Drainage pipe delivered.	Excavating WP2A, WP1A, WP1D. Backfilling WP82X and rip-rap. Backfilling MSB2A and MSB2B and MSB1A. Cutting rebar. Filling sandbags. Grading cell, surveyor topo taken.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671733	11/20/2014	8:31	11/21/2014	8:20	44	35	30.49	Quail Creek Station; Op-Tech Weater Satlon	31.70	Non-Detect	1.9	13	13	SE	PT Cloudy	Citizens Working along Big Four	Excavating WP2A, WP1A, WP1D. Backfilling WP82X and rip-rap. Backfilling MSB2A and MSB2B and MSB1A. Cutting rebar. Filling sandbags. Grading cell, surveyor topo taken.	Clearing cell of jagged objects. Liner crew on-site to place geotextile and geomembrane. Testing conducted. Cutting rebar. Backfilling MSB Areas	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671727	11/21/2014	8:25	11/22/2014	8:49	38	35	30.49	Quail Creek Station; Op-Tech Weater Satlon	35.70	0.1100	1.9	13	13	SE	PT Cloudy	Citizens Working along Big Four	Clearing cell of jagged objects. Liner crew on-site to place geotextile and geomembrane. Testing conducted. Cutting rebar. Backfilling MSB Areas	Liner crew repairing liner & performing destructive/non-destructive testing. Line crew de-mob post testing. Consolidating equipment into conex box by Op-Tech, backfilling MSB areas, cutting and consolidating rebar.	Salting roads.	
HV-3 #0857	NWC	8671730	11/22/2014	8:55	11/23/2014	8:49	32	43	30.32	Quail Creek Station; Op-Tech Weater Satlon	17.20	Non-Detect	3.9	12	20	S	.06 IN RAIN	Citizens Working along Big Four	Liner crew repairing liner & performing destructive/non-destructive testing. Line crew de-mob post testing. Consolidating equipment into conex box by Op-Tech, backfilling MSB areas, cutting and consolidating rebar.	Non-Work Day	Salting roads	
HV-3 #0857	NWC	8671734	11/23/2014	8:50	11/24/2014	8:37	34	51	30.02	Quail Creek Station; Op-Tech Weater Satlon	ND	Non-Detect	3.4	12	20	SSE	1.42 IN RAIN	N/A	Non-Work Day	De-mob rental equipment, cleaning adler tanks, de-watering site, reports.	Salting roads	
HV-3 #0857	NWC	8671737	11/24/2014	8:45	11/24/2014	8:31	34	47	29.91	Quail Creek Station; Op-Tech Weater Satlon			7	28	28	SW	.14 IN RAIN	N/A	De-mob rental equipment, cleaning adler tanks, de-watering site, reports.	Crew Travel	Salting roads	
HV-3 #0857	NWC		11/25/2014	N/A	11/25/2014	N/A	N/A	35	30.14	Quail Creek Station; Op-Tech Weater Satlon	50.49	0.0310	4.3	15	18	WSW	OVERCAST	CREW OFF-SITE TRAVEL DAY				
HV-3 #0857	NWC	N/A	11/26/2014	N/A	11/27/2014	N/A	N/A			Quail Creek Station; Op-Tech Weater Satlon	50.49	0.0310	CREW OFF-SITE TRAVEL DAY									
HV-3 #0857	NWC	N/A	11/28/2014	N/A	11/28/2014	N/A	N/A			Quail Creek Station; Op-Tech Weater Satlon	50.49	0.0310	CREW OFF-SITE TRAVEL DAY									
HV-3 #0857	NWC	N/A	11/29/2014	N/A	11/29/2014	N/A	N/A			Quail Creek Station; Op-Tech Weater Satlon	50.49	0.0310	CREW OFF-SITE TRAVEL DAY									
HV-3 #0857	NWC	N/A	11/30/2014	N/A	11/30/2014	N/A	N/A			Quail Creek Station; Op-Tech Weater Satlon	50.49	0.0310	CREW OFF-SITE TRAVEL DAY									
HV-3 #0857	NWC	8671740	12/1/2014	8:17	12/2/2014	8:31	34	33	29.5	Quail Creek Station; Op-Tech Weater Satlon	5.00	Non-Detect	3.2	20	15	NNE	Cloudy and 0.1 in. of rain	Citizens Working along Big Four	Backfilling MSB areas and pumping water. Cleaning vessels. Mapping out liner seams and repairs.	No work performed on-site	Salting roads	
HV-3 #0857	NWC	8671743	12/2/2014	8:39	12/3/2014	8:27	32	29.5	29.5	Quail Creek Station; Op-Tech Weater Satlon	18.00	Non-Detect	2.3	13	13	SSE	Cloudy and 0.1 in. of rain	Citizens Working along Big Four	Backfilling MSB areas and pumping water. Cleaning vessels. Mapping out liner seams and repairs.	No work performed on-site	Salting roads	
HV-3 #0857	NWC	8671746	12/3/2014	8:27	12/4/2014	8:33	32	34	30.37	Quail Creek Station; Op-Tech Weater Satlon	25.80	Non-Detect	3.1	16	17	SW	Freezing rain	Citizens Working along Big Four	Backfilling MSB areas and pumping water. Cleaning vessels. Mapping out liner seams and repairs.	No work performed on-site	Salting roads	
HV-3 #0857	NWC	8671749	12/4/2014	8:38	12/5/2014	8:38	34	29.3	30.22	Quail Creek Station; Op-Tech Weater Satlon	16.40	Non-Detect	1.1	11	11	E	Freezing rain	Citizens Working along Big Four	Backfilling MSB areas and pumping water. Cleaning vessels. Mapping out liner seams and repairs.	No work performed on-site	Salting roads	
HV-3 #0857	NWC		12/5/2014		12/6/2014			35	30.17	Quail Creek Station; Op-Tech Weater Satlon	ND	Non-Detect	7	16	20	ENE	Rain all day	Citizens Working along Big Four	Backfilling MSB areas and pumping water. Cleaning vessels. Mapping out liner seams and repairs.	No work performed on-site	None	

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2014 HI-VOLUME AIR SAMPLING DATA TABLE HV-3

90 Day Rolling Average: 0.084

Weekly Average: 0.051 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Loset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additional Notes
HV-3 #0857	NWC	8671752	12/6/2014	8:26	12/7/2014	12:09	34	34	30.33	Quail Creek Station; Op-Tech Weater Sation	6.10	Non-Detect	14	25	32	NNE	Cloudy	Citizens Working along Big Four	Pumping water	No work performed on-site	None	
HV-3 #0857	NWC	8671755	12/7/2014	12:15	12/8/2014	8:54	33	34	30.52	Quail Creek Station; Op-Tech Weater Sation	6.70	Non-Detect	10	16	20	ENE	Cloudy	Citizens Working along Big Four	Pumping water	No work performed on-site	None	
HV-3 #0857	NWC	8671758	12/8/2014	9:00	12/9/2014	9:01	32	36.6	30.08	Quail Creek Station; Op-Tech Weater Sation	17.60	Non-Detect	18	18	N/A	WSW	Cloudy with light rain	Citizens Working along Big Four	Pumping water, backfilling WP areas, and lining side walls with poly	No work performed on-site	Used sweeper	
HV-3 #0857	NWC	8671761	12/9/2014	9:09	12/10/2014	9:10	32	35.1	30.29	Quail Creek Station; Op-Tech Weater Sation	6.50	Non-Detect	1.7	9	10	NW	Cloudy with no rain	None	Pumping water, backfilling WP areas, and sweeping roads	No work performed on-site	Used sweeper	
HV-3 #0857	NWC	8671764	12/10/2014	9:40	11/11/2014	8:54	30	30.7	30.25	Quail Creek Station; Op-Tech Weater Sation	10.50	Non-Detect	3	12	12	NW	INTERMITTENT CLOUDS	None	backfilling WP areas, sweeping roads, and laying poly	No work performed on-site	Used sweeper to lay water on roads	
HV-3 #0857	NWC	8671767	12/11/2014	9:00	12/12/2014	9:01	33	32.1	30.19	Quail Creek Station; Op-Tech Weater Sation	9.60	Non-Detect	1.9	12	12	WNW	Cloudy with no rain	None	Back filling, liner crew on site, working on drainage pipe, and load out concrete	No work performed on-site	Used sweeper to lay water on roads	
HV-3 #0857	NWC	8671773	12/13/2014	13:15	12/14/2014	9:15	30	40.6	30.18	Quail Creek Station; Op-Tech Weater Sation	44.50	Non-Detect	2	8	9	SSW	Cloudy with light rain	Hi-Vol #3 was repaired and setup to collect air sample.	Back filling, pumping water, cover cell with clay, pick up trash and sand bags	Grading and rolling	Used sweeper to lay water on roads	
HV-3 #0857	NWC	8671776	12/14/2014	9:21	12/15/2014	9:15	39	49	30.19	Quail Creek Station; Op-Tech Weater Sation	35.80	0.0540	2.1	8	11	S	Overcast	N/A	Installed temp fencing, sweeping roads, installed animal guards, covered south side of cell with cap fill	Washed adler tank, sweeping roads, air monitors shut down, hauled concrete off-site, covered top & east sides of cell with cap fill, compaction testing	Used sweepr and water	

Notes: HV-1 located downwind along S. Arlington Avenue; HV-2 & HV-3 located upwind on the western limit of the site adjecent to Citizen Gas Co.
Reporting limit for lead is .050 µg/m3; All Non-Detects are less than .050 µg/m3.

2014 HI-VOLUME AIR SAMPLING DATA TABLE Non-Work/Travel Days

90 Day Rolling Average: 0.019

Overall Average 0.051 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additoinal Notes
HV-1 #1902	NEC	6062333	8/28/2014	9:00	8/29/2014	9:00	35	76	30.1	Quail Creek Station; Op-Tech Weater Satlon	35.30	Non-Detect	0.7	7	8	NE				TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-1 #1902	NEC	6014693	8/29/2014	9:02	8/30/2014	9:02	36	75	30.1	Quail Creek Station; Op-Tech Weater Satlon	42.30	Non-Detect	0.6	10	10	S			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014759	9/17/2014	9:40	9/18/2014	9:18	37	57	30.11	Quail Creek Station; Op-Tech Weater Satlon	36.20	Non-Detect	0.4	6	10	S	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Continued excavating MSB2A, grading cell, rolling for compaction, hoe-ramming concrete and demo of pumphouses. Backfilling NW Area. Water samples taken. Weekly meeting. Site prep'd for travel.	Crew Travel. Local crew pumping water and air monitoring. Services performed on equipment.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014762	9/18/2014	9:23	9/19/2014	9:26	38	62	30.13	Quail Creek Station; Op-Tech Weater Satlon	26.00	Non-Detect	0.5	6	11	NNE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Crew Travel. Local crew pumping water and air monitoring. Services performed on equipment.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014765	9/19/2014	9:31	9/20/2014	9:25	38	64	30.19	Quail Creek Station; Op-Tech Weater Satlon	20.10	Non-Detect	0.7	9	12	ESE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Local Crew on-site for air monitoring and pumping water.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-1 #0014	NEC	6014768	9/20/2014	9:29	9/21/2014	9:17	36	67	30.06	Quail Creek Station; Op-Tech Weater Satlon	21.80	Non-Detect	2.1	12	16	SSW	.03 IN RAIN		Local Crew on-site for air monitoring and pumping water.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671926	10/15/2014	9:13	10/16/2014	8:47	40	55	29.78	Quail Creek Station; Op-Tech Weater Satlon	1.50	Non-Detect	1.1	8	12	SSE	.19 IN RAIN	Construction on Big Four Road near HV2 & HV3	Mixing lid with excavated materials, grading cell, seeding around cell with winter rye and straw overlay, setting up hi-vols for travel, de-watering site, consolidating concrete, backfilling FLAB with granular fill.	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671929	10/16/2014	8:54	10/17/2014	9:02	38	58	29.86	Quail Creek Station; Op-Tech Weater Satlon	22.30	Non-Detect	1.1	9	12	SW	.02 IN RAIN		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671932	10/17/2014	3:11	10/18/2014	9:30	38	60	29.87	Quail Creek Station; Op-Tech Weater Satlon	34.20	Non-Detect	2.4	12	16	SW	PT CLOUDY		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671935	10/18/2014	9:37	10/19/2014	8:54	38	51	30.18	Quail Creek Station; Op-Tech Weater Satlon	5.80	Non-Detect	1.6	9	13	NNW	.05 IN RAIN		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-1 #0014	NEC	8671938	10/19/2014	9:00	10/20/2014	8:05	38	50	30.25	Quail Creek Station; Op-Tech Weater Satlon	17.40	Non-Detect	1.3	9	10	SSW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	TRAVEL - NO WORK PERFORMED	Excavating MSB2A & B, and Lagoon. Dewatering site, cutting and consolidating rebar, cleaning roadways, mixing materials with lid in cell, grading cell, surveyor on-site, soil and water samples taken.	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062331	8/27/2014	9:15	8/28/2014	9:06	42	81	30.11	Quail Creek Station; Op-Tech Weater Satlon	34.70	Non-Detect	0.7	8	10	NNE	PT CLOUDY	Citizens performing construction activities adjacent to HV-2 & HV-3	Grading, rolling, and surveying cell. Fencing installed along CSX North limit, Electrican on-site to discuss hi-vol power set-up, pumped water into lagoon & treated in Adler tank, pulled cattails from lagoon & stockpiled within poly, weekly call-in meeting, built stone access into cell area, hoe-ramming concrete with sprinklers to mitigate dust	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-2 #0237	SWC	6062334	8/28/2014	9:08	8/29/2014	9:08	40	76	30.1	Quail Creek Station; Op-Tech Weater Satlon	23.00	Non-Detect	0.7	7	8	NE			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-2 #0237	SWC	6014694	8/29/2014	9:10	8/30/2014	9:08	40	75	30.1	Quail Creek Station; Op-Tech Weater Satlon	25.60	Non-Detect	0.6	10	10	S			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014763	9/18/2014	9:32	9/19/2014	9:35	41	62	30.13	Quail Creek Station; Op-Tech Weater Satlon	18.40	Non-Detect	0.5	6	11	NNE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Crew Travel. Local crew pumping water and air monitoring. Services performed on equipment.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014766	9/19/2014	9:41	9/20/2014	9:33	43	64	30.19	Quail Creek Station; Op-Tech Weater Satlon	18.20	Non-Detect	0.7	9	12	ESE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Local Crew on-site for air monitoring and pumping water.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-2 #6200	SWC	6014769	9/20/2014	9:37	9/21/2014	9:26	42	67	30.06	Quail Creek Station; Op-Tech Weater Satlon	20.50	Non-Detect	2.1	12	16	SSW	.03 IN RAIN		Local Crew on-site for air monitoring and pumping water.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671927	10/15/2014	9:23	10/16/2014	9:05	40	55	29.78	Quail Creek Station; Op-Tech Weater Satlon	ND	Non-Detect	1.1	8	12	SSE	.19 IN RAIN	Construction on Big Four Road near HV2 & HV3	Mixing lid with excavated materials, grading cell, seeding around cell with winter rye and straw overlay, setting up hi-vols for travel, de-watering site, consolidating concrete, backfilling FLAB with granular fill.	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671930	10/16/2014	9:10	10/17/2014	9:17	32	58	29.86	Quail Creek Station; Op-Tech Weater Satlon	41.90	Non-Detect	1.1	9	12	SW	.02 IN RAIN		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671933	10/17/2014	9:24	10/18/2014	9:43	40	60	29.87	Quail Creek Station; Op-Tech Weater Satlon	54.50	0.0540	2.4	12	16	SW	PT CLOUDY		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671936	10/18/2014	9:47	10/19/2014	9:07	37	51	30.18	Quail Creek Station; Op-Tech Weater Satlon	5.40	Non-Detect	1.6	9	13	NNW	.05 IN RAIN		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-2 #6200	SWC	8671939	10/19/2014	9:16	10/20/2014	9:07	36	50	30.25	Quail Creek Station; Op-Tech Weater Satlon	12.40	Non-Detect	1.3	9	10	SSW	PT CLOUDY	Construction on Big Four Road near HV2 & HV3	TRAVEL - NO WORK PERFORMED	Excavating MSB2A & B, and Lagoon. Dewatering site, cutting and consolidating rebar, cleaning roadways, mixing materials with lid in cell, grading cell, surveyor on-site, soil and water samples taken.	Water Truck & Sprinklers	
HV-3 #0857	NWC	6062332	8/27/2014	9:22	8/28/2014	9:13	38	81	30.11	Quail Creek Station; Op-Tech Weater Satlon	42.90	0.0630	0.7	8	10	NNE	PT CLOUDY	Citizens performing construction activities adjacent to HV-2 & HV-3	Grading, rolling, and surveying cell. Fencing installed along CSX North limit, Electrican on-site to discuss hi-vol power set-up, pumped water into lagoon & treated in Adler tank, pulled cattails from lagoon & stockpiled within poly, weekly call-in meeting, built stone access into cell area, hoe-ramming concrete with sprinklers to mitigate dust	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014692	8/28/2014	9:15	8/29/2014	9:15	38	76	30.1	Quail Creek Station; Op-Tech Weater Satlon	10.80	Non-Detect	0.7	7	8	NE			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014695	8/29/2014	9:17	8/30/2014	9:10	38	75	30.1	Quail Creek Station; Op-Tech Weater Satlon	124.00	Non-Detect	0.6	10	10	S			TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014764	9/18/2014	9:40	9/19/2014	9:45	38	62	30.13	Quail Creek Station; Op-Tech Weater Satlon	21.10	Non-Detect	0.5	6	11	NNE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Crew Travel. Local crew pumping water and air monitoring. Services performed on equipment.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	

