

ADDENDUM NO. 2

DATE: March 27th, 2023

PROJECT: **2023 MFT Street Maintenance Program – Gurnee #8443**

OWNER: VILLAGE OF GURNEE

TO: PROSPECTIVE BIDDERS

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents approved for bid, with the amendments as noted below.

This Addendum consists of 69 pages. This Addendum contains the following revisions:

1. Removal of a portion of storm sewer work on Waveland Ave
2. Addition of CCDD Report

CHANGES TO THE CONTRACT DOCUMENTS AND SPECIFICATIONS:

Project Manual:

- Item 1: Remove and replace the page titled “Waveland Ave Storm Sewer Work” in the bid documents with page 2 of this Addendum
 - Removed portions of proposed storm sewer work, but culvert removal and replacement remains
- Item 2: Remove and replace BLR 12201 Schedule of Prices in its entirety with pages 3 and 4 of this Addendum
 - Removed pay items “STORM SEWER REMOVAL” and “STORM SEWERS, CLASS B TYPE 1 12" HDPE”
- Item 3: Remove and replace the Quantity Breakdown by Street with pages 5, 6, 7, and 8 of this Addendum
 - Removed pay items “STORM SEWER REMOVAL” and “STORM SEWERS, CLASS B TYPE 1 12" HDPE”
- Item 4: Add pages 9-69 of this Addendum to the bid documents
 - Included the CCDD Report

Signed: Jake Benner

Jake Benner
Civil Engineer
Village of Gurnee

Please acknowledge receipt of this Addendum by signing below and faxing or emailing a copy of the Addendum to the Village of Gurnee, Engineering Department at (847)-599-7550 or engineering@village.gurnee.il.us. Failure to do may disqualify the Bidder.

Firm

By

Name

Title

Waveland Ave Storm Sewer Work



Engineer will provide elevations and layout.



Scale
1:2,400



Schedule of Prices

Print Form

Print With Instructions

Reset Form



Contractor's Name

Contractor's Address

City

State

Zip Code

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Local Public Agency

County

Section Number

Village of Gurnee	Lake	23-00000-01-GM
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Route(s) (Street/Road Name)

Various

Schedule for Multiple Bids

Combination Letter	Section Included in Combinations	Total
+		
-		

Schedule for Single Bid

(For complete information covering these items, see plans and specifications.)

Item Number	Items	Unit	Quantity	Unit Price	Total
+	1	COMB. CONC. CURB & GUTTER, TYPE B-6:12	FOOT	4185.5	
-					
+	2	COMB. CONC. CURB & GUTTER, TYPE M-6:12	FOOT	2797.3	
-					
+	3	COMBINATION CURB & GUTTER REMOVAL	FOOT	6982.2	
-					
+	4	SIDEWALK REMOVAL	SF	9199.3	
-					
+	5	P.C.C. SIDEWALK	SF	9199.3	
-					
+	6	DETECTABLE WARNING TILES	EA	123	
-					
+	7	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 6"	SY	736	
-					
+	8	HMA DRIVEWAY REMOVAL AND REPLACEMENT	SY	2494	
-					
+	9	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	10830	
-					
+	10	HMA BINDER COURSE, IL-19.0, N50	TON	5730	
-					
+	11	BITUMINOUS MATERIAL (TACK COAT)	LB	65560	
-					
+	12	LEVELING BINDER (MACHINE MET.), N50	TON	3782	
-					
+	13	PAVEMENT PATCHING-CLASS D, 6-INCH	SY	6182	
-					
+	14	PAVEMENT PATCHING-CLASS D, 4-INCH	SY	4597	
-					
+	15	PAVEMENT PATCHING-CLASS D, 2-INCH, SPECIAL	SY	3150	
-					
+	16	PAVEMENT PATCHING-CLASS D, 4-INCH, SPECIAL	SY	5500	
-					
+	17	PAVEMENT PATCHING-CLASS D, 6-INCH, SPECIAL	SY	2000	
-					
+	18	HOT-MIX ASPHALT SURFACE REMOVAL-(COLD MILLING)	SY	65145	
-					
+	19	HOT-MIX ASPHALT PAVEMENT REMOVAL, 4-INCHES	SY	7995	
-					
+	20	HOT-MIX ASPHALT PAVEMENT REMOVAL, 5-INCHES	SY	9610	
-					
+	21	HOT-MIX ASPHALT PAVEMENT REMOVAL, 6-INCHES	SY	12178	
-					
+	22	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SY	1110	
-					
+	23	UNSUITABLE SUBGRADE EXCAVATION, CA-1 REPLACEMENT	CY	2314	
-					
+	24	UNSUITABLE SUBGRADE EXCAVATION, CA-6 REPLACEMENT	CY	771	
-					