2014 HI-VOLUME AIR SAMPLING DATA TABLE Non-Work/Travel Days

90 Day Rolling Average: 0.019

Overall Average 0.051 *Detection Limit = 0.050

Map ID	General Location	Filter ID#	Start Date	Start Time	Stop Date	Stop Time	Flow Rate Average (CFM)	Average On/Off Temperature	Average On/Off Barometric Pressure	Weather Source	TSP Results µg/m3	Lead Results (Reporting Limit .050 µg/m3)	Avg Wind Speed	Max Wind	Max Gust	Wind Direction	Weather Conditions	Notes/Upset Conditions	Work Activities Start of Sampling	Work Activities End of Sampling	Dust Mitigation Efforts	Additoinal Notes
HV-3 #0857	NWC	6014767	9/19/2014	9:49	9/20/2014	9:39	38	64	30.19	Quail Creek Station; Op-Tech Weater Satlon	26.80	Non-Detect	0.7	9	12	ESE	PT CLOUDY	Citizens working adjacent to HV-2 & HV-3	Local Crew on-site for air monitoring and pumping water.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-3 #0857	NWC	6014770	9/20/2014	9:44	9/21/2014	9:33	38	67	30.06	Quail Creek Station; Op-Tech Weater Satlon	25.60	Non-Detect	2.1	12	16	SSW	.03 IN RAIN		Local Crew on-site for air monitoring and pumping water.	Local Crew on-site for air monitoring and pumping water.	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671928	10/15/2014	9:32	10/16/2014	9:19	38	62	29.74	Quail Creek Station; Op-Tech Weater Satlon	11.30	Non-Detect	3.1	19	19	S	.54 IN RAIN	Construction on Big Four Road near HV2 & HV3	Mixing lkd with excavated materials, grading cell, seeding around cell with winter rye and straw overlay, setting up hi-vols for travel, de-watering site, consolidating concrete, backfilling FL48 with granular fill.	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671931	10/16/2014	9:32	10/17/2014	9:30	38	55	29.78	Quail Creek Station; Op-Tech Weater Satlon	7.00	Non-Detect	1.1	8	12	SSE	.19 IN RAIN	Construction on Big Four Road near HV2 & HV3	TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671934	10/17/2014	9:39	10/18/2014	9:53	38	58	29.86	Quail Creek Station; Op-Tech Weater Satlon	19.50	Non-Detect	1.1	9	12	SW	.02 IN RAIN		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671937	10/18/2014	10:00	10/19/2014	9:21	38	60	29.87	Quail Creek Station; Op-Tech Weater Satlon	1.80	Non-Detect	2.4	12	16	SW	PT CLOUDY		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	
HV-3 #0857	NWC	8671940	10/19/2014	9:30	10/20/2014	9:23	38	51	30.18	Quail Creek Station; Op-Tech Weater Satlon	10.00	Non-Detect	1.6	9	13	NNW	.05 IN RAIN		TRAVEL - NO WORK PERFORMED	TRAVEL - NO WORK PERFORMED	Water Truck & Sprinklers	

2015 Hi-Volume Sampling Data Table- HV-1

Sampler ID:	Hi-Vol #1
Sampler Location:	Northeast Corner
Weekly Lead Average:	0.050
90 Day Rolling Average:	0.048
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
8671777	28-Aug	29-Aug	1141	742	29.9	ND	40	Clear - Overcast	68	30.14	1	11	11	East	Scraping Cap Soil from CCB & Stockpiling. Building berm extension.	Tow-behind water tote.	
Non-Work Day	29-Aug	30-Aug			31.8	0.037											
Non-Work Day	30-Aug	31-Aug			31.8	0.037											
8671782	31-Aug	1-Sep	826	739	49.5	ND	40	Clear	77	30.08	2	16	16	SSW	Excavated CGE 5. Continued scraping around CCB & stockpiling. Continued building berm extension.	Tow-behind water tote.	
8671785	1-Sep	2-Sep	744	844	57.1	ND	40	Overcast	77	30.07	2	16	16	SSW	Continued scraping cap soil and grading CCB extension and building berm. Stockpiling cap soil at Lagoon. Surveyed CGE-5, layout of excavation areas.	Tow-behind water tote.	
8671788	2-Sep	3-Sep	848	740	73.8	ND	40	Humid - PT Cloudy	78	30.05	1	16	16	SSW	Backfilled CGE-5 with #53C Stone. Continued to grade and build CCB extension. Repaired silt fence along western limits.	Tow-behind water tote.	
Non-Work Day	3-Sep	4-Sep			31.809	0.037									Limited crew and limited site-work. Built road sign frames. Weed-whacking western limit for insect (tick) control.		
Non-Work Day	4-Sep	5-Sep			31.809	0.037											
Non-Work Day	5-Sep	6-Sep			31.809	0.037											
Non-Work Day	6-Sep	7-Sep			31.809	0.037											
Non-Work Day	7-Sep	8-Sep			31.809	0.037											
Non-Work Day	8-Sep	9-Sep			31.809	0.037											
8671791	9-Sep	10-Sep	831	836	24.3	ND	40	.14 in Rain	69	29.93	1	11	11	NNW	Backfilling Lagoon; Removing geotextile from CCB.	Rain	
8671794	10-Sep	11-Sep	842	814	44.1	ND	40	Overcast	70	29.91	2	16	16	North	Backfilling Lagoon; Removing poly liner from CCB and placing within cell.	Tow-behind water tote.	HV 3 down due to power loss; Restored on 9/11.
8671797	11-Sep	12-Sep	818	802	16.3	ND	40	.24 in Rain	62	29.91	2	16	16	North	Backfilling Lagoon; Excavating FL1	Rain	HV 3 down due to power loss; Restored on 9/11.
8671800	12-Sep	13-Sep	804	812	13.6	ND	40	Overcast	58	29.98	4	24	24	NW	Backfilling Lagoon; Excavating FL1, FL2, WP1A; Grading CCB.	Tow-behind water tote.	
Non-Work Day	13-Sep	14-Sep			31.809	0.037											
9115503	14-Sep	15-Sep	741	628	33.3	ND	40	Clear	61	30.16	2	19	19	South	Re-Dig on WP1A, Continued excavating FL2. Began excavating WP3A and removed poles. Pulled up concrete to be sampled for on-site granular fill. Grading and rolling CCB.	Tow-behind water tote.	
9115506	15-Sep	16-Sep	631	830	63.6	0.08	40	Clear	66	30.28	1	16	16	SSE	Continued excavating FL2. Began excavating AA1 - Citizens Gas walk through for High Pressure Line. Continued grading and rolling CCB.	Tow-behind water tote.	
9115509	16-Sep	17-Sep	832	838	84.4	0.13	40	Clear	68	30.25	1	16	16	South	Continued excavating AA1 and FL2. Continued grading and compacting CCB. Concrete sampling for on-site fill. Shaping CCB 3:1 slope; swale maintenance.	Tow-behind water tote.	

2015 Hi-Volume Sampling Data Table- HV-1

Sampler ID:	Hi-Vol #1
Sampler Location:	Northeast Corner
Weekly Lead Average:	0.050
90 Day Rolling Average:	0.048
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
9115512	17-Sep	18-Sep	840	841	26.4	ND	40	Clear	69	30.09	2	20	20	SSW	Excavating AA1 - AA5. Continued grading and compacting CCB. Built berm around WP3A until backfill is completed..	Tow-behind water tote.	
9115515	18-Sep	19-Sep	842	742	38.8	ND	40	.15 in Rain	71	29.94	2	19	19	South	Excavating AA5 and AA6. Continued grading and compacting CCB. Overturned trees with excavator adjacent to WP2B.	Tow-behind water tote.	Citizens Gas creating dust storm blowing toward Hi-Vol 2.
9115518	19-Sep	20-Sep	745	905	6.8	ND	40	.66 in Rain	68	29.94	4	35	35	WNW	No excavation performed due to heavy rainfall. De-watering site.	N/A	
9115521	20-Sep	21-Sep	909	817	18.4	ND	40	Clear	63	30.14	3	19	19	NNE	Excavating AA5, AA6, DW1. De-watering site. Measured installed/repaired silt fence from previous week. Reviewed JHA for chainsaw cutting. Coned off excavations.	Tow-behind water tote.	
9115524	21-Sep	22-Sep	821	756	33.5	ND	40	Clear	61	30.13	1	12	12	North	Excavating DW1 and DW2. Grading and compacting CCB. AECOM/CSX walk-down. All-hands safety lunch. Cut up trees with chainsaw. Set-up additional cones along excavated areas.	Tow-behind water tote.	
9115527	22-Sep	23-Sep	758	831	26.1	ND	41	Clear	63	30.18	1	15	15	North	Re-dig for DW1 , DW2, and AA5. Began FL3. Continued grading CCB. Hydro-axe cutting up trees. Water sample taken for POTW discharge.	Tow-behind water tote.	
9115530	23-Sep	24-Sep	833	902	53.5	ND	40	Clear	66	30.23	1	14	14	NNE	Excavating FL3. Continued grading and compacting CCB. Weekly Meeting. Surveying AA1-6, DW1, DW2. Partial Crew Travel.	Tow-behind water tote.	
Non-Intrusive Work Day	24-Sep	25-Sep			31.809	0.037		Clear	68	30.2	1	16	16	NE	Collected Hi-Vols. Partial crew on-site - non intrusive activities. Cut-up trees and placed into roll offs. Placed concrete on-site fill into WP1A.	N/A	
Non-Intrusive Work Day	25-Sep	26-Sep			31.809	0.037		Clear	68	30.15	2	24	24	NE	Partial crew on-site - non intrusive activities. Placed trees into roll-offs. Placed 15 loads of Cap Fill into WP1A.	N/A	
Non-Work Day	26-Sep	27-Sep			31.809	0.037											
Non-Work Day	27-Sep	28-Sep			31.809	0.037											
9115533	28-Sep	29-Sep	840	900	18.4	ND	41	.01 in Rain; Clear	72	30.02	0	11	11	SSW	Backfilling DW1. Excavating FL3. Dumped roll-offs into CCB. Hydro-axe clearing AMT1. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
9115536	29-Sep	30-Sep	903	825	23.3	ND	40	.24 in Rain	68	29.93	2	26	26	North	Backfilling DW1 & DW2. Excavating FL3, FL4, AMT2. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
9115539	30-Sep	1-Oct	827	910	15	ND	40	.01 in Rain; Overcast	61	30	6	23	23	North	Backfilling DW and AA areas. Excavating FL4, AMT2. Surveying. Grading and compacting CCB. Weekly Meeting.	Water Truck; Water Tote as needed.	
9115542	1-Oct	2-Oct	913	909	16.1	ND	41	Overcast	56	30.17	8	28	28	NNE	Backfilling DW and AA areas. Excavating FL4, AMT2, AMT1, FL5. Grading and Compacting CCB.	Water Truck; Water Tote as needed.	

2015 Hi-Volume Sampling Data Table- HV-1

Sampler ID:	Hi-Vol #1
Sampler Location:	Northeast Corner
Weekly Lead Average:	0.050
90 Day Rolling Average:	0.048
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
9115545	2-Oct	3-Oct	916	902	19.5	ND	40	.18 in Rain	54	30.16	9	31	31	NNE	Backfilling with Top Soil - DW1, AA3-6, Lagoon. Excavating FL5, AMT2, AMT1. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
9115548	3-Oct	4-Oct	905	842	5.8	ND	40	.17 in Rain	48	30.09	7	28	22	NNE	Spreading top soil in lagoon. Excavating FL5, AMT3, AMT2 - Vac Truck used for AMT3. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
Non-Work Day	4-Oct	5-Oct			31.809	0.037											
9115551	5-Oct	6-Oct	852	802	71.5	ND	41	Overcast	65	30.12	2	14	14	NNE	Excavating AMT2, FL5, ND2. Compacting and grading CCB. Backfilling AA areas with top soil.	Water Truck; Water Tote as needed.	
9115554	6-Oct	7-Oct	804	802	44.6	ND	41	Clear	64	30.11	2	12	12	NNW	Excavating AMT2, ND2, ND1, co-mingled tree/soil pile. Compacting and grading CCB. Backfilling AA and Lagoon with top soil.	Water Truck; Water Tote as needed.	
9115557	7-Oct	8-Oct	805	826	70.2	ND	40	Clear	66	30.13	1	9	9	North	Excavating ND1, ND2, DW1, HWMU areas. Compacting and grading CCB. Backfilling Lagoon with Structural Fill. Backfilling DW areas with top soil. Placed rip rap along spillways.	Water Truck; Water Tote as needed.	
9115560	8-Oct	9-Oct	829	830	80.7	0.059	40	Clear	67	30.05	2	18	18	SSW	Excavating HWMU areas and Rail Spur. Backfilling lagoon with Structural Fill. Rough grading AA and DW areas or sod prep. Cutting FL for final grading and stock piling soil for fill. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
9115563	9-Oct	10-Oct	832	824	55.4	ND	40	Clear	62	30.07	4	20	20	NW	Sod placement along AA and DW areas. Backfilling Lagoon with top soil. Hoe-ramming concrete. Cutting FL areas and stockpiling for fill. Watering Sod with water truck. Clearing CSX with hydro-axe. Placed stone along DW area.	Water Truck; Water Tote as needed.	Citizens Gas paving adjacent to HV-2.
9115566	10-Oct	11-Oct	826	757	38.3	ND	40	Clear	53	30.16	1	12	12	North	Watering sod with water truck. Backfilling Lagoon with top soil. Placing stone along DW area. Cutting FL areas and stockpiling for fill. Hoe-ramming concrete.	Water Truck; Water Tote as needed.	
Non-Work Day	11-Oct	12-Oct			31.809	0.037											
9115569	12-Oct	13-Oct	825	752	81.9	ND	40	Clear/Overcast	64	29.69	2	15	24	SSW	Backfilling AMT areas. Stockpiling on-site soil for backfill from FL areas. Placing stone along DW areas. Placing concrete within FL5 and backfilling with soil for final grading. Placed temp. seeding along Lagoon slope. Rough grading Lagoon.	Water Truck; Water Tote as needed.	Strip of Sod driven through adjacent to IPL meter - over seeded and straw placed on-top.
9115572	13-Oct	14-Oct	754	808	65.4	0.061	40	Clear/Overcast	55	29.74	3	23	23	West	Backfilling AMT. Backfilling FL5 with concrete and soil for final grading. Stockpiling on-site soil material. Discharged to the POTW. Excavating HWMU area and MSB1A - pockets of rebar and concrete found.	Water Truck; Water Tote as needed.	Citizens Gas street sweeping adjacent to HV-2.