Local Public Agency		County	Section Number		Route(s) (Street/Road Name)	
Village of Gurnee		Lake	23-00000-01-GM		Various	
Item Number	Items	Unit	Quantity	Unit Price	Total	
+25	EARTH EXCAVATION	CY	10			
-26	NON-SPECIAL WASTE DISPOSAL	CY	10			
+27	AGGREGATE BASE REPAIR	TON	1563			
-28	PREPARATION OF BASE	SY	28356			
+29	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SY	6550			
-30	INLETS TO BE ADJUSTED	EA	201			
+31	INLETS TO BE RECONSTRUCTED	EA	1			
-32	MANHOLE TO BE ADJUSTED	EA	36			
+33	LANDSCAPING	SY	9062			
-34	GRADING AND SHAPING OF DITCHES	SY	4565			
+35	AGGREGATE FOR TEMPORARY ACCESS	TON	10			
-36	BRIDGE DECK SCARIFICATION, 2"	SY	140			
+3	BRIDGE DECK LATEX CONCRETE OVERLAY, 2"	SY	140			
-3	JOINT SEAL	FOOT	31			
+39	BRIDGE SIDEWALK AND CURB REMOVAL AND REPLACEMENT	SY	95			
-40	PVC UNDERDRAIN, 4 INCH	FOOT	275			
+41	2' INLET, TYPE-A, CLOSED LID TYPE 1	EA	3			
-42	2' INLET, TYPE-A, TYPE 8 GRATE	EA	2			
+43	PIPE CULVERT REMOVAL	FOOT	710			
-44	PIPE CULVERT, CLASS D TYPE 1 12", CMP	FOOT	710			
+45	STORM SEWERS, CLASS B TYPE 1 12" PVC SDR 26	FOOT	80			
-46	METAL FLARED END SECTIONS 12"	EA	48			
+47	THERMOPLASTIC PVMT. MARKING, 24" LINE	FOOT	742			
-48	THERMOPLASTIC PVMT. MARKING, 12" LINE	FOOT	3426			
+49	THERMOPLASTIC PVMT. MARKING, 4" LINE	FOOT	982			
-50	THERMOPLASTIC PVMT. MARKING, LETTERS & SYMBOLS	SF	10			
+51	TRAFFIC CONTROL AND PROTECTION	LS	1			
				Bidder's Total Proposal		

1. Each pay item should have a unit price and a total price.
2. If no total price is shown or if there is a discrepancy between the product of the unit price multiplied by the quantity, the unit price shall govern.
3. If a unit price is omitted, the total price will be divided by the quantity in order to establish a unit price.
4. A bid may be declared unacceptable if neither a unit price or total price is shown.

ITEM	PAY ITEM	UNIT	TOTAL AMOUNT	Covenant Ct	Lexington Sq	Concord Sq	Grandville Ave	Waveland Ave	Adele Dr	Cascade Way
1	COMB. CONC. CURB & GUTTER, TYPE B-6:12	FOOT	4185.5	0	0	0	433.4	91.3	0	110
2	COMB. CONC. CURB & GUTTER, TYPE M-6:12	FOOT	2797.3	193.6	302.5	232.1	0	0	177.1	0
3	COMBINATION CURB & GUTTER REMOVAL	FOOT	6982.8	193.6	302.5	232.1	433.4	91.3	177.1	110
4	SIDEWALK REMOVAL	S.F.	9199.3	393.8	198	220	44	543.4	561	220
5	P.C.C. SIDEWALK	S.F.	9199.3	393.8	198	220	44	543.4	561	220
6	DETECTABLE WARNING TILES	EA	123	4	7	7	0	7	2	6
7	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 6"	S.Y.	736	10	15	10	50	10	5	5
8	HMA DRIVEWAY REMOVAL AND REPLACEMENT	S.Y.	2494	64	90	100	145	200	70	50
9	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	10830	226	444	448	307	667	400	433
10	HMA BINDER COURSE, IL-19.0, N50	TON	5730	0	0	0	510	1334	0	0
11	BITUMINOUS MATERIAL (TACK COAT)	LB	65560	1330	2610	2630	2400	3900	2300	2600
12	LEVELING BINDER (MACHINE MET.), N50	TON	3782	113	222	224	0	0	200	217
13	PAVEMENT PATCHING-CLASS D, 6-INCH	S.Y.	6182	246	200	273	0	0	107	270
14	PAVEMENT PATCHING-CLASS D, 4-INCH	S.Y.	4597	246	185	700	0	0	300	270
15	PAVEMENT PATCHING-CLASS D, 2-INCH, SPECIAL	S.Y.	3150	0	0	0	0	0	0	0
16	PAVEMENT PATCHING-CLASS D, 4-INCH, SPECIAL	S.Y.	5500	0	0	0	0	0	0	0
17	PAVEMENT PATCHING-CLASS D, 6-INCH, SPECIAL	S.Y.	2000	0	0	0	0	0	0	0
18	HOT-MIX ASPHALT SURFACE REMOVAL-(COLD MILLING)	S.Y.	65145	1935	3790	3830	0	0	3325	3700
19	HOT-MIX ASPHALT PAVEMENT REMOVAL, 4-INCHES	S.Y.	7995	0	0	0	3460	0	0	0
20	HOT-MIX ASPHALT PAVEMENT REMOVAL, 5-INCHES	S.Y.	9610	0	0	0	0	0	0	0
21	HOT-MIX ASPHALT PAVEMENT REMOVAL, 6-INCHES	S.Y.	12178	0	0	0	0	5650	0	0
22	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	S.Y.	1110	30	60	60	90	150	120	60
23	UNSUITABLE SUBGRADE EXCAVATION, CA-1 REPLACEMENT	C.Y.	2314	0	0	0	260	484	0	0
24	UNSUITABLE SUBGRADE EXCAVATION, CA-6 REPLACEMENT	C.Y.	771	0	0	0	85	162	0	0
25	EARTH EXCAVATION	C.Y.	10	0	0	0	0	0	0	0
26	NON-SPECIAL WASTE DISPOSAL	C.Y.	10	0	0	0	0	0	0	0
27	AGGREGATE BASE REPAIR	TON	1563	0	0	0	195	319	0	0
28	PREPARATION OF BASE	S.Y.	28356	0	0	0	3550	5800	0	0
29	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	S.Y.	6550	0	0	0	780	1450	0	0
30	INLETS TO BE ADJUSTED	EA	201	6	13	11	8	5	7	3
31	INLETS TO BE RECONSTRUCTED	EA	1	0	0	0	0	0	0	0
32	MANHOLE TO BE ADJUSTED	EA	36	2	0	2	2	8	5	0
33	LANDSCAPING	S.Y.	9062	60	107	85	700	3000	100	35
34	GRADING AND SHAPING OF DITCHES	S.Y.	4565	0	0	0	300	2000	0	0
35	AGGREGATE FOR TEMPORARY ACCESS	TON	10	0	0	0	0	0	0	0
36	BRIDGE DECK SCARIFICATION, 2"	S.Y.	140	0	0	0	0	0	0	0
37	BRIDGE DECK LATEX CONCRETE OVERLAY, 2"	S.Y.	140	0	0	0	0	0	0	0
38	JOINT SEAL	FOOT	31	0	0	0	0	0	0	0
39	BRIDGE SIDEWALK AND CURB REMOVAL AND REPLACEMENT	S.Y.	95	0	0	0	0	0	0	0
40	PVC UNDERDRAIN, 4 INCH	FOOT	275	0	0	0	0	0	0	0
41	2' INLET, TYPE-A, CLOSED LID TYPE 1	EA	3	0	0	0	0	0	0	0
42	2' INLET, TYPE-A, TYPE 8 GRATE	EA	2	0	0	0	0	1	0	0
43	PIPE CULVERT REMOVAL	FOOT	710	0	0	0	80	360	0	0
44	PIPE CULVERT, CLASS D TYPE 1 12", CMP	FOOT	710	0	0	0	80	360	0	0
45	STORM SEWERS, CLASS B TYPE 1 12" PVC SDR 26	FOOT	80	0	0	0	0	80	0	0
46	METAL FIARED END SECTIONS 12"	EA	48	0	0	0	6	24	0	0
47	THERMOPLASTIC PVMT. MARKING, 24" LINE	FOOT	742	12	24	24	89	120	15	0
48	THERMOPLASTIC PVMT. MARKING, 12" LINE	FOOT	3426	48	120	12	96	0	48	0
49	THERMOPLASTIC PVMT. MARKING, 4" LINE	FOOT	982	0	0	0	982	0	0	0
50	THERMOPLASTIC PVMT. MARKING, LETTERS & SYMBOLS	S.F.	10	0	0	0	10	0	0	0
51	TRAFFIC CONTROL AND PROTECTION	L.S.	1	0	0	0	0	0	0	0