2015 Hi-Volume Sampling Data Table- HV-1

Sampler ID:	Hi-Vol #1
Sampler Location:	Northeast Corner
Weekly Lead Average:	0.050
90 Day Rolling Average:	0.048
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
9115575	14-Oct	15-Oct	811	1230			40	Clear	50	30	2	15	18	NW	Backfilling AMT areas. Capital fence on-site to remove temp fencing. Backfilling FL areas to final grading with on-site fill. Uncovered slabs of concrete and footers. Prep for crew travel.	Water Truck; Water Tote as needed.	
Non-Work Day	15-Oct	16-Oct			31.809	0.037									Backfilling AMT areas. Watered Sod. Bloodhound markout.		
Non-Work Day	16-Oct	17-Oct			31.809	0.037									Built berm along AMT1. Set-up pump to de-water CSX area.		
Non-Work Day	17-Oct	18-Oct			31.809	0.037											
Non-Work Day	18-Oct	19-Oct			31.809	0.037											
9115578	19-Oct	20-Oct	928	849	29.6	ND	41	Clear	50	30.35	3	26	26	South	Backfilling AMT. Hoe-ramming Concrete. Excavating MSB1A. De-watering CSX. Backfilling/grading FL areas.	Water Truck; Water Tote as needed.	
9115581	20-Oct	21-Oct	850	830	37.4	ND	38	Clear	57	30.25	2	19	22	SSW	Backfilling AMT. Placing Top Soil around CCB. Hoe-ramming concrete. Excavating CG1. Gate installation. Clearing CSX ditch line brush.	Water Truck; Water Tote as needed.	
9115584	21-Oct	22-Oct	832	809	51.4	0.051	40	Clear	62	30.24	2	26	26	South	Excavating CG1 CG2. Placing top soil around CCB and FL areas. Hoe-ramming concrete. Weekly Call-in Meeting. Gate finished.	Water Truck; Water Tote as needed.	
9115587	22-Oct	23-Oct	811	810	36	0.16	42	Clear	65	30.22	2	19	19	West	Excavating CSX - flagmen on-site. Placed top soil along FL areas. Hoe-ramming concrete. Placed concrete in CCB to mix with wet materials. Rock hounding top soil.	Water Truck; Water Tote as needed.	
9115590	23-Oct	24-Oct	812	823	10.8	ND	41	Clear	62	30.14	1	14	12	ESE	Hoe-ramming concrete. Clearing brush behind AA1 w/Hydro Axe. Excavating Basin #2 and sending to CCB. Grading and compacting CCB. Watering sod. ECM delivered. Seeded CCB, CG1, CG2, and Lagoon - not hydro seeded.	Water Truck; Water Tote as needed.	
9115593	24-Oct	25-Oct	825	825	17.4	ND	40	.22 in Rain	64	30	3	26	26	SSW	Hoe-ramming concrete. Excavating Basin #2. Decon Adler Tank. Placed concrete in CCB to solidify material.	Water Truck and Rain.	
Non-Work Day	25-Oct	26-Oct			31.809	0.037											
9115596	26-Oct	27-Oct	837	858	11.1	ND	41	Clear	52	30.35	2	22	22	ENE	Hoe-ramming concrete. Cutting Rebar. Roll offs picked up and replaced. Mixed 18 loads of concrete into the CCB to solidify material. Rock hounding top soil along FL area. Backfilling HWMU areas with concrete and on-site fill.	Water Truck	
9115599	27-Oct	28-Oct	901	838	7.6	ND	40	1.31 in Rain	51	30.07	3	26	26	ENE	Hoe-ramming concrete at Truck Loading Dock Area. Cutting rebar. Placed 3 check dams along CSX/ND2 ditch line. Re-excavated CSX - Flagmen on-site. De-watering.	Rain	

2015 Hi-Volume Sampling Data Table- HV-1

Sampler ID:	Hi-Vol #1
Sampler Location:	Northeast Corner
Weekly Lead Average:	0.050
90 Day Rolling Average:	0.048
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
9112102	28-Oct	29-Oct	841	833	4.2	ND	40	.64 in Rain	55	29.68	5	24	24	SSW	Hoe-ramming concrete at Truck Loading Dock Area. Cutting rebar. De-watering site. Capital City Fence installing at CGE1-4. Backfilled Truck Loading Dock Area w/concrete & soil.	Rain	
9112105	29-Oct	30-Oct	835	830	14	ND	40	Overcast	44	29.87	4	28	28	WSW	Backfilling Truck Loading Dock Area w/on-site fill. De-watering. Cutting rebar. Equip Maintenance. Capital City Fence installing at CGE1-4. Clearing behind South fence line w/Hydro-Axe.	Water Truck as needed.	
9112108	30-Oct	31-Oct	834	839	26.3	ND	40	Overcast	46	30.14	0	12	12	SW	Backfilling Truck Loading Doc Area with on-site fill. Capital City Fencing owns-tie to install at CGE1-4. Stop-work due to live wires found - Citizens Gas brought electrician on-site to remove power to live lines. Clearing behind South fence line with Hydro-axe. De-watering. Placed rip rap at CGE1-4 for truck exit.	Water Truck as needed.	
9112111	31-Oct	1-Nov	841	826	9.6	ND	40	.07 in Rain	49	30	2	20	20	SSE	Excavating CGE1&2. Installing barbed wire on fencing. Shaping CCB. Backfilling with structural fill. De-watering. Cleaning roadways & haul roads.	Water Truck as needed.	
9112114	1-Nov	2-Nov	828	905	31.8	ND	40	.02 in Rain	45	29.96	2	11	16	SW	Excavating CGE2&3. Shaping CCB. Cleaning roadways & haul roads. De-watering.	Water Truck as needed.	
9112117	2-Nov	3-Nov	907	830	29.8	ND	40	Clear	54	30.06	0	12	12	ESE	Excavating CGE2 & 1. Shaping CCB. Backfilling for final grading. Sweeping roadways.	Water Truck as needed.	
9112120	3-Nov	4-Nov	832	950	50	ND	40	Clear	56	30.14	1	9	9	SSE	Excavating CGE2 & 1. Shaping CCB. Backfilling for final grading. Sweeping roadways. Filled in pot holes with asphalt along main roadway.	Water Truck as needed.	
9112123	4-Nov	5-Nov	951	730	26.8	ND	40	Clear	63	30.18	1	15	15	SSW	Shaping CCB. Hoe-ramming weigh station. Set-up pumps for CSX. Cutting rebar.	Water Truck as needed.	
Non-Work Day	5-Nov	6-Nov			31.809	0.037									Limited crew. Backfilling for final grading. Hoe-ramming weigh station. Hydro seeding by subcontractor.	Water Truck as needed.	
Non-Work Day	6-Nov	7-Nov			31.809	0.037									Hoe-ramming and backfilling weigh station. De-watering CSX. Decon Adler Tank.		
Non-Work Day	7-Nov	8-Nov			31.809	0.037									De-watering		
Non-Work Day	8-Nov	9-Nov			31.809	0.037											
9112126	9-Nov	10-Nov	839	913	13.9	ND	40	.38 in Rain	44	30.28	1	14	14	East	Shaping CCB. De-watering. Grading wetland. Vac Trucking material from manhole to CCB. ECM install on CCB North.	Ground conditions wet from rain.	

2015 Hi-Volume Sampling Data Table- HV-1

Sampler ID:	Hi-Vol #1
Sampler Location:	Northeast Corner
Weekly Lead Average:	0.050
90 Day Rolling Average:	0.048
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
9112129	10-Nov	11-Nov	915	841	36	ND	40	.03 in Rain	44	30.13	1	9	9	SSW	Shaping CCB. De-watering. Filling manhole with concrete/stone. Cutting rebar. Liner Crew filling sandbags. ECM Install on CCB North.	Ground conditions wet from rain.	
9112150	11-Nov	12-Nov	843	944	20.6	ND	40	.11 in Rain	47	29.86	3	24	24	SE	Liner crew filling sandbags. Demob due to CCB moisture. NRC overturning CCB to dry and re-shape. Backfill CGE1&2 w/Structrual Fill. High Wind Advisory. De-watering.	Ground conditions wet from rain.	
9112147	12-Nov	13-Nov	946	941	15.4	ND	40	Overcast	51	29.76	8	35	35	SW	Overturning CCB to dry and re-shape. Backfilling CGE 2-4 w/Structural Fill. Raised hydrant. High Wind Advisory. De-watering.	Hydrant being raised.	
9112144	13-Nov	14-Nov	956	932	18.7	ND	40	Overcast	43	30.15	5	34	34	West	Backfilling CGE 3-4 with stone, structural fill, and top soil. Backfill around hydrant with structural fill. De-watering. Overturning and re-shaping CCB. IPL fixed meter and street lights. Stockpiling cap fill.	Hydrant being raised.	
9112141	14-Nov	15-Nov	926	750	31	ND	40	Clear	40	30.38	2	16	16	South	Final shaping of CCB. Grading CGE and rock hounding. De-watering. Liner crew re-mob & installed Geotextile. Grading wetland area.	N/A	Hi-Vol 2 down due to pump.
9112140	15-Nov	16-Nov	751	833	37.8	ND	40	Clear	48	30.38	2	20	20	SSW	Grading CGE and rockhounding. Liner crew laying geomembrane liner on CCB. Grading swale adjacent to CCB West.	N/A	Hi-Vol 2 down due to pump.

2015 Hi-Volume Sampling Data Table- HV-2

Sampler ID:	Hi-Vol #2
Sampler Location:	Southwest Corner
Weekly Lead Average:	0.047
90 Day Rolling Average:	0.072
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
8671778	27-Aug	28-Aug	1415	811	40.5	ND	38	Clear - Overcast	68	30.14	1	11	11	East	Scraping Cap Soil from CCB & Stockpiling. Building berm extension.	Tow-behind water tote.	
8671780	28-Aug	29-Aug	814	730	51.2	0.05	38	Clear - Overcast	68	30.14	1	11	11	East	Scraping Cap Soil from CCB & Stockpiling. Building berm extension.	Tow-behind water tote.	
Non-Work Day	29-Aug	30-Aug			33.758	0.038											
Non-Work Day	30-Aug	31-Aug			33.758	0.038											
8671783	31-Aug	1-Sep	805	808	38.2	ND	38	Clear	77	30.08	2	16	16	SSW	Excavated CGE 5. Continued scraping around CCB & stockpiling. Continued building berm extension.	Tow-behind water tote.	
8671786	1-Sep	2-Sep	811	817	37.2	ND	38	Overcast	77	30.07	2	16	16	SSW	Continued scraping cap soil and grading CCB extension and building berm. Stockpiling cap soil at Lagoon. Surveyed CGE-5, layout of excavation areas.	Tow-behind water tote.	
8671789	2-Sep	3-Sep	820	752	71.8	ND	38	Humid - PT Cloudy	78	30.05	1	16	16	SSW	Backfilled CGE-5 with #53C Stone. Continued to grade and build CCB extension. Repaired silt fence along western limits.	Tow-behind water tote.	
Non-Work Day	3-Sep	4-Sep			31.809	0.037									Limited crew and limited site-work. Built road sign frames. Weed-whacking western limit for insect (tick) control.		
Non-Work Day	4-Sep	5-Sep			33.758	0.038											
Non-Work Day	5-Sep	6-Sep			33.758	0.038											
Non-Work Day	6-Sep	7-Sep			33.758	0.038											
Non-Work Day	7-Sep	8-Sep			33.758	0.038											
Non-Work Day	8-Sep	9-Sep			33.758	0.038											
8671792	9-Sep	10-Sep	838	850	16.6	ND	38	.14 in Rain	69	29.93	1	11	11	NNW	Backfilling Lagoon; Removing geotextile from CCB.	Rain	
8671795	10-Sep	11-Sep	855	823	10.9	ND	39	Overcast	70	29.91	2	16	16	North	Backfilling Lagoon; Removing poly liner from CCB and placing within cell.	Tow-behind water tote.	HV 3 down due to power loss; Restored on 9/11.
8671798	11-Sep	12-Sep	827	809	10	ND	39	.24 in Rain	62	29.91	2	16	16	North	Backfilling Lagoon; Excavating FL1	Rain	HV 3 down due to power loss; Restored on 9/11.
9115501	12-Sep	13-Sep	812	818	6.7	ND	38	Overcast	58	29.98	4	24	24	NW	Backfilling Lagoon; Excavating FL1, FL2, WP1A; Grading CCB.	Tow-behind water tote.	
Non-Work Day	13-Sep	14-Sep			33.758	0.038											
9115504	14-Sep	15-Sep	747	634	19	ND	38	Clear	61	30.16	2	19	19	South	Re-Dig on WP1A, Continued excavating FL2. Began excavating WP3A and removed poles. Pulled up concrete to be sampled for on-site granular fill. Grading and rolling CCB.	Tow-behind water tote.	
9115507	15-Sep	16-Sep	637	837	28.3	ND	38	Clear	66	30.28	1	16	16	SSE	Continued excavating FL2. Began excavating AA1 - Citizens Gas walk through for High Pressure Line. Continued grading and rolling CCB.	Tow-behind water tote.	
9115510	16-Sep	17-Sep	840	844	27.8	ND	38	Clear	68	30.25	1	16	16	South	Continued excavating AA1 and FL2. Continued grading and compacting CCB. Concrete sampling for on-site fill. Shaping CCB 3:1 slope; swale maintenance.	Tow-behind water tote.	
9115513	17-Sep	18-Sep	845	846	20.2	ND	38	Clear	69	30.09	2	20	20	SSW	Excavating AA1 - AA5. Continued grading and compacting CCB. Built berm around WP3A until backfill is completed..	Tow-behind water tote.	
9115516	18-Sep	19-Sep	847	758	31.8	ND	38	.15 in Rain	71	29.94	2	19	19	South	Excavating AA5 and AA6. Continued grading and compacting CCB. Overturned trees with excavator adjacent to WP2B.	Tow-behind water tote.	Citizens Gas creating dust storm blowing toward Hi-Vol 2.
9115519	19-Sep	20-Sep	801	913	9.1	ND	38	.66 in Rain	68	29.94	4	35	35	WNW	No excavation performed due to heavy rainfall. De-watering site.	N/A	
9115522	20-Sep	21-Sep	915	825	11.1	ND	38	Clear	63	30.14	3	19	19	NNE	Excavating AA5, AA6, DW1. De-watering site. Measured installed/repaired silt fence from previous week. Reviewed JHA for chainsaw cutting. Coned off excavations.	Tow-behind water tote.	