ITEM	PAY ITEM	UNIT	TOTAL AMOUNT	Strawberry Fields	Abbey Rd	Aster Dr	Penny Ln	Spinney Run Dr	Brian Ct	Kristin Ct	Chesley Ct	Harper Ave
1	COMB. CONC. CURB & GUTTER, TYPE B-6:12	FOOT	4185.5	226.6	85.8	95.7	172.7	0	0	0	0	52.8
2	COMB. CONC. CURB & GUTTER, TYPE M-6:12	FOOT	2797.3	0	0	0	0	107.8	92.4	62.7	57.2	0
3	COMBINATION CURB & GUTTER REMOVAL	FOOT	6982.8	226.6	85.8	95.7	172.7	107.8	92.4	62.7	57.2	52.8
4	SIDEWALK REMOVAL	S.F.	9199.3	308	132	231	445.5	433.4	55	110	0	132
5	P.C.C. SIDEWALK	S.F.	9199.3	308	132	231	445.5	433.4	55	110	0	132
6	DETECTABLE WARNING TILES	EA	123	0	5	4	2	3	1	1	0	8
7	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 6"	S.Y.	736	8	4	4	4	0	0	0	0	10
8	HMA DRIVEWAY REMOVAL AND REPLACEMENT	S.Y.	2494	55	40	60	65	0	50	60	30	150
9	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	10830	244	150	312	276	204	108	174	106	568
10	HMA BINDER COURSE, IL-19.0, N50	TON	5730	406	250	0	0	0	0	0	0	853
11	BITUMINOUS MATERIAL (TACK COAT)	LB	65560	1900	1200	1830	1620	1200	630	1000	620	3300
12	LEVELING BINDER (MACHINE MET.), N50	TON	3782	0	0	156	138	102	54	85	53	0
13	PAVEMENT PATCHING-CLASS D, 6-INCH	S.Y.	6182	0	0	200	125	0	0	0	0	0
14	PAVEMENT PATCHING-CLASS D, 4-INCH	S.Y.	4597	0	0	400	200	352	186	300	183	0
15	PAVEMENT PATCHING-CLASS D, 2-INCH, SPECIAL	S.Y.	3150	0	0	0	0	0	0	0	0	0
16	PAVEMENT PATCHING-CLASS D, 4-INCH, SPECIAL	S.Y.	5500	0	0	0	0	0	0	0	0	0
17	PAVEMENT PATCHING-CLASS D, 6-INCH, SPECIAL	S.Y.	2000	0	0	0	0	0	0	0	0	0
18	HOT-MIX ASPHALT SURFACE REMOVAL-(COLD MILLING)	S.Y.	65145	0	0	2680	2400	1760	930	1500	915	0
19	HOT-MIX ASPHALT PAVEMENT REMOVAL, 4-INCHES	S.Y.	7995	2820	1715	0	0	0	0	0	0	0
20	HOT-MIX ASPHALT PAVEMENT REMOVAL, 5-INCHES	S.Y.	9610	0	0	0	0	0	0	0	0	4820
21	HOT-MIX ASPHALT PAVEMENT REMOVAL, 6-INCHES	S.Y.	12178	0	0	0	0	0	0	0	0	0
22	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	S.Y.	1110	0	0	30	0	0	0	0	0	120
23	UNSUITABLE SUBGRADE EXCAVATION, CA-1 REPLACEMENT	C.Y.	2314	188	113	0	0	0	0	0	0	427
24	UNSUITABLE SUBGRADE EXCAVATION, CA-6 REPLACEMENT	C.Y.	771	63	38	0	0	0	0	0	0	143
25	EARTH EXCAVATION	C.Y.	10	0	0	0	0	0	0	0	0	0
26	NON-SPECIAL WASTE DISPOSAL	C.Y.	10	0	0	0	0	0	0	0	0	0
27	AGGREGATE BASE REPAIR	TON	1563	155	95	0	0	0	0	0	0	272
28	PREPARATION OF BASE	S.Y.	28356	2820	1715	0	0	0	0	0	0	4940
29	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	S.Y.	6550	564	340	0	0	0	0	0	0	1280
30	INLETS TO BE ADJUSTED	EA	201	7	4	7	9	2	1	3	1	0
31	INLETS TO BE RECONSTRUCTED	EA	1	0	0	0	0	0	0	0	0	0
32	MANHOLE TO BE ADJUSTED	EA	36	0	0	0	0	1	1	1	0	6
33	LANDSCAPING	S.Y.	9062	58	25	42	60	40	20	20	10	3000
34	GRADING AND SHAPING OF DITCHES	S.Y.	4565	0	0	0	0	0	0	0	0	2000
35	AGGREGATE FOR TEMPORARY ACCESS	TON	10	0	0	0	0	0	0	0	0	0
36	BRIDGE DECK SCARIFICATION, 2"	S.Y.	140	0	0	0	0	0	0	0	0	0
37	BRIDGE DECK LATEX CONCRETE OVERLAY, 2"	S.Y.	140	0	0	0	0	0	0	0	0	0
38	JOINT SEAL	FOOT	31	0	0	0	0	0	0	0	0	0
39	BRIDGE SIDEWALK AND CURB REMOVAL AND REPLACEMENT	S.Y.	95	0	0	0	0	0	0	0	0	0
40	PVC UNDERDRAIN, 4 INCH	FOOT	275	0	0	0	0	270	0	0	0	0
41	2' INLET, TYPE-A, CLOSED LID TYPE 1	EA	3	0	0	0	0	2	0	0	0	0
42	2' INLET, TYPE-A, TYPE 8 GRATE	EA	2	0	0	0	0	1	0	0	0	0
43	PIPE CULVERT REMOVAL	FOOT	710	0	0	0	0	0	0	0	0	150
44	PIPE CULVERT, CLASS D TYPE 1 12", CMP	FOOT	710	0	0	0	0	0	0	0	0	150
45	STORM SEWERS, CLASS B TYPE 1 12" PVC SDR 26	FOOT	80	0	0	0	0	0	0	0	0	0
46	METAL FLARED END SECTIONS 12"	EA	48	0	0	0	0	0	0	0	0	10
47	THERMOPLASTIC PVMT. MARKING, 24" LINE	FOOT	742	15	26	15	28	0	0	0	0	72
48	THERMOPLASTIC PVMT. MARKING, 12" LINE	FOOT	3426	72	144	72	144	108	60	0	0	216
49	THERMOPLASTIC PVMT. MARKING, 4" LINE	FOOT	982	0	0	0	0	0	0	0	0	0
50	THERMOPLASTIC PVMT. MARKING, LETTERS & SYMBOLS	S.F.	10	0	0	0	0	0	0	0	0	0
51	TRAFFIC CONTROL AND PROTECTION	L.S.	1	0	0	0	0	0	0	0	0	0