2015 Hi-Volume Sampling Data Table- HV-2

Sampler ID:	Hi-Vol #2
Sampler Location:	Southwest Corner
Weekly Lead Average:	0.047
90 Day Rolling Average:	0.072
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
9115525	21-Sep	22-Sep	829	736	15.8	ND	38	Clear	61	30.13	1	12	12	North	Excavating DW1 and DW2. Grading and compacting CCB. AECOM/CSX walk-down. All-hands safety lunch. Cut up trees with chainsaw. Set-up additional cones along excavated areas.	Tow-behind water tote.	
9115528	22-Sep	23-Sep	738	842	31.7	0.19	38	Clear	63	30.18	1	15	15	North	Re-dig for DW1 , DW2, and AA5. Began FL3. Continued grading CCB. Hydro-axe cutting up trees. Water sample taken for POTW discharge.	Tow-behind water tote.	
9115531	23-Sep	24-Sep	845	906	14.3	ND	38	Clear	66	30.23	1	14	14	NNE	Excavating FL3. Continued grading and compacting CCB. Weekly Meeting. Surveying AA1-6, DW1, DW2. Partial Crew Travel.	Tow-behind water tote.	
Non-Intrusive Work Day	24-Sep	25-Sep			33.758	0.038		Clear	68	30.2	1	16	16	NE	Collected Hi-Vols. Partial crew on-site - non intrusive activities. Cut-up trees and placed into roll offs. Placed concrete on-site fill into WP1A.	N/A	
Non-Intrusive Work Day	25-Sep	26-Sep			33.758	0.038		Clear	68	30.15	2	24	24	NE	Partial crew on-site - non intrusive activities. Placed trees into roll-offs. Placed 15 loads of Cap Fill into WP1A.	N/A	
Non-Work Day	26-Sep	27-Sep			33.758	0.038											
Non-Work Day	27-Sep	28-Sep			33.758	0.038											
9115534	28-Sep	29-Sep	854	919	8.8	ND	39	.01 in Rain; Clear	72	30.02	0	11	11	SSW	Backfilling DW1. Excavating FL3. Dumped roll-offs into CCB. Hydro-axe clearing AMT1. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
9115537	29-Sep	30-Sep	921	832	7.7	ND	38	.24 in Rain	68	29.93	2	26	26	North	Backfilling DW1 & DW2. Excavating FL3, FL4, AMT2. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
9115540	30-Sep	1-Oct	839	855	20.7	0.54	38	.01 in Rain; Overcast	61	30	6	23	23	North	Backfilling DW and AA areas. Excavating FL4, AMT2. Surveying. Grading and compacting CCB. Weekly Meeting.	Water Truck; Water Tote as needed.	
9115543	1-Oct	2-Oct	857	931	20	0.4	38	Overcast	56	30.17	8	28	28	NNE	Backfilling DW and AA areas. Excavating FL4, AMT2, AMT1, FL5. Grading and Compacting CCB.	Water Truck; Water Tote as needed.	
9115546	2-Oct	3-Oct	933	908	29.3	0.81	38	.18 in Rain	54	30.16	9	31	31	NNE	Backfilling with Top Soil - DW1, AA3-6, Lagoon. Excavating FL5, AMT2, AMT1. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
9115550	3-Oct	4-Oct	914	845	11.2	0.29	38	.17 in Rain	48	30.09	7	28	22	NNE	Spreading top soil in lagoon. Excavating FL5, AMT3, AMT2 - Vac Truck used for AMT3. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
Non-Work Day	4-Oct	5-Oct			33.758	0.038											
9115552	5-Oct	6-Oct	858	808	14.4	ND	38	Overcast	65	30.12	2	14	14	NNE	Excavating AMT2, FL5, ND2. Compacting and grading CCB. Backfilling AA areas with top soil.	Water Truck; Water Tote as needed.	
9115555	6-Oct	7-Oct	811	820	33.7	ND	38	Clear	64	30.11	2	12	12	NNW	Excavating AMT2, ND2, ND1, co-mingled tree/soil pile. Compacting and grading CCB. Backfilling AA and Lagoon with top soil.	Water Truck; Water Tote as needed.	
9115558	7-Oct	8-Oct	822	834	30	ND	38	Clear	66	30.13	1	9	9	North	Excavating ND1, ND2, DW1, HWMU areas. Compacting and grading CCB. Backfilling Lagoon with Structural Fill. Backfilling DW areas with top soil. Placed rip rap along spillways.	Water Truck; Water Tote as needed.	
9115561	8-Oct	9-Oct	837	837	2.2	ND	38	Clear	67	30.05	2	18	18	SSW	Excavating HWMU areas and Rail Spur. Backfilling lagoon with Structural Fill. Rough grading AA and DW areas or sod prep. Cutting FL for final grading and stock piling soil for fill. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
9115564	9-Oct	10-Oct	840	830	26.1	ND	38	Clear	62	30.07	4	20	20	NW	Sod placement along AA and DW areas. Backfilling Lagoon with top soil. Hoe-ramming concrete. Cutting FL areas and stockpiling for fill. Watering Sod with water truck. Clearing CSX with hydro-axe. Placed stone along DW area.	Water Truck; Water Tote as needed.	Citizens Gas paving adjacent to HV-2.

2015 Hi-Volume Sampling Data Table- HV-2

Sampler ID:	Hi-Vol #2
Sampler Location:	Southwest Corner
Weekly Lead Average:	0.047
90 Day Rolling Average:	0.072
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
9115567	10-Oct	11-Oct	833	802	27.7	0.055	39	Clear	53	30.16	1	12	12	North	Watering sod with water truck. Backfilling Lagoon with top soil. Placing stone along DW area. Cutting FL areas and stockpiling for fill. Hoe-ramming concrete.	Water Truck; Water Tote as needed.	
Non-Work Day	11-Oct	12-Oct			33.758	0.038											
9115570	12-Oct	13-Oct	830	800	53.1	ND	38	Clear/Overcast	64	29.69	2	15	24	SSW	Backfilling AMT areas. Stockpiling on-site soil for backfill from FL areas. Placing stone along DW areas. Placing concrete within FL5 and backfilling with soil for final grading. Placed temp. seeding along Lagoon slope. Rough grading Lagoon.	Water Truck; Water Tote as needed.	Strip of Sod driven through adjacent to IPL meter - over seeded and straw placed on-top.
9115573	13-Oct	14-Oct	802	816	52.7	ND	38	Clear/Overcast	55	29.74	3	23	23	West	Backfilling AMT. Backfilling FL5 with concrete and soil for final grading. Stockpiling on-site soil material. Discharged to the POTW. Excavating HWMU area and MSB1A - pockets of rebar and concrete found.	Water Truck; Water Tote as needed.	Citizens Gas street sweeping adjacent to HV-2.
9115576	14-Oct	15-Oct	817	1235			38	Clear	50	30	2	15	18	NW	Backfilling AMT areas. Capital fence on-site to remove temp fencing. Backfilling FL areas to final grading with on-site fill. Uncovered slabs of concrete and footers. Prep for crew travel.	Water Truck; Water Tote as needed.	
Non-Work Day	15-Oct	16-Oct			33.758	0.038									Backfilling AMT areas. Watered Sod. Bloodhound markout.		
Non-Work Day	16-Oct	17-Oct			33.758	0.038									Built berm along AMT1. Set-up pump to de-water CSX area.		
Non-Work Day	17-Oct	18-Oct			33.758	0.038											
Non-Work Day	18-Oct	19-Oct			33.758	0.038											
9115579	19-Oct	20-Oct	945	854	15.8	0.056	39	Clear	50	30.35	3	26	26	South	Backfilling AMT. Hoe-ramming Concrete. Excavating MSB1A. De-watering CSX. Backfilling/grading FL areas.	Water Truck; Water Tote as needed.	
9115582	20-Oct	21-Oct	856	837	31	0.12	38	Clear	57	30.25	2	19	22	SSW	Backfilling AMT. Placing Top Soil around CCB. Hoe-ramming concrete. Excavating CG1. Gate installation. Clearing CSX ditch line brush.	Water Truck; Water Tote as needed.	
9115585	21-Oct	22-Oct	840	817	24.3	0.074	39	Clear	62	30.24	2	26	26	South	Excavating CG1 CG2. Placing top soil around CCB and FL areas. Hoe-ramming concrete. Weekly Call-In Meeting. Gate finished.	Water Truck; Water Tote as needed.	
9115588	22-Oct	23-Oct	818	818	22.2	ND	39	Clear	65	30.22	2	19	19	West	Excavating CSX - flagmen on-site. Placed top soil along FL areas. Hoe-ramming concrete. Placed concrete in CCB to mix with wet materials. Rock hounding top soil.	Water Truck; Water Tote as needed.	
9115591	23-Oct	24-Oct	821	830	19.2	0.061	39	Clear	62	30.14	1	14	12	ESE	Hoe-ramming concrete. Clearing brush behind AA1 w/Hydro Axe. Excavating Basin #2 and sending to CCB. Grading and compacting CCB. Watering sod. ECM delivered. Seeded CCB, CG1, CG2, and Lagoon - not hydro seeded.	Water Truck; Water Tote as needed.	
9115594	24-Oct	25-Oct	833	833	7.7	ND	38	.22 in Rain	64	30	3	26	26	SSW	Hoe-ramming concrete. Excavating Basin #2. Decon Adler Tank. Placed concrete in CCB to solidify material.	Water Truck and Rain.	
Non-Work Day	25-Oct	26-Oct			33.758	0.038											
9115597	26-Oct	27-Oct	842	908	40.2	0.081	39	Clear	52	30.35	2	22	22	ENE	Hoe-ramming concrete. Cutting Rebar. Roll offs picked up and replaced. Mixed 18 loads of concrete into the CCB to solidify material. Rock hounding top soil along FL area. Backfilling HWMU areas with concrete and on-site fill.	Water Truck	
9115600	27-Oct	28-Oct	910	847	2.4	ND	38	1.31 in Rain	51	30.07	3	26	26	ENE	Hoe-ramming concrete at Truck Loading Dock Area. Cutting rebar. Placed 3 check dams along CSX/ND2 ditch line. Re-excavated CSX - Flagmen on-site. De-watering.	Rain	

2015 Hi-Volume Sampling Data Table- HV-2

Sampler ID:	Hi-Vol #2
Sampler Location:	Southwest Corner
Weekly Lead Average:	0.047
90 Day Rolling Average:	0.072
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
9112103	28-Oct	29-Oct	849	846	2.4	ND	38	.64 in Rain	55	29.68	5	24	24	SSW	Hoe-ramming concrete at Truck Loading Dock Area. Cutting rebar. De-watering site. Capital City Fence installing at CGE1-4. Backfilled Truck Loading Dock Area w/concrete & soil.	Rain	
9112106	29-Oct	30-Oct	848	837	10.7	ND	38	Overcast	44	29.87	4	28	28	WSW	Backfilling Truck Loading Dock Area w/on-site fill. De-watering. Cutting rebar. Equip Maintenance. Capital City Fence installing at CGE1-4. Clearing behind South fence line w/Hydro-Axe.	Water Truck as needed.	
9112109	30-Oct	31-Oct	841	847	7.4	ND	38	Overcast	46	30.14	0	12	12	SW	Backfilling Truck Loading Doc Area with on-site fill. Capital City Fencing owns-tie to install at CGE1-4. Stop-work due to live wires found - Citizens Gas brought electrician on-site to remove power to live lines. Clearing behind South fence line with Hydro-axe. De-watering. Placed rip rap at CGE1-4 for truck exit.	Water Truck as needed.	
9112112	31-Oct	1-Nov	850	834	7.2	ND	38	.07 in Rain	49	30	2	20	20	SSE	Excavating CGE1&2. Installing barbed wire on fencing. Shaping CCB. Backfilling with structural fill. De-watering. Cleaning roadways & haul roads.	Water Truck as needed.	
9112115	1-Nov	2-Nov	835	915	20.9	ND	38	.02 in Rain	45	29.96	2	11	16	SW	Excavating CGE2&3. Shaping CCB. Cleaning roadways & haul roads. De-watering.	Water Truck as needed.	
9112118	2-Nov	3-Nov	917	838	16.9	ND	38	Clear	54	30.06	0	12	12	ESE	Excavating CGE2 & 1. Shaping CCB. Backfilling for final grading. Sweeping roadways.	Water Truck as needed.	
9112121	3-Nov	4-Nov	840	955	16.7	ND	38	Clear	56	30.14	1	9	9	SSE	Excavating CGE2 & 1. Shaping CCB. Backfilling for final grading. Sweeping roadways. Filled in pot holes with asphalt along main roadway.	Water Truck as needed.	
9112124	4-Nov	5-Nov	957	734	4.9	ND	40	Clear	63	30.18	1	15	15	SSW	Shaping CCB. Hoe-ramming weigh station. Set-up pumps for CSX. Cutting rebar.	Water Truck as needed.	
Non-Work Day	5-Nov	6-Nov			33.758	0.038									Limited crew. Backfilling for final grading. Hoe-ramming weigh station. Hydro seeding by subcontractor.	Water Truck as needed.	
Non-Work Day	6-Nov	7-Nov			33.758	0.038									Hoe-ramming and backfilling weigh station. De-watering CSX. Decon Adler Tank.		
Non-Work Day	7-Nov	8-Nov			33.758	0.038									De-watering		
Non-Work Day	8-Nov	9-Nov			33.758	0.038											
9112127	9-Nov	10-Nov	839	926	4.2	ND	38	.38 in Rain	44	30.28	1	14	14	East	Shaping CCB. De-watering. Grading wetland. Vac Trucking material from manhole to CCB. ECM install on CCB North.	Ground conditions wet from rain.	
9112130	10-Nov	11-Nov	928	847	14.1	ND	38	.03 in Rain	44	30.13	1	9	9	SSW	Shaping CCB. De-watering. Filling manhole with concrete/stone. Cutting rebar. Liner Crew filling sandbags. ECM Install on CCB North.	Ground conditions wet from rain.	
9112149	11-Nov	12-Nov	849	950	17.9	ND	38	.11 in Rain	47	29.86	3	24	24	SE	Liner crew filling sandbags. Demob due to CCB moisture. NRC overturning CCB to dry and re-shape. Backfill CGE1&2 w/Structrual Fill. High Wind Advisory. De-watering.	Ground conditions wet from rain.	
9112146	12-Nov	13-Nov	953	946	16.3	ND	38	Overcast	51	29.76	8	35	35	SW	Overturning CCB to dry and re-shape. Backfilling CGE 2-4 w/Structural Fill. Raised hydrant. High Wind Advisory. De-watering.	Hydrant being raised.	
9112143	13-Nov	14-Nov	949	942	5.7	ND	39	Overcast	43	30.15	5	34	34	West	Backfilling CGE 3-4 with stone, structural fill, and top soil. Backfill around hydrant with structural fill. De-watering. Overturning and re-shaping CCB. IPL fixed meter and street lights. Stockpiling cap fill.	Hydrant being raised.	
N/A	14-Nov	15-Nov	N/A	N/A	33.758	0.038	N/A	Clear	40	30.38	2	16	16	South	Final shaping of CCB. Grading CGE and rock hounding. De-watering. Liner crew re-mob & installed Geotextile. Grading wetland area.	N/A	Hi-Vol 2 down due to pump.
N/A	15-Nov	16-Nov	N/A	N/A	33.758	0.038	N/A	Clear	48	30.38	2	20	20	SSW	Grading CGE and rockhounding. Liner crew laying geomembrane liner on CCB. Grading swale adjacent to CCB West.	N/A	Hi-Vol 2 down due to pump.