ITEM	PAY ITEM	UNIT	TOTAL AMOUNT	Woodlawn Ave	Magnolia Ave	Greystone Dr	Nursery Dr	Sawyer Ct	Sutton Pl	Sycamor Ln	Acacia Ct
1	COMB. CONC. CURB & GUTTER, TYPE B-6:12	FOOT	4185.5	0	0	0	490.6	217.8	39.6	0	0
2	COMB. CONC. CURB & GUTTER, TYPE M-6:12	FOOT	2797.3	0	0	0	0	0	0	140.8	74.8
3	COMBINATION CURB & GUTTER REMOVAL	FOOT	6982.8	0	0	0	490.6	217.8	39.6	140.8	74.8
4	SIDEWALK REMOVAL	S.F.	9199.3	110	0	0	517	1048.3	198	110	176
5	P.C.C. SIDEWALK	S.F.	9199.3	110	0	0	517	1048.3	198	110	176
6	DETECTABLE WARNING TILES	EA	123	2	0	0	20	6	0	2	2
7	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 6"	S.Y.	736	5	0	0	150	125	45	35	0
8	HMA DRIVEWAY REMOVAL AND REPLACEMENT	S.Y.	2494	45	35	150	150	125	45	35	30
9	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	10830	150	182	828	592	128	230	81	108
10	HMA BINDER COURSE, IL-19.0, N50	TON	5730	225	273	0	0	0	345	161	217
11	BITUMINOUS MATERIAL (TACK COAT)	LB	65560	900	1100	4900	3470	750	1350	470	640
12	LEVELING BINDER (MACHINE MET.), N50	TON	3782	0	0	414	296	64	0	0	0
13	PAVEMENT PATCHING-CLASS D, 6-INCH	S.Y.	6182	0	0	1560	1038	178	0	0	0
14	PAVEMENT PATCHING-CLASS D, 4-INCH	S.Y.	4597	0	0	0	0	0	0	0	0
15	PAVEMENT PATCHING-CLASS D, 2-INCH, SPECIAL	S.Y.	3150	0	0	0	0	0	0	0	0
16	PAVEMENT PATCHING-CLASS D, 4-INCH, SPECIAL	S.Y.	5500	0	0	0	0	0	0	0	0
17	PAVEMENT PATCHING-CLASS D, 6-INCH, SPECIAL	S.Y.	2000	0	0	0	0	0	0	0	0
18	HOT-MIX ASPHALT SURFACE REMOVAL-(COLD MILLING)	S.Y.	65145	0	0	7200	5080	1110	0	0	0
19	HOT-MIX ASPHALT PAVEMENT REMOVAL, 4-INCHES	S.Y.	7995	0	0	0	0	0	0	0	0
20	HOT-MIX ASPHALT PAVEMENT REMOVAL, 5-INCHES	S.Y.	9610	1210	1580	0	0	0	2000	0	0
21	HOT-MIX ASPHALT PAVEMENT REMOVAL, 6-INCHES	S.Y.	12178	0	0	0	0	0	0	670	910
22	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	S.Y.	1110	90	0	0	60	0	0	30	30
23	UNSUITABLE SUBGRADE EXCAVATION, CA-1 REPLACEMENT	C.Y.	2314	109	132	0	0	0	133	47	63
24	UNSUITABLE SUBGRADE EXCAVATION, CA-6 REPLACEMENT	C.Y.	771	36	44	0	0	0	44	16	21
25	EARTH EXCAVATION	C.Y.	10	0	0	0	0	0	0	0	0
26	NON-SPECIAL WASTE DISPOSAL	C.Y.	10	0	0	0	0	0	0	0	0
27	AGGREGATE BASE REPAIR	TON	1563	72	87	0	0	0	0	39	52
28	PREPARATION OF BASE	S.Y.	28356	1300	1580	0	0	0	0	700	943
29	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	S.Y.	6550	325	395	0	0	0	0	140	190
30	INLETS TO BE ADJUSTED	EA	201	0	0	17	15	0	2	2	2
31	INLETS TO BE RECONSTRUCTED	EA	1	0	0	0	0	0	0	0	0
32	MANHOLE TO BE ADJUSTED	EA	36	1	0	0	0	0	0	2	1
33	LANDSCAPING	S.Y.	9062	300	320	115	100	35	20	25	20
34	GRADING AND SHAPING OF DITCHES	S.Y.	4565	120	120	0	25	0	0	0	0
35	AGGREGATE FOR TEMPORARY ACCESS	TON	10	0	0	0	0	0	0	0	0
36	BRIDGE DECK SCARIFICATION, 2"	S.Y.	140	0	0	0	0	0	0	0	0
37	BRIDGE DECK LATEX CONCRETE OVERLAY, 2"	S.Y.	140	0	0	0	0	0	0	0	0
38	JOINT SEAL	FOOT	31	0	0	0	0	0	0	0	0
39	BRIDGE SIDEWALK AND CURB REMOVAL AND REPLACEMENT	S.Y.	95	0	0	0	0	0	0	0	0
40	PVC UNDERDRAIN, 4 INCH	FOOT	275	0	0	0	0	0	0	0	0
41	2" INLET, TYPE-A, CLOSED LID TYPE 1	EA	3	0	0	0	0	0	0	0	0
42	2" INLET, TYPE-A, TYPE 8 GRATE	EA	2	0	0	0	0	0	0	0	0
43	PIPE CULVERT REMOVAL	FOOT	710	90	30	0	0	0	0	0	0
44	PIPE CULVERT, CLASS D TYPE 1 12", CMP	FOOT	710	90	30	0	0	0	0	0	0
45	STORM SEWERS, CLASS B TYPE 1 12" PVC SDR 26	FOOT	80	0	0	0	0	0	0	0	0
46	METAL FLARED END SECTIONS 12"	EA	48	6	2	0	0	0	0	0	0
47	THERMOPLASTIC PVMT. MARKING, 24" LINE	FOOT	742	12	0	30	50	15	15	0	15
48	THERMOPLASTIC PVMT. MARKING, 12" LINE	FOOT	3426	48	0	270	480	60	60	72	72
49	THERMOPLASTIC PVMT. MARKING, 4" LINE	FOOT	982	0	0	0	0	0	0	0	0
50	THERMOPLASTIC PVMT. MARKING, LETTERS & SYMBOLS	S.F.	10	0	0	0	0	0	0	0	0
51	TRAFFIC CONTROL AND PROTECTION	L.S.	1	0	0	0	0	0	0	0	0