2015 Hi-Volume Sampling Data Table- HV-3

Sampler ID:	Hi-Vol #3
Sampler Location:	Northwest Corner
Weekly Lead Average:	0.050
90 Day Rolling Average:	0.067
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
8671779	27-Aug	28-Aug	1433	820	82.3	ND	40	Clear - Overcast	68	30.14	1	11	11	East	Scraping Cap Soil from CCB & Stockpiling. Building berm extension.	Tow-behind water tote.	
8671781	28-Aug	29-Aug	842	736	75.1	ND	39	Clear - Overcast	68	30.14	1	11	11	East	Scraping Cap Soil from CCB & Stockpiling. Building berm extension.	Tow-behind water tote.	
Non-Work Day	29-Aug	30-Aug			50.486	0.031											
Non-Work Day	30-Aug	31-Aug			50.486	0.031											
8671784	31-Aug	1-Sep	812	826	68.4	ND	39	Clear	77	30.08	2	16	16	SSW	Excavated CGE 5. Continued scraping around CCB & stockpiling. Continued building berm extension.	Tow-behind water tote.	
8671787	1-Sep	2-Sep	828	824	65.9	ND	39	Overcast	77	30.07	2	16	16	SSW	Continued scraping cap soil and grading CCB extension and building berm. Stockpiling cap soil at Lagoon. Surveyed CGE-5, layout of excavation areas.	Tow-behind water tote.	
8671790	2-Sep	3-Sep	830	759	100	ND	39	Humid - PT Cloudy	78	30.05	1	16	16	SSW	Backfilled CGE-5 with #53C Stone. Continued to grade and build CCB extension. Repaired silt fence along western limits.	Tow-behind water tote.	
Non-Work Day	3-Sep	4-Sep			31.809	0.037									Limited crew and limited site-work. Built road sign frames. Weed-whacking western limit for insect (tick) control.		
Non-Work Day	4-Sep	5-Sep			50.486	0.031											
Non-Work Day	5-Sep	6-Sep			50.486	0.031											
Non-Work Day	6-Sep	7-Sep			50.486	0.031											
Non-Work Day	7-Sep	8-Sep			50.486	0.031											
Non-Work Day	8-Sep	9-Sep			50.486	0.031											
8671793	9-Sep	10-Sep	845	900	6.7	ND	39	.14 in Rain	69	29.93	1	11	11	NNW	Backfilling Lagoon; Removing geotextile from CCB.	Rain	
8671796	10-Sep	11-Sep	902	902	3.6	ND	42	Overcast	70	29.91	2	16	16	North	Backfilling Lagoon; Removing poly liner from CCB and placing within cell.	Tow-behind water tote.	HV 3 down due to power loss; Restored on 9/11.
8671799	11-Sep	12-Sep	1255	818	9.7	ND	40	.24 in Rain	62	29.91	2	16	16	North	Backfilling Lagoon; Excavating FL1	Rain	HV 3 down due to power loss; Restored on 9/11.
9115502	12-Sep	13-Sep	820	823	12.9	ND	40	Overcast	58	29.98	4	24	24	NW	Backfilling Lagoon; Excavating FL1, FL2, WP1A; Grading CCB.	Tow-behind water tote.	
Non-Work Day	13-Sep	14-Sep			50.486	0.031											
9115505	14-Sep	15-Sep	800	640	75.1	0.89	40	Clear	61	30.16	2	19	19	South	Re-Dig on WP1A, Continued excavating FL2. Began excavating WP3A and removed poles. Pulled up concrete to be sampled for on-site granular fill. Grading and rolling CCB.	Tow-behind water tote.	
9115508	15-Sep	16-Sep	643	843	43.5	0.2	41	Clear	66	30.28	1	16	16	SSE	Continued excavating FL2. Began excavating AA1 - Citizens Gas walk through for High Pressure Line. Continued grading and rolling CCB.	Tow-behind water tote.	
9115511	16-Sep	17-Sep	848	848	27.2	0.11	41	Clear	68	30.25	1	16	16	South	Continued excavating AA1 and FL2. Continued grading and compacting CCB. Concrete sampling for on-site fill. Shaping CCB 3:1 slope; swale maintenance.	Tow-behind water tote.	
9115514	17-Sep	18-Sep	850	856	61	0.23	40	Clear	69	30.09	2	20	20	SSW	Excavating AA1 - AA5. Continued grading and compacting CCB. Built berm around WP3A until backfill is completed..	Tow-behind water tote.	
9115517	18-Sep	19-Sep	858	932	42.9	ND	40	.15 in Rain	71	29.94	2	19	19	South	Excavating AA5 and AA6. Continued grading and compacting CCB. Overturned trees with excavator adjacent to WP2B.	Tow-behind water tote.	Citizens Gas creating dust storm blowing toward Hi-Vol 2.
9115520	19-Sep	20-Sep	935	918	4.8	ND	40	.66 in Rain	68	29.94	4	35	35	WNW	No excavation performed due to heavy rainfall. De-watering site.	N/A	
9115523	20-Sep	21-Sep	922	832	3.1	ND	42	Clear	63	30.14	3	19	19	NNE	Excavating AA5, AA6, DW1. De-watering site. Measured installed/repaired silt fence from previous week. Reviewed JHA for chainsaw cutting. Coned off excavations.	Tow-behind water tote.	

2015 Hi-Volume Sampling Data Table- HV-3

Sampler ID:	Hi-Vol #3
Sampler Location:	Northwest Corner
Weekly Lead Average:	0.050
90 Day Rolling Average:	0.067
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
9115526	21-Sep	22-Sep	836	744	18.5	ND	40	Clear	61	30.13	1	12	12	North	Excavating DW1 and DW2. Grading and compacting CCB. AECOM/CSX walk-down. All-hands safety lunch. Cut up trees with chainsaw. Set-up additional cones along excavated areas.	Tow-behind water tote.	
9115529	22-Sep	23-Sep	746	850	41.6	ND	40	Clear	63	30.18	1	15	15	North	Re-dig for DW1 , DW2, and AA5. Began FL3. Continued grading CCB. Hydro-axe cutting up trees. Water sample taken for POTW discharge.	Tow-behind water tote.	
9115532	23-Sep	24-Sep	852	911	39.1	ND	40	Clear	66	30.23	1	14	14	NNE	Excavating FL3. Continued grading and compacting CCB. Weekly Meeting. Surveying AA1-6, DW1, DW2. Partial Crew Travel.	Tow-behind water tote.	
Non-Intrusive Work Day	24-Sep	25-Sep			50.486	0.031		Clear	68	30.2	1	16	16	NE	Collected Hi-Vols. Partial crew on-site - non intrusive activities. Cut-up trees and placed into roll offs. Placed concrete on-site fill into WP1A.	N/A	
Non-Intrusive Work Day	25-Sep	26-Sep			50.486	0.031		Clear	68	30.15	2	24	24	NE	Partial crew on-site - non intrusive activities. Placed trees into roll-offs. Placed 15 loads of Cap Fill into WP1A.	N/A	
Non-Work Day	26-Sep	27-Sep			50.486	0.031											
Non-Work Day	27-Sep	28-Sep			50.486	0.031											
9115535	28-Sep	29-Sep	848	912	42.2	0.11	40	.01 in Rain; Clear	72	30.02	0	11	11	SSW	Backfilling DW1. Excavating FL3. Dumped roll-offs into CCB. Hydro-axe clearing AMT1. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
9115538	29-Sep	30-Sep	912	837	6.2	ND	41	.24 in Rain	68	29.93	2	26	26	North	Backfilling DW1 & DW2. Excavating FL3, FL4, AMT2. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
9115541	30-Sep	1-Oct	835	905	2.7	ND	40	.01 in Rain; Overcast	61	30	6	23	23	North	Backfilling DW and AA areas. Excavating FL4, AMT2. Surveying. Grading and compacting CCB. Weekly Meeting.	Water Truck; Water Tote as needed.	
9115544	1-Oct	2-Oct	920	938	11.4	ND	41	Overcast	56	30.17	8	28	28	NNE	Backfilling DW and AA areas. Excavating FL4, AMT2, AMT1, FL5. Grading and Compacting CCB.	Water Truck; Water Tote as needed.	
9115547	2-Oct	3-Oct	940	918	6	ND	42	.18 in Rain	54	30.16	9	31	31	NNE	Backfilling with Top Soil - DW1, AA3-6, Lagoon. Excavating FL5, AMT2, AMT1. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
9115549	3-Oct	4-Oct	921	850	2.9	ND	41	.17 in Rain	48	30.09	7	28	22	NNE	Spreading top soil in lagoon. Excavating FL5, AMT3, AMT2 - Vac Truck used for AMT3. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
Non-Work Day	4-Oct	5-Oct			50.486	0.031											
9115553	5-Oct	6-Oct	917	815	14.6	ND	42	Overcast	65	30.12	2	14	14	NNE	Excavating AMT2, FL5, ND2. Compacting and grading CCB. Backfilling AA areas with top soil.	Water Truck; Water Tote as needed.	
9115556	6-Oct	7-Oct	822	812	15.3	ND	42	Clear	64	30.11	2	12	12	NNW	Excavating AMT2, ND2, ND1, co-mingled tree/soil pile. Compacting and grading CCB. Backfilling AA and Lagoon with top soil.	Water Truck; Water Tote as needed.	
9115559	7-Oct	8-Oct	815	845	13	ND	42	Clear	66	30.13	1	9	9	North	Excavating ND1, ND2, DW1, HWMU areas. Compacting and grading CCB. Backfilling Lagoon with Structural Fill. Backfilling DW areas with top soil. Placed rip rap along spillways.	Water Truck; Water Tote as needed.	
9115562	8-Oct	9-Oct	847	846	36.7	0.077	41	Clear	67	30.05	2	18	18	SSW	Excavating HWMU areas and Rail Spur. Backfilling lagoon with Structural Fill. Rough grading AA and DW areas or sod prep. Cutting FL for final grading and stock piling soil for fill. Grading and compacting CCB.	Water Truck; Water Tote as needed.	
9115565	9-Oct	10-Oct	847	847	17.6	ND	41	Clear	2-Mar	30-Jan	4	20	20	NW	Sod placement along AA and DW areas. Backfilling Lagoon with top soil. Hoe-ramming concrete. Cutting FL areas and stockpiling for fill. Watering Sod with water truck. Clearing CSX with hydro-axe. Placed stone along DW area.	Water Truck; Water Tote as needed.	Citizens Gas paving adjacent to HV-2.

2015 Hi-Volume Sampling Data Table- HV-3

Sampler ID:	Hi-Vol #3
Sampler Location:	Northwest Corner
Weekly Lead Average:	0.050
90 Day Rolling Average:	0.067
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
9115568	10-Oct	11-Oct	848	808	20.5	ND	41	Clear	22-Feb	30-Jan	1	12	12	North	Watering sod with water truck. Backfilling Lagoon with top soil. Placing stone along DW area. Cutting FL areas and stockpiling for fill. Hoe-ramming concrete.	Water Truck; Water Tote as needed.	
Non-Work Day	11-Oct	12-Oct			50.486	0.031											
9115571	12-Oct	13-Oct	834	811	88.3	ND	40	Clear/Overcast	64	29.69	2	15	24	SSW	Backfilling AMT areas. Stockpiling on-site soil for backfill from FL areas. Placing stone along DW areas. Placing concrete within FL5 and backfilling with soil for final grading. Placed temp. seeding along Lagoon slope. Rough grading Lagoon.	Water Truck; Water Tote as needed.	Strip of Sod driven through adjacent to IPL meter - over seeded and straw placed on-top.
9115574	13-Oct	14-Oct	814	823	77	ND	40	Clear/Overcast	55	29.74	3	23	23	West	Backfilling AMT. Backfilling FL5 with concrete and soil for final grading. Stockpiling on-site soil material. Discharged to the POTW. Excavating HWMU area and MSB1A - pockets of rebar and concrete found.	Water Truck; Water Tote as needed.	Citizens Gas street sweeping adjacent to HV-2.
9115577	14-Oct	15-Oct	834	1240			40	Clear	50	30	2	15	18	NW	Backfilling AMT areas. Capital fence on-site to remove temp fencing. Backfilling FL areas to final grading with on-site fill. Uncovered slabs of concrete and footers. Prep for crew travel.	Water Truck; Water Tote as needed.	
Non-Work Day	15-Oct	16-Oct			50.486	0.031									Backfilling AMT areas. Watered Sod. Bloodhound markout.		
Non-Work Day	16-Oct	17-Oct			50.486	0.031									Built berm along AMT1. Set-up pump to de-water CSX area.		
Non-Work Day	17-Oct	18-Oct			50.486	0.031											
Non-Work Day	18-Oct	19-Oct			33.758	0.038											
9115580	19-Oct	20-Oct	955	903	103	0.24	40	Clear	50	30.35	3	26	26	South	Backfilling AMT. Hoe-ramming Concrete. Excavating MSB1A. De-watering CGE/CSX. Backfilling/grading FL areas.	Water Truck; Water Tote as needed.	Driving on and around the cell throughout the day. Adjacent to HV-3
9115583	20-Oct	21-Oct	905	845	92.7	0.09	40	Clear	57	30.25	2	19	22	SSW	Backfilling AMT. Placing Top Soil around CCB. Hoe-ramming concrete. Excavating CG1. Gate installation. Clearing CSX ditch line brush.	Water Truck; Water Tote as needed.	Driving on and around the cell throughout the day. Adjacent to HV-3
9115586	21-Oct	22-Oct	847	822	101	0.19	40	Clear	62	30.24	2	26	26	South	Excavating CG1 CG2. Placing top soil around CCB and FL areas. Hoe-ramming concrete. Weekly Call-in Meeting. Gate finished.	Water Truck; Water Tote as needed.	Driving on and around the cell throughout the day. Adjacent to HV-3
9115589	22-Oct	23-Oct	824	823	21.1	ND	42	Clear	65	30.22	2	19	19	West	Excavating CSX - flagmen on-site. Placed top soil along FL areas. Hoe-ramming concrete. Placed concrete in CCB to mix with wet materials. Rock hounding top soil.	Water Truck; Water Tote as needed.	Driving on and around the cell throughout the day. Adjacent to HV-3
9115592	23-Oct	24-Oct	831	838	54.3	0.17	41	Clear	62	30.14	1	14	12	ESE	Hoe-ramming concrete. Clearing brush behind AA1 w/Hydro Axe. Excavating Basin #2 and sending to CCB. Grading and compacting CCB. Watering sod. ECM delivered. Seeded CCB, CG1, CG2, and Lagoon - not hydro seeded.	Water Truck; Water Tote as needed.	
9115595	24-Oct	25-Oct	840	845	20.7	0.093	41	.22 in Rain	64	30	3	26	26	SSW	Hoe-ramming concrete. Excavating Basin #2. Decon Adler Tank. Placed concrete in CCB to solidify material.	Water Truck and Rain.	
Non-Work Day	25-Oct	26-Oct			33.758	0.038											
9115598	26-Oct	27-Oct	850	910	13	ND	41	Clear	52	30.35	2	22	22	ENE	Hoe-ramming concrete. Cutting Rebar. Roll offs picked up and replaced. Mixed 18 loads of concrete into the CCB to solidify material. Rock hounding top soil along FL area. Backfilling HWMU areas with concrete and on-site fill.	Water Truck	
9112101	27-Oct	28-Oct	920	851	2.5	ND	42	1.31 in Rain	51	30.07	3	26	26	ENE	Hoe-ramming concrete at Truck Loading Dock Area. Cutting rebar. Placed 3 check dams along CSX/ND2 ditch line. Re-excavated CSX - Flagmen on-site. De-watering.	Rain	

2015 Hi-Volume Sampling Data Table- HV-3

Sampler ID:	Hi-Vol #3
Sampler Location:	Northwest Corner
Weekly Lead Average:	0.050
90 Day Rolling Average:	0.067
Notes:	ND = .050 for calculations

Filter ID	Date		Time		Results			Weather (Source: Weather Underground)							Site Conditions		
	Start	Stop	Start	Stop	TSP µg/m3	Lead µg/m3	Flow Rate (CFM)	Conditions	Avg. Temp.	Avg. Baro.	Avg. Wind	Max Wind	Max Gust	Wind Direction	Scope of Work	Dust Mitigation	Notes
9112104	28-Oct	29-Oct	853	905	7.3	ND	40	.64 in Rain	55	29.68	5	24	24	SSW	Hoe-ramming concrete at Truck Loading Dock Area. Cutting rebar. De-watering site. Capital City Fence installing at CGE1-4. Backfilled Truck Loading Dock Area w/concrete & soil.	Rain	
9112107	29-Oct	30-Oct	908	845	10.8	ND	40	Overcast	44	29.87	4	28	28	WSW	Backfilling Truck Loading Dock Area w/on-site fill. De-watering. Cutting rebar. Equip Maintenance. Capital City Fence installing at CGE1-4. Clearing behind South fence line w/Hydro-Axe.	Water Truck as needed.	
9112110	30-Oct	31-Oct	847	856	14.7	ND	40	Overcast	46	30.14	0	12	12	SW	Backfilling Truck Loading Doc Area with on-site fill. Capital City Fencing owns-tie to install at CGE1-4. Stop-work due to live wires found - Citizens Gas brought electrician on-site to remove power to live lines. Clearing behind South fence line with Hydro-axe. De-watering. Placed rip rap at CGE1-4 for truck exit.	Water Truck as needed.	
9112113	31-Oct	1-Nov	858	844	11.2	ND	40	.07 in Rain	49	30	2	20	20	SSE	Excavating CGE1&2. Installing barbed wire on fencing. Shaping CCB. Backfilling with structural fill. De-watering. Cleaning roadways & haul roads.	Water Truck as needed.	
9112116	1-Nov	2-Nov	845	922	20.5	ND	40	.02 in Rain	45	29.96	2	11	16	SW	Excavating CGE2&3. Shaping CCB. Cleaning roadways & haul roads. De-watering.	Water Truck as needed.	
9112119	2-Nov	3-Nov	924	850	27.2	ND	41	Clear	54	30.06	0	12	12	ESE	Excavating CGE2 & 1. Shaping CCB. Backfilling for final grading. Sweeping roadways.	Water Truck as needed.	
9112122	3-Nov	4-Nov	857	1002	15.7	ND	41	Clear	56	30.14	1	9	9	SSE	Excavating CGE2 & 1. Shaping CCB. Backfilling for final grading. Sweeping roadways. Filled in pot holes with asphalt along main roadway.	Water Truck as needed.	
9112125	4-Nov	5-Nov	1011	739	22	ND	40	Clear	63	30.18	1	15	15	SSW	Shaping CCB. Hoe-ramming weigh station. Set-up pumps for CSX. Cutting rebar.	Water Truck as needed.	
Non-Work Day	5-Nov	6-Nov			33.758	0.038									Limited crew. Backfilling for final grading. Hoe-ramming weigh station. Hydro seeding by subcontractor.	Water Truck as needed.	
Non-Work Day	6-Nov	7-Nov			33.758	0.038									Hoe-ramming and backfilling weigh station. De-watering CSX. Decon Adler Tank.		
Non-Work Day	7-Nov	8-Nov			33.758	0.038									De-watering		
Non-Work Day	8-Nov	9-Nov			33.758	0.038											
9112128	9-Nov	10-Nov	846	920	5.5	ND	42	.38 in Rain	44	30.28	1	14	14	East	Shaping CCB. De-watering. Grading wetland. Vac Trucking material from manhole to CCB. ECM install on CCB North.	Ground conditions wet from rain.	
9112130	10-Nov	11-Nov	924	849	15.3	ND	42	.03 in Rain	44	30.13	1	9	9	SSW	Shaping CCB. De-watering. Filling manhole with concrete/stone. Cutting rebar. Liner Crew filling sandbags. ECM install on CCB North.	Ground conditions wet from rain.	
9112148	11-Nov	12-Nov	900	958	27.6	ND	40	.11 in Rain	47	29.86	3	24	24	SE	Liner crew filling sandbags. Demob due to CCB moisture. NRC overturning CCB to dry and re-shape. Backfill CGE1&2 w/Structrual Fill. High Wind Advisory. De-watering.	Ground conditions wet from rain.	
9112145	12-Nov	13-Nov	1000	955	17.9	ND	40	Overcast	51	29.76	8	35	35	SW	Overturning CCB to dry and re-shape. Backfilling CGE 2-4 w/Structural Fill. Raised hydrant. High Wind Advisory. De-watering.	Hydrant being raised.	
9112142	13-Nov	14-Nov	956	932	23.7	ND	40	Overcast	43	30.15	5	34	34	West	Backfilling CGE 3-4 with stone, structural fill, and top soil. Backfill around hydrant with structural fill. De-watering. Overturning and re-shaping CCB. IPL fixed meter and street lights. Stockpiling cap fill.	Hydrant being raised.	
9112139	14-Nov	15-Nov	933	755	20.7	ND	41	Clear	40	30.38	2	16	16	South	Final shaping of CCB. Grading CGE and rock hounding. De-watering. Liner crew re-mob & installed Geotextile. Grading wetland area.	N/A	Hi-Vol 2 down due to pump.
9112138	15-Nov	16-Nov	756	848	41.7	ND	40	Clear	48	30.38	2	20	20	SSW	Grading CGE and rockhounding. Liner crew laying geomembrane liner on CCB. Grading swale adjacent to CCB West.	N/A	Hi-Vol 2 down due to pump.

APPENDIX G

Waste Disposal Documents
(Provided on Disc Also)

Customer Summary Report
Criteria: 01/01/2014 12:00 AM to 12/17/2014 11:59 PM
Business Unit Name: Twin Bridges LF - S04008 (USA)
User: akeane
Date: Dec 17 2014, 12:55:22 PM - Central Standard Time
Operation Type: All
Customer Name: All
Ticket Type: All
Customer Type: All
PMT Category: All
Profile: 608806IN

Ticket Date	Ticket ID	Cust Code	MAS Unique ID	Customer	Generator	Manifest	Profile	Truck	Material	Material Description	Origin	Rate Qty	Yards	Tons
12/11/2014	1368934	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	001	608806IN	AC152	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	20.7	0	20.7
12/11/2014	1368938	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	002	608806IN	AC159	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	19.24	0	19.24
12/11/2014	1368943	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	003	608806IN	AC158	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	18.09	0	18.09
12/11/2014	1368952	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	005	608806IN	AC180	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	17.39	0	17.39
12/11/2014	1368960	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	004	608806IN	AC146	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	15.91	0	15.91
12/11/2014	1368990	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	007	608806IN	AC179	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	19.14	0	19.14
12/11/2014	1368991	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	009	608806IN	AC159	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	18.88	0	18.88
12/11/2014	1368995	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	006	608806IN	AC152	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	19.35	0	19.35
12/11/2014	1369000	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	008	608806IN	AC158	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	20.31	0	20.31
12/11/2014	1369004	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	10	608806IN	AC180	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	22.64	0	22.64
12/11/2014	1369020	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	011	608806IN	AC146	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	21.97	0	21.97
12/11/2014	1369039	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	012	608806IN	AC159	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	24.61	0	24.61
12/11/2014	1369046	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	013	608806IN	AC140	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	22.36	0	22.36
12/11/2014	1369048	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	014	608806IN	AC179	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	24.16	0	24.16
12/11/2014	1369056	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	015	608806IN	AC158	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	22.14	0	22.14
12/11/2014	1369061	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	016	608806IN	AC180	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	23.68	0	23.68
12/11/2014	1369062	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	017	608806IN	AC164	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	21.72	0	21.72
12/11/2014	1369068	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	018	608806IN	AC147	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	22.58	0	22.58
12/11/2014	1369072	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	019	608806IN	AC146	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	21.62	0	21.62
12/11/2014	1369074	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	020	608806IN	AC142	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	20.8	0	20.8
12/11/2014	1369095	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	21	608806IN	AC159	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	21.68	0	21.68
12/11/2014	1369097	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	022	608806IN	AC157	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	22.09	0	22.09
12/11/2014	1369101	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	23	608806IN	AC140	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	20.05	0	20.05
12/11/2014	1369110	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	024	608806IN	AC179	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	21.23	0	21.23
12/11/2014	1369113	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	25	608806IN	AC158	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	21.14	0	21.14
12/11/2014	1369120	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	20	608806IN	AC180	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	20.97	0	20.97
12/11/2014	1369121	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	27	608806IN	AC164	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	21.34	0	21.34
12/11/2014	1369124	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	028	608806IN	AC147	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	19.12	0	19.12
12/11/2014	1369129	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	025	608806IN	AC146	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	19.67	0	19.67
12/11/2014	1369132	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	30	608806IN	AC142	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	20.27	0	20.27
12/12/2014	1369186	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	031	608806IN	AC157	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	21.24	0	21.24
12/12/2014	1369190	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	032	608806IN	AC179	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	20.91	0	20.91
12/12/2014	1369191	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	033	608806IN	AC147	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	17.46	0	17.46
12/12/2014	1369200	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	034	608806IN	AC146	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	20.91	0	20.91

12/12/2014	1369205	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	035	608806IN	AC162	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	19.64	0	19.64
12/12/2014	1369226	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	036	608806IN	AC157	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	20.9	0	20.9
12/12/2014	1369229	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	037	608806IN	AC179	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	20.16	0	20.16
12/12/2014	1369232	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	38	608806IN	AC147	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	18.35	0	18.35
12/12/2014	1369241	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	039	608806IN	AC146	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	18.68	0	18.68
12/12/2014	1369248	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	040	608806IN	AC162	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	20.1	0	20.1
12/12/2014	1369277	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	41	608806IN	AC157	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	18.4	0	18.4
12/12/2014	1369281	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	042	608806IN	AC179	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	19.82	0	19.82
12/12/2014	1369286	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	043	608806IN	AC147	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	18.12	0	18.12
12/12/2014	1369296	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	044	608806IN	AC146	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	17.9	0	17.9
12/12/2014	1369301	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	045	608806IN	AC162	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	17.65	0	17.65
12/12/2014	1369331	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	046	608806IN	AC157	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	19.7	0	19.7
12/12/2014	1369338	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	047	608806IN	AC179	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	18.55	0	18.55
12/12/2014	1369347	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	048	608806IN	AC147	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	16.51	0	16.51
12/12/2014	1369352	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	049	608806IN	AC146	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	18.27	0	18.27
12/12/2014	1369358	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	050	608806IN	AC162	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	19.89	0	19.89
12/15/2014	1369425	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	051	608806IN	AC157	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	19.8	0	19.8
12/15/2014	1369465	0002221	144468403002	NATIONAL RESPONSE CORPORATION	141-REFINEDMETALS	056	608806IN	AC157	Spwaste Solid Oth-Tons	Special Waste Solid Other	IN-MARION	10.84	0	10.84
Material Total	52											1038.65	0	1038.65
Customer Total	52											1038.65	0	1038.65
Ticket Totals	52											1038.65	0	1038.65

Customer Summary Report
Criteria: 01/01/2014 12:00 AM to 12/17/2014 11:59 PM
Business Unit Name: Twin Bridges LF - S04008 (USA)
User: akeane
Date: Dec 17 2014, 12:55:22 PM - Central Standard Time
Operation Type: All
Customer Name: All
Ticket Type: All
Customer Type: All
PMT Category: All
Profile: 608806IN

Internal Customer	Loads	Yards	Tons	Total Ticket Amount

Customer Summary Report
Criteria: 01/01/2014 12:00 AM to 12/17/2014 11:59 PM
Business Unit Name: Twin Bridges LF - S04008 (USA)
User: akeane
Date: Dec 17 2014, 12:55:22 PM - Central Standard Time
Operation Type: All
Customer Name: All
Ticket Type: All
Customer Type: All
PMT Category: All
Profile: 608806IN

943221
D3101271

Customer:
HERITAGE ENVIRONMENTAL SERVICES, INC.
7901 WEST MORRIS STREET
INDIANAPOLIS, IN 46231

Generator:
REFINED METALS CORPORATION
3700 S. ARLINGTON AVE.
INDIANAPOLIS, IN 46203

Veolia ES Technical Solutions, L.L.C.
AZ0000337360
Certificate of Receipt/Recycling

Manifest/BOL Number: 000616375WAS

Type	Quantity	Unit of Measure	Serial Number
Incineration - PCB Ballast	167	P	D3101271-1

By this document, Veolia ES Technical Solutions, L.L.C. certifies that the above listed items/wastes, as described on the shipping paper listed above, were received for recycling/processing on the below listed date. By accepting the items/wastes listed above, Veolia ES Technical Solutions, L.L.C. certifies to the generator that the transportation, receipt, storage, and processing methods employed are in accordance with Veolia ES permit parameters, the Toxic Substance Control Act, the Resource Conservation and Recovery Act, the Hazardous Materials Transportation Act, the Occupational Health and Safety Act and all applicable federal, state and local laws.

Upon receipt of the final certificates of disposal from the ultimate disposal facility, Veolia ES Technical Solutions, L.L.C. will provide a tracking report for the materials received and copies of the final Certificates of Disposal..

I certify that the information contained in or accompanying this document is true, accurate and complete.

James Harrison
Operations Manager

Date Received: 12/10/2014

Veolia North America
Head office: 200 East Randolph, Suite 7900
Chicago, IL 60601
tel. +1 312 552 2800 - fax +1 312 552 2866

5736 West Jefferson Street
Phoenix, AZ 85043
tel. +1 800 368 9095 - fax +1 602 415 3030

www.veolianorthamerica.com

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Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: IND000718130
2. Page 1 of: 1
3. Emergency Response Phone: (800)326-1221
4. Manifest Tracking Number: 000616375WAS

5. Generator's Name and Mailing Address:
REFINED METALS / MATT LOVE
3000 MONTROSE AVE
READING, PA 19605-2751
Generator's Phone: (610)921-4054

Generator's Site Address (if different than mailing address):
REFINED METALS / MATT LOVE
3700 SOUTH ARLINGTON
INDIANAPOLIS, IN 46203
GEN: 29289

6. Transporter 1 Company Name: HERITAGE TRANSPORT,LLC-TS INDIANAPOLIS
U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name: Veolia ES Technical Solutions
U.S. EPA ID Number: NJD 080631369

8. Designated Facility Name and Site Address:
VEOLIA ES TECHNICAL SOLUTIONS, L.L.C.
5736 W JEFFERSON ST
PHOENIX, AZ 85043-3633
Facility's Phone: (602)233-2955
U.S. EPA ID Number: AZ0000337360

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN2315,POLYCHLORINATED BIPHENYLS, LIQUID, 9,PGII,ERG#171 (1X55DM)	1	DM	40	K	
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. ~~739197~~ SJB 739137 _T#7547705, RBG-1, OOS: 11/10/14
SO# 943221
ERI:HERITAGE [4793224]T

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: SCOTT WARD AS AGENT FOR EXIDE
Signature: [signature]
Month 11 Day 10 Year 14

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Michael W. Tyford
Signature: [signature]
Month 11 Day 10 Year 14
Transporter 2 Printed/Typed Name: Terry Nhoan
Signature: [signature]
Month 11 Day 18 Year 14

18. Discrepancy
18a. Discrepancy Indication Space ☑ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Actual wgt. 76 K. Resolved per J. Dobinsky on 12/15/14
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H141
2.
3.
4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: John M. Genta
Signature: [signature]
Month 12 Day 10 Year 14

GENERATOR / INT'L / TRANSPORTER / DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HERITAGE
ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: 1877234-9000

Trip#: 1 481206

Pick-up: 11/10/14 - 11/10/14

Site#: 2 9289

EPA ID#: IND000718130
PO#: PENDING

Internal Contact
LEA WILSON

Mailing Address

MATT LOVE
REFINED METALS
3000 MONTROSE AVE
READING, PA 19605-2751
UNITED STATES

Site Address (None)

REFINED METALS
3700 SOUTH ARLINGTON
INDIANAPOLIS, IN 46203
UNITED STATES

Phone# (610)921-4054
LIKENS, ERIC - (317)272-6590

HERITAGE TRANSPORT,LLC-TS INDIANAPOLIS (10153) (317)538-8458
IND058484114 US DOT#:

Emergency Rate_____ Pickup Demurrage_____ Final Delivery Demurrage_____

Tractor#_____ Trailer#_____

Odometer: Start_____ End_____

Liner Qty_____

PICKUP TIME: 07:00-16:00

Driver#_____ Driver Name_____ Date_____

HERITAGE ENVIRONMENTAL SERVICES (9000) IND093219012
7901 W MORRIS ST, INDIANAPOLIS, IN 46231-3301 UNITED STATES (317)243-0811

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	FLOCCULENT	000616373WAS-1	7534854	103	Y41N	3	DM
2	BAGHOUSE FILTERS	000616373WAS-2	7547704	6064	Y44N	3	
3	USED OIL	000616373WAS-3	7534847	68	Y39N	9	DM
4	METAL ION PRECIPITANT	1877234-9000-1	7534849	103	N42N	1	DM
5	PURGE WATER	1877234-9000-2	7534855	53	N45N	3	DM

Site Rep
Name_____ Signature_____ Date_____

150085: EXIDE TECHNOLOGIES
Company\Loc: 48\7

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Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	IND000718130	1	(800)326-1221	000616373WAS

5. Generator's Name and Mailing Address
REFINED METALS / MATT LOVE
3000 MONTROSE AVE
READING, PA 19605-2751
Generator's Phone: (610)921-4054

Generator's Site Address (if different than mailing address)
REFINED METALS / MATT LOVE
3700 SOUTH ARLINGTON
INDIANAPOLIS, IN 46203
GEN: 29289

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC-TS INDIANAPOLIS — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
HERITAGE ENVIRONMENTAL SERVICES
7901 W MORRIS ST
INDIANAPOLIS, IN 46231-3301
Facility's Phone: (317)243-0811
U.S. EPA ID Number: IND093219012

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN3266, WASTE CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S., 8, PGIII, (SODIUM CARBONATE), ERG#154 (3X55DM)	3	DM	165	G	D002
X	2. ~~RQ, NA3077, HAZARDOUS WASTE, SOLID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171~~	TD	11/10/14			~~D008~~
X	3. RQ, NA3082, HAZARDOUS WASTE, LIQUID, N.O.S., 9, PGIII, (LEAD), (D008), ERG#171	9	DM	495	G	D008
	4.					