ITEM	PAY ITEM	UNIT	TOTAL AMOUNT	Hollyhock Ct	Alder Ct	Suffolk Ct	Delaware Ave	Yew Ct	Monterey Ct	Acorn Ct	Prescott Ln	Old Walnut Cir
1	COMB. CONC. CURB & GUTTER, TYPE B-6:12	FOOT	4185.5	0	0	0	0	0	220	110	220	660
2	COMB. CONC. CURB & GUTTER, TYPE M-6:12	FOOT	2797.3	118.8	83.6	177.1	976.8	0	0	0	0	495
3	COMBINATION CURB & GUTTER REMOVAL	FOOT	6982.8	118.8	83.6	177.1	976.8	220	110	220	660	495
4	SIDEWALK REMOVAL	S.F.	9199.3	269.5	88	242	482.9	132	132	220	825	550
5	P.C.C. SIDEWALK	S.F.	9199.3	269.5	88	242	482.9	132	132	220	825	550
6	DETECTABLE WARNING TILES	EA	123	2	2	2	9	2	2	4	8	5
7	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 6"	S.Y.	736	0	5	5	75	0	50	25	0	10
8	HMA DRIVEWAY REMOVAL AND REPLACEMENT	S.Y.	2494	50	25	0	200	50	50	50	200	150
9	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	10830	177	85	300	792	106	89	120	1070	725
10	HMA BINDER COURSE, IL-19.0, N50	TON	5730	354	170	0	0	0	177	240	0	0
11	BITUMINOUS MATERIAL (TACK COAT)	LB	65560	1040	500	1760	4650	700	550	710	6500	4500
12	LEVELING BINDER (MACHINE MET.), N50	TON	3782	0	0	0	150	0	0	0	0	0
13	PAVEMENT PATCHING-CLASS D, 6-INCH	S.Y.	6182	0	0	0	285	0	0	0	0	363
14	PAVEMENT PATCHING-CLASS D, 4-INCH	S.Y.	4597	0	0	0	285	0	0	0	1000	700
15	PAVEMENT PATCHING-CLASS D, 2-INCH, SPECIAL	S.Y.	3150	0	0	0	0	0	0	0	0	0
16	PAVEMENT PATCHING-CLASS D, 4-INCH, SPECIAL	S.Y.	5500	0	0	0	0	0	0	0	0	0
17	PAVEMENT PATCHING-CLASS D, 6-INCH, SPECIAL	S.Y.	2000	0	0	0	0	0	0	0	0	0
18	HOT-MIX ASPHALT SURFACE REMOVAL-(COLD MILLING)	S.Y.	65145	0	0	0	2570	0	0	0	9300	6300
19	HOT-MIX ASPHALT PAVEMENT REMOVAL, 4-INCHES	S.Y.	7995	0	0	0	0	0	0	0	0	0
20	HOT-MIX ASPHALT PAVEMENT REMOVAL, 5-INCHES	S.Y.	9610	0	0	0	0	0	0	0	0	0
21	HOT-MIX ASPHALT PAVEMENT REMOVAL, 6-INCHES	S.Y.	12178	1508	710	0	0	924	766	1040	0	0
22	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	S.Y.	1110	30	30	30	60	0	0	0	0	30