14. Special Handling Instructions and Additional Information
1. W41_Q912556 2. W44_Q912152 3. W39_Q912353

ERI:HERITAGE [4793221]

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: SCOTT WARD AS AGENT FOR EDDIE — Signature: [signature] — Month 11 Day 10 Year 14

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Michael W. Tyford — Signature: [signature] — Month 11 Day 10 Year 14
Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	H129	H061	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: MICHAEL A OLLEBOE — Signature: [signature] — Month 11 Day 16 Year 14

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HERITAGE
ENVIRONMENTAL SERVICES

Stop Ticket

.op#: **1877234-15119**

Trip#: 1481206

Pick-up: 11/10/14 - 11/10/14

Site#: 29289

EPA ID#: IND000718130
PO#: PENDING

Internal Contact
LEA WILSON

Mailing Address

MATT LOVE
REFINED METALS
3000 MONTROSE AVE
READING, PA 19605-2751
UNITED STATES

Site Address (None)

REFINED METALS
3700 SOUTH ARLINGTON
INDIANAPOLIS, IN 46203
UNITED STATES

Phone# (610)921-4054
LIKENS, ERIC - (317)272-6590

HERITAGE TRANSPORT,LLC-TS INDIANAPOLIS (10153) (317)538-8458
IND058484114 US DOT#:

Emergency Rate_____ Pickup Demurrage_____ Final Delivery Demurrage_____

Tractor#_____ Trailer#_____

Odometer: Start_____ End_____

Liner Qty_____

PICKUP TIME: 07:00-16:00

Driver#_____ Driver Name_____ Date_____

IERITAGE THERMAL SERVICES, INC. (15119) OHD980613541
1250 SAINT GEORGE ST UNIT 1, PO BOX 1026 EAST LIVERPOOL, OH 43920-3461 UNITED STATES (800)545-7655

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	CONSOLIDATION OF SMALL CHEMICAL CONTA	000616374WAS-1	7547706	8090	Y5Y	1	

Site Rep
Name_____ Signature_____ Date_____

150085: EXIDE TECHNOLOGIES
Company\Loc: 48\7

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: IND000718130
2. Page 1 of 1
3. Emergency Response Phone: (800)326-1221
4. Manifest Tracking Number: 000616374WAS

5. Generator's Name and Mailing Address
REFINED METALS / MATT LOVE
3000 MONTROSE AVE
READING, PA 19605-2751
Generator's Phone: (610)921-4054

Generator's Site Address (if different than mailing address)
REFINED METALS / MATT LOVE
3700 SOUTH ARLINGTON
INDIANAPOLIS, IN 46203
GEN: 29289

6. Transporter 1 Company Name: HERITAGE TRANSPORT,LLC-TS INDIANAPOLIS
U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
HERITAGE THERMAL SERVICES, INC.
1250 SAINT GEORGE ST UNIT 1
EAST LIVERPOOL, OH 43920-3461
Facility's Phone: (800)545-7655
U.S. EPA ID Number: OHD980613541

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. UN2810,WASTE TOXIC, LIQUIDS, ORGANIC, N.O.S.,6.1,PGII, (LEAD OXIDE),ERG#153 (1x20CF)	1	CF	20	P	~~D008~~
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1.600_W5_Q911758_LDR, RMC-1
ERI:HERITAGE [4793223]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. T117981

Generator's/Offeror's Printed/Typed Name: SCOTT WARD AS AGENT FOR EXIDE
Signature:
Month 11 Day 10 Year 14

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Michael W. Taylor
Signature:
Month 11 Day 10 Year 14
Transporter 2 Printed/Typed Name:
Signature:
Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H040 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: JOE BURKE
Signature:
Month 11 Day 24 Year 14

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

HERITAGE
ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: 1877234-15701

Trip#: 1481206

Pick-up: 11/10/14 - 11/10/14

Site#: 29289

EPA ID#: IND000718130
PO#: PENDING

Internal Contact
LEA WILSON

Mailing Address

MATT LOVE
REFINED METALS
3000 MONTROSE AVE
READING, PA 19605-2751
UNITED STATES

Site Address (None)

REFINED METALS
3700 SOUTH ARLINGTON
INDIANAPOLIS, IN 46203
UNITED STATES

Phone# (610)921-4054
LIKENS, ERIC - (317)272-6590

HERITAGE TRANSPORT,LLC-TS INDIANAPOLIS (10153) (317)538-8458
IND058484114 US DOT#:

Emergency Rate_____ Pickup Demurrage_____ Final Delivery Demurrage_____

Tractor#_____ Trailer#_____

Odometer: Start_____ End_____

Liner Qty_____

PICKUP TIME: 07:00-16:00

Driver#_____ Driver Name_____ Date_____

AEOLIA ES TECHNICAL SOLUTIONS, L.L.C. (15701) AZ0000337360
5736 W JEFFERSON ST, PHOENIX, AZ 85043-3633 UNITED STATES (602)233-2955

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	PCB BALLASTS	000616375WAS-1	7547705	2121	N46N	2	

Site Rep
Name_____ Signature_____ Date_____

150085: EXIDE TECHNOLOGIES
Company\Loc: 48\7

ID: 1877234-9000

HAZMAT BILL OF LADING/MANIFEST	1. Offeror's ID Number	2. Page 1 of	3. Emergency Response Phone	4. Tracking Number
	IND000718130	1	(800)326-1221	1877234-9000

5. Offeror's Name and Mailing Address
REFINED METALS / MATT LOVE
3000 MONTROSE AVE
READING, PA 19605-2751
(610)921-4054
Offeror's Phone:

Offeror's Site Address (if different than mailing address)
REFINED METALS / MATT LOVE
3700 SOUTH ARLINGTON
INDIANAPOLIS, IN 46203
GEN: 29289

6. Transporter 1 Company Name: HERITAGE TRANSPORT,LLC-TS INDIANAPOLIS — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
HERITAGE ENVIRONMENTAL SERVICES
7901 W MORRIS ST
INDIANAPOLIS, IN 46231-3301
(317)243-0811
Facility's Phone:
U.S. EPA ID Number: IND093219012

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.
	1. NON-DOT/NON-RCRA REGULATED (1X55DF)	1	DF	55	G
	2. NON-DOT/NON-RCRA REGULATED (3X55DM)	3	DM	165	G
	3.				
	4.				
	5.				
	6.				
	7.				

13. Special Handling Instructions and Additional Information
1.W42_Q912565 2.W45_Q912967

ERI:HERITAGE [4793222]

14. OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Offeror's Printed/Typed Name: SCOTT WARD AS AGENT FOR EXIDE — Signature: [signature] — Month 11 Day 10 Year 14

15. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MICHAEL W. TUFORD — Signature: [signature] — Month 11 Day 10 Year 14

Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

16. Discrepancy

17. Designated Facility Owner or Operator: Certification of receipt of hazardous Bill of Lading/Manifest covered by the manifest except as noted in item 16

Printed/Typed Name: MICHAEL A OKEEFE — Signature: [signature] — Month 11 Day 16 Year 14

OFFEROR — TRANSPORTER — DESIGNATED FACILITY

DESIGNATED FACILITY TO OFFEROR

Please print or type (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
IND000718130	1	(800)326-1221	000649550WAS

GENERATOR

Generator's Name and Mailing Address
REFINED METALS
3000 MONTROSE AVE
READING, PA 19605-2151
Generator's Phone: (610)921-4054

Generator's Site Address (if different than mailing address)
REFINED METALS
3700 SOUTH ARLINGTON
INDIANAPOLIS, IN 46203
GEN. 29289

6. Transporter 1 Company Name: HERITAGE TRANSPORT LLC — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name: — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EXIDE CORPORATION
2601 WEST MOUNT PLEASANT BLVD
MUNCIE, IN 47302
Facility's Phone: (765)747-9980
U.S. EPA ID Number: IND000717959

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, Hazardous Waste Solid, NOS, 9, PG111 (K069)	001	DM	70	P	K069
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Dale Reynolds — Signature: DWRey — Month 12 Day 09 Year 14

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jim Hadley — Signature: Jim Hadley — Month 12 Day 9 Year 14
Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

DESIGNATED FACILITY

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1 2 3 4

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Mark Elliott — Signature: Mark Elliott — Month 12 Day 11 Year 14

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)

EXIDE TECHNOLOGIES

SECONDARY LEAD SMELTER
MUNCIE, INDIANA

ACCEPTANCE APPROVAL CERTIFICATE

NO. 2014 - 003

THIS IS TO CERTIFY THAT

Baghouse Bags

FROM

Refined Metals Corporation

Has been qualified for acceptance at the Exide Technologies Secondary Lead Recycling Facility in Muncie, Indiana for recycling/reclamation in accordance with the RCRA Hazardous Waste Management Permit # IND 000 717 959 issued by the Indiana Department of Environmental Management and the U.S. EPA. This approval is valid for a period not to exceed one (1) year from date of issue, and must be renewed prior to the expiration date listed below for shipments of this material to continue after that date.

DATE OF ISSUE: December 02, 2014

EXPIRATION DATE: December 01, 2015

ISSUED BY:

Robert Helton
Environmental Specialist
Exide Technologies,

THIRD-PARTY INDEMNIFICATION

TO: Heritage Environmental Services, LLC and Heritage Transport, LLC

FROM: Refined Metals

DATE: 12/8/2014

Refined Metals, as owner, generator, and shipper of materials and waste products, does hereby assert that it freely and independently selected the destination for such materials and waste products, as Refined Metals and that such selection was in compliance with all applicable federal, state and local statutes, including but not limited to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or "Superfund"), as amended, and similar statutes, laws, ordinances and regulations at the federal, state and local level, Refined Metals agrees to indemnify, defend and hold Heritage Environmental Services, LLC., Heritage Transport, LLC, and its affiliates and their respective officers, employees and agents [collectively hereinafter referred to as "Heritage"] harmless from and against any and all liabilities, claims, causes of actions, costs and expenses (including but not limited to reasonable attorney's fees) associated with the use, reuse, recycling, treatment, disposal and storage of materials and waste products managed by Heritage to such designated destinations as directed by Refined Metals.

It is understood that this indemnification is not intended to apply to the extent that any such liability, claim, cause of action, cost or expense is caused by the negligent acts, errors or omissions of Heritage occurring during the performance of services for Refined Metals nor is it intended to relieve Heritage of any obligation to maintain the regulatory-required types and amounts of insurance, or transport the materials or waste products in a manner consistent with their waste classification, marking and labeling, as determined by Refined Metals.

By: D W Rey Dale Reynolds
Signature of Authorized Company Representative

Title: Facility Manager

Date: 12/8/2014

EXIDE TECHNOLOGIES- MUNCIE FACILITY

HAZARDOUS WASTE ANALYSIS RECORD- FORM ER-185 (Exhibit C-13)

1. Generator Information

Company Name: Refined Metals Corporation
EPA Identification No.: IND000718130
Address, State, Zip Code: 3700 S. Arlington Avenue, Indianapolis, IN 46203
Facility Name: Refined Metals Corporation
Facility Contact: Matthew Love
Facility Contact #: (610) 921-4054

2. Waste Description/Characterization

Common Name of Waste: Used Baghouse Bags from a Secondary Lead Smelter
Process Generating Waste: Secondary Lead Smelting
S. DOT Shipping Name:RQ, NA3077,Hazardous Waste Solid, N.O.S.,9,PGIII, (K069), ERG1
DOT Hazard Class: 9
UN/NA Number: NA3077
Expected Annual Quantity (specify units): one 55-gallon drum
Anticipated Shipment Frequency: one time
Packaging (Bulk, Drums, Boxes, etc.): 55-gallon drum
Physical Properties at 25 Degrees Celsius

Physical State (check as appropriate):

Liquid _____ Solid X Sludge (% solids) _____
Single Phase _____ Multi-phase _____

pH (10% slurry in distilled water for solids): 6-8
Density/Specific Gravity: NA
Physical Appearance (color & texture): baghouse bags, variable color
Odor (type & strength): None

3. Waste Composition

>List all components within the waste stream by percentage.
>Account for 100 percent of the waste in the Typical % column.

Constituent	Typical %	Range %
Baghouse Bags	100%	

4. Laboratory Analysis - Attach Laboratory Analysis

RCRA Analytical Testing- Hazardous Waste Characteristics (check if applicable)

Toxicity____X_____ Ignitability_____ Reactivity_____ Corrosivity_____

TCLP Procedure for Metals (data expressed in mg/L)

		TC Limits			TC Limits
Arsenic	<0.2	5.0	Lead	205	5.0
Barium	<0.1	100.0	Mercury	<0.05	0.2
Cadmium	119	1.0	Selenium	1	1.0
Chromium	<0.1	5.0	Silver	NA	5.0

Chemical Constituents - Total Concentrations (specify units)

		Expected Range (specify)			Expected Range (specify)
Aluminum			Lead		
Antimony			Magnesium		
Arsenic			Mercury		
Barium			Selenium		
Cadmium			Silver		
Chlorine			Tin		
Chromium			Zinc		
Copper			Other (specify)		
Fluoride			Total Metals		

. Exide Treatment/Storage/Disposal Facility Information

Exide Facility Location:	Exide Technologies Muncie Recycling Facility		
Address:	2601 West Mount Pleasant Blvd.		
City, State, Zip Code:	Muncie, Indiana 47302		
EPA Identification No.:	IND000717959		
Facility Contact:	Mike Henry	Telephone:	(765) 747-9980 ext 124

6. Additional Comments, Descriptions, or Waste Stream Information

*TCLP information based on generator knowledge from baghouse bags at similar smelter locations.

*Mailing address for generator is Exide Technologies, 3000 Montrose Avenue, Reading, PA 19605.

I certify and warrant that all information on this form is complete and factual (including attached information) and is an accurate representation of the known and suspected hazards of the waste stream described.

Mark G. Fr — Signature

Dir. Global Env. Remediation — Title

12/1/14 — Date

EXIDE
TECHNOLOGIES
2601 W. Mt. Pleasant Blvd. P.O. Box 2098
Muncie, IN 47302
(765) 747-9980*(765) 282-5461 facsimile
EOE*M/F/D/V

CERTIFICATE OF RECYCLING

This certificate is to verify that the Lead containing material on lot number 000649550WAS has been recycled in accordance with all Local, State and Federal Regulations. The generator of the lead containing material was Refined Metals, Indianapolis, IN. The material was received on December 11, 2014.

Exide Technologies
P.O. Box 2098
2601 W. Mt. Pleasant Blvd.
Muncie, IN 47302

EPA Identification #IND000717959

Phone Number (765) 747-9980

Signed Misty D. Nelson Date December 12, 2014

Printed Name & Title Misty D. Nelson, Production Coordinator

Please print or type (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4.
	IND000718130	1	(800)326-1221	

5. Generator's Name and Mailing Address
REFINED METALS
3700 MONTROSE AVE
READING, PA 19605-2151
Generator's Phone: (610)921-4054

Generator's Site Address (if different than mailing address)
REFINED METALS
3700 SOUTH ARLINGTON
INDIANAPOLIS, IN 46203
GEN. 29289

6. Transporter 1 Company Name
HERITAGE TRANSPORT, LLC
U.S. EPA ID Number: IND000[illegible]

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
EXIDE CORPORATION
2401 WEST MOUNT PLEASANT BL
MUNCIE, IN 47302
Facility's Phone: (765)747-9980
U.S. EPA ID Number: IND000717959

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, NA3077, Hazardous Waste Solid, NOS, 9, PG111 (K069)					K069
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, [illegible] marked and labeled/placarded and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment [illegible] Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Dale Reynolds
Signature: DWRey

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: JIM HADLEY
Signature: Jim Hadley
Transporter 2 Printed/Typed Name:
Signature:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection
Manifest Reference Number:
U.S. EPA ID Number:
18b. Alternate Facility (or Generator)
Facility's Phone:
18c. Signature of Alternate Facility (or Generator)

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1	2	3	4

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name:
Signature:

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

Land Disposal Restriction Form

Manifest: 000 649550 WAS Waste Stream Number (profile #) 2014-003

Generator Name: Refined Metals Corporation EPA ID # IND[illegible]

Address: 3700 S. Arlington Avenue

City Indianapolis State: Indiana Zip Code: [illegible]

Please check the appropriate Box (s). Attach waste analysis data when available.

1 ☐ This waste is not prohibited from land disposal.

The waste identified on the above reference manifest can be land disposed without further treatment.

"I certify under penalty of law that I personally have examined and am familiar with the waste stream(s) through analysis and testing, or through knowledge of the waste, to support this certification. The waste complies with the treatment standards specified in CCR title 22, division 4.5 chapter 18, article 4 and article 11 and all applicable prohibitions set forth in CCR title 22, section 66268.32 or RCRA section 3004 (d) (42 USC section 69249 (d)). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false certification including the possibility of a fine and imprisonment."

2 ☒ Pursuant to 40 CFR 268.7, "I am notifying **Exide Technologies** that under the above listed manifest number, *I am shipping a waste identified by the EPA waste numbers and subcategories listed below, that is subject to land disposal restrictions as indicated."*

All treatment standards listed as expressed in 40 CFR 268.40 for NON-Wastewater's only.

RCRA Waste Code	Waste description and subcategories	Technology Based Treatment	Numeric treatment standard
D001	☐ Ignitable Characteristic Solids (Lithium, Magnesium batteries only)	DEACT and meet 268.48 standards.	N/A
D002	☐ Corrosive Characteristic	DEACT and meet 268.48 standards.	N/A
D003	☐ Reactive Characteristic Water reactive subcategory based on 261.23 (a) (2) (3) and (4)	DEACT and meet 268.48 standards.	N/A
D004	☐ Arsenic Characteristic		5.0 mg/l TCLP and meet 268.48 standards
D005	☐ Barium Characteristic		21 mg/l TCLP and meet 268.48 standards.
D006	☐ Cadmium Characteristic		0.11 mg/l TCLP and meet 268.48 standards.
	☐ Cadmium Containing Batteries	RTHRM	
D007	☐ Chromium Characteristic		0.60 mg/l TCLP and meet 268.48 standards.
D008	☐ Lead Characteristic		0.75 mg/l TCLP and meet 268.48 standards.
	☐ Lead Acid Batteries (note this standards only applies to lead acid batteries that are identified as RCRA hazardous wastes and that are not excluded from regulations under the land disposal restriction of 40 CFR 268 or exempted under other EPA regulations (see 40 CFR 266.80)	RLRAD	
D009	☐ Mercury Characteristic ≥260mg/l total Hg (inorganic)	RMERC	

	☐ Mercury Characteristic Hg (inorganic) <260mg/l total		
D010	☐ Selenium characteristic		
D011	☐ Silver characteristic		

	Listed waste from non-specific sources	Regulated constituents	
F006	☐ Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum (2) Tin plating on carbon steel (3) Zinc plating (segregated basis) on carbon steel (4) Aluminum or zinc-aluminum plating on carbon steel (5) Cleaning/stripping associated with tin, zinc, and aluminum plating on carbon steel; and (6) Chemical etching and milling of aluminum	Cadmium Chromium (Total) Cyanides (Total) Cyanides (Amenable) Lead Nickel Silver	[illegible]
F007	☐ Spent cyanide plating bath solution from electroplating operations.	Cadmium Chromium (Total) Cyanides (Total) Cyanides (Amenable) Lead Nickel Silver	[illegible]
F008	☐ Plating residues frpm the bottom of plating baths from electroplating operations where cyanides are used in the process.	Cadmium Chromium (Total) Cyanides (Total) Cyanides (Amenable) Lead Nickel Silver	[illegible] 0.60 mg/l TCLP 590 mg/l 30 mg/l 0.75 mg/l TCLP 11 mg/l TCLP 0.14 mg/l TCLP
☒ Other	*For codes other than those listed above pre approval will be necessary*		
K069	Emission control sludge from secondary lead smelting,	RLEAD	
	non-calcium sulfate (high lead) category		

3. Does the waste listed above contain any underlying hazardous constituents as listed in 40 CFR 268.48 (Table [illegible])
   ☒ No
   ☐ Yes (please indicate underlying constituents on attachment 1)

4. Does the material listed above meet the definition of debris (solid material exceeding a 60 mm particle size that is intended for disposal and that is: Manufactured object: plant or animal matter: or natural geological material) ?
   ☐ No
   ☒ Yes

5. California regulated waste only (please specify) _____ N/A
The waste identified above must be treated to meet the applicable standards in CCR Title 22, Division 4.5, chapter [illegible]

I certify and warrant that the information that appears on this form and any appended documents is true and correct. I have correctly [illegible] managed in accordance with 40 CFR 268. My certification is based on personal examination of the information submitted or is based on my [illegible] responsible for obtaining the information.

Name: Dale Reynolds Signature: Dale Reynolds Date: [illegible]

Terra Limited

Southside Solidification Services, LLC

Industrial Waste Disposal Shipping Form

Last Four Digits of Landfill Ticket No. *(Landfil Use Only)* : _____

Generator Information			
Generator Name:	Refined Metals Corporation		
Site Address	3700 S. Arlington Ave Indianapolis, IN 46203	Mailing Address	
Contact Name:	Matthew Love	Title:	Dir., Global Env. Remediation
Phone:	610-921-4054	Fax:	610-921-4062
Cell Phone:		email:	matt.love@exide.com

Contractor / Consultant Information			
Company Name:			
Mailing Address			
Contact Name:		Title:	
Phone:		Fax:	
Cell Phone:		email:	

Transporter Information			
Company Name:	ERS Terra Limited		
Phone:		Fax:	
Driver Signature			Date

Waste Stream Information		Est. Qty	Approval Information	
Name of Waste:	Treatability Samples	6 buckets	Approval No.	120814P2
Frequency:	☒ One Time ☐ Project		☐ As needed	☐ _____

Generator Certification

I hereby certify that the above information is true and accurate to the best of my knowledge, and the waste contained in this load is not a hazardous waste as described in 40 CFR 261 nor is it any other type of unauthorized waste. No changes have been made to any relevant raw material or to the waste generating process since the last shipment.

Authorized Company Representative

Name (Printed) Dale Reynolds Title Facility Manager

Signature [signature] Date 12/15/2014

Disposal Site Information *(Landfill Use Only)*

Site Name Southside Landfill

FP No. 49-01-N243 Weight _____ Landfill Ticket No. _____

Signature [signature] Date 12/15/2014

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: [illegible]
2. Page 1 of: 1
3. Emergency Response Phone: [illegible]
4. Manifest Tracking Number: [illegible]

5. Generator's Name and Mailing Address: [illegible]
Generator's Site Address (if different than mailing address): [illegible]
Generator's Phone: [illegible]

6. Transporter 1 Company Name: [illegible]
U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: [illegible]
U.S. EPA ID Number: [illegible]
Facility's Phone: [illegible]

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. [illegible]	1	CF	20	P	[illegible]
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
[illegible]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: [illegible] Signature: [illegible] Month: 11 Day: 20 Year: 17

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: [illegible] Signature: [illegible] Month: 11 Day: 20 Year: 17
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H040 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: JOE PURVE Signature: [illegible] Month: 11 Day: 20 Year: 17

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

HERITAGE
ENVIRONMENTAL SERVICES

Stop Ticket

Stop#: **1877234-9000**

Trip#: 1481206 Pick-up: 11/10/14 - 11/10/14

Site#: 29289

EPA ID#: IND000718130
PO#: PENDING

Internal Contact
LEA WILSON

Mailing Address

MATT LOVE
REFINED METALS
3000 MONTROSE AVE
READING, PA 19605-2751
UNITED STATES

Site Address (None)

REFINED METALS
3700 SOUTH ARLINGTON
INDIANAPOLIS, IN 46203
UNITED STATES

Phone# (610)921-4054
LIKENS, ERIC - (317)272-6590

HERITAGE TRANSPORT,LLC-TS INDIANAPOLIS (10153) (317)538-8458
IND058484114 US DOT#:

Emergency Rate_____ Pickup Demurrage_____ Final Delivery Demurrage_____

Tractor#_____ Trailer#_____

Odometer: Start_____ End_____

Liner Qty_____

PICKUP TIME: 07:00-16:00

Driver#_____ Driver Name_____ Date_____

HERITAGE ENVIRONMENTAL SERVICES (9000) IND093219012
7901 W MORRIS ST, INDIANAPOLIS, IN 46231-3301 UNITED STATES (317)243-0811

P/U Items	Common Name	See Manifest	Transaction	Prod	Ref#	Ord	Type
1	FLOCCULENT	000616373WAS-1	7534854	103	Y41N	3	DM
2	BAGHOUSE FILTERS	000616373WAS-2	7547704	6064	Y44N	3	
3	USED OIL	000616373WAS-3	7534847	68	Y39N	9	DM
4	METAL ION PRECIPITANT	1877234-9000-1	7534849	103	N42N	1	DM
5	PURGE WATER	1877234-9000-2	7534855	53	N45N	3	DM

Site Rep
Name_____ Signature_____ Date_____

150085: EXIDE TECHNOLOGIES
Company\Loc: 48\7

ID:

1877234-9000

HAZMAT BILL OF LADING/MANIFEST	1. Offeror's ID Number	2. Page 1 of	3. Emergency Response Phone	4. Tracking Number
	IND000718130	1	(800)326-1221	1877234-9000

5. Offeror's Name and Mailing Address
REFINED METALS / MATT LOVE
3000 MONTROSE AVE
READING, PA 19605-2751
(610)921-4054
Offeror's Phone:

Offeror's Site Address (if different than mailing address)
REFINED METALS / MATT LOVE
3700 SOUTH ARLINGTON
INDIANAPOLIS, IN 46203
GEN: 29289

6. Transporter 1 Company Name
HERITAGE TRANSPORT,LLC-TS INDIANAPOLIS
U.S. EPA ID Number
IND058484114

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
HERITAGE ENVIRONMENTAL SERVICES
7901 W MORRIS ST
INDIANAPOLIS, IN 46231-3301
Facility's Phone: (317)243-0811
U.S. EPA ID Number
IND093219012

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.
	1. NON-DOT/NON-RCRA REGULATED (1X55DF)	1	DF	55	G
	2. NON-DOT/NON-RCRA REGULATED (3X55DM)	3	DM	165	G
	3.				
	4.				
	5.				
	6.				
	7.				

13. Special Handling Instructions and Additional Information
1.W42_Q912565 2.W45_Q912967

ERI:HERITAGE [4793222]

14. **OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Offeror's Printed/Typed Name: SCOTT WARD AS AGENT FOR EXIDE
Signature: [signature]
Month 11 Day 10 Year 14

15. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Michael W. Tyford
Signature: [signature]
Month 11 Day 10 Year 14

Transporter 2 Printed/Typed Name
Signature
Month Day Year

16. Discrepancy

17. Designated Facility Owner or Operator: Certification of receipt of hazardous Bill of Lading/Manifest covered by the manifest except as noted in item 16

Printed/Typed Name: MICHAEL A OKEEFE
Signature: [signature]
Month 11 Day 16 Year 14

OFFEROR

TRANSPORTER

DESIGNATED FACILITY

DESIGNATED FACILITY TO OFFEROR

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
[illegible]	1	[illegible]	[illegible]

5. Generator's Name and Mailing Address
REFINED METALS / KATT LOVE
[illegible]
[illegible]
Generator's Phone: [illegible]

Generator's Site Address (if different than mailing address)
REFINED METALS / KATT LOVE
[illegible] SOUTH ARLINGTON
INDIANAPOLIS, IN [illegible]
[illegible]

6. Transporter 1 Company Name: [illegible] — U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name: [illegible] — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
[illegible] ENVIRONMENTAL SERVICES
[illegible]
INDIANAPOLIS, IN [illegible]
Facility's Phone: [illegible]

U.S. EPA ID Number: [illegible]

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. [illegible]	3	DM	1665	G	[illegible]
X	2. [illegible]	[illegible]	11/10/14			[illegible]
X	3. [illegible]	9	DM	495	G	[illegible]
	4.					

14. Special Handling Instructions and Additional Information
[illegible]

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: SCOTT WARD AS AGENT FOR BRIDGE — Signature: [signature] — Month 11 Day 10 Year 14

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: [illegible] — Signature: [signature] — Month 11 Day 10 Year 14
Transporter 2 Printed/Typed Name: — Signature: — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
H141	[illegible]	[illegible]	

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: [illegible] — Signature: [signature] — Month 11 Day 10 Year 14

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

1878851-15289

HAZMAT BILL OF LADING/MANIFEST	1. Offeror's ID Number	2. Page 1 of	3. Emergency Response Phone	4. Tracking Number
	IND000718130	1	800-326-1221	1878851 ~~1877234~~ 15289 11/10/14

5. Offeror's Name and Mailing Address
REFINED METALS / MATT LOVE
3000 MONTROSE AVE
READING, PA 19605-2751
Offeror's Phone: 610-921-4054

Offeror's Site Address (if different than mailing address)
REFINED METALS / MATT LOVE
3700 S ARLINGTON
INDIANAPOLIS, IN 46203
GEN: 29289

6. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC - TS INDIANAPOLIS — U.S. EPA ID Number: IND058484114

7. Transporter 2 Company Name: Lighting Resources LLC — U.S. EPA ID Number: IN0000351387

8. Designated Facility Name and Site Address
LIGHTING RESOURCES, INC
498 PARK 800 DR
GREENWOOD, IN 46143
Facility's Phone: 317-888-3889
U.S. EPA ID Number: IN0000351387

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
	1. NON-DOT UNIVERSAL WASTE - LAMPS (1X20CF)	1	CF	25	P
	2.				
	3.				
	4.				
	5.				
	6.				
	7.				

13. Special Handling Instructions and Additional Information
1. W43

14. **OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Offeror's Printed/Typed Name	Signature	Month	Day	Year
SCOTT WARD AS AGENT FOR EXODE	[signature]	11	10	14

15. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
MICHAEL W. T[illegible]	[signature]	11	10	14

Transporter 2 Printed/Typed Name	Signature	Month	Day	Year
BEFF WARDACKER	[signature]	11	13	14

16. Discrepancy

17. Designated Facility Owner or Operator: Certification of receipt of hazardous Bill of Lading/Manifest covered by the manifest except as noted in Item 16

Printed/Typed Name	Signature	Month	Day	Year
John J Knight	[signature]	11	19	14

OFFEROR

TRANSPORTER

DESIGNATED FACILITY

DESIGNATED FACILITY TO OFFEROR