23	UNSUITABLE SUBGRADE EXCAVATION, CA-1 REPLACEMENT	C.Y.	2314	103	50	0	0	60	60	85	0	0
24	UNSUITABLE SUBGRADE EXCAVATION, CA-6 REPLACEMENT	C.Y.	771	34	17	0	0	20	20	28	0	0
25	EARTH EXCAVATION	C.Y.	10	0	0	0	0	0	0	0	0	0
26	NON-SPECIAL WASTE DISPOSAL	C.Y.	10	0	0	0	0	0	0	0	0	0
27	AGGREGATE BASE REPAIR	TON	1563	85	41	0	0	51	42	58	0	0
28	PREPARATION OF BASE	S.Y.	28356	1538	740	0	0	924	766	1040	0	0
29	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	S.Y.	6550	308	148	0	0	190	190	250	0	0
30	INLETS TO BE ADJUSTED	EA	201	2	2	6	21	4	1	3	15	22
31	INLETS TO BE RECONSTRUCTED	EA	1	0	0	0	0	0	0	0	0	0
32	MANHOLE TO BE ADJUSTED	EA	36	3	0	0	1	0	0	0	0	0
33	LANDSCAPING	S.Y.	9062	30	20	70	185	35	35	40	200	150
34	GRADING AND SHAPING OF DITCHES	S.Y.	4565	0	0	0	0	0	0	0	0	0
35	AGGREGATE FOR TEMPORARY ACCESS	TON	10	0	0	0	0	0	0	0	0	0
36	BRIDGE DECK SCARIFICATION, 2"	S.Y.	140	0	0	0	0	0	0	0	0	0
37	BRIDGE DECK LATEX CONCRETE OVERLAY, 2"	S.Y.	140	0	0	0	0	0	0	0	0	0
38	JOINT SEAL	FOOT	31	0	0	0	0	0	0	0	0	0
39	BRIDGE SIDEWALK AND CURB REMOVAL AND REPLACEMENT	S.Y.	95	0	0	0	0	0	0	0	0	0
40	PVC UNDERDRAIN, 4 INCH	FOOT	275	0	0	0	0	0	0	0	0	0
41	2" INLET, TYPE-A, CLOSED LID TYPE 1	EA	3	0	0	0	0	0	0	0	0	0
42	2" INLET, TYPE-A, TYPE 8 GRATE	EA	2	0	0	0	0	0	0	0	0	0
43	PIPE CULVERT REMOVAL	FOOT	710	0	0	0	0	0	0	0	0	0
44	PIPE CULVERT, CLASS D TYPE 1 12", CMP	FOOT	710	0	0	0	0	0	0	0	0	0
45	STORM SEWERS, CLASS B TYPE 1 12" PVC SDR 26	FOOT	80	0	0	0	0	0	0	0	0	0
46	METAL FLARED END SECTIONS 12"	EA	48	0	0	0	0	0	0	0	0	0
47	THERMOPLASTIC PVMT. MARKING, 24" LINE	FOOT	742	15	15	0	45	15	15	15	30	15
48	THERMOPLASTIC PVMT. MARKING, 12" LINE	FOOT	3426	72	72	0	360	72	72	72	144	360
49	THERMOPLASTIC PVMT. MARKING, 4" LINE	FOOT	982	0	0	0	0	0	0	0	0	0
50	THERMOPLASTIC PVMT. MARKING, LETTERS & SYMBOLS	S.F.	10	0	0	0	0	0	0	0	0	0
51	TRAFFIC CONTROL AND PROTECTION	L.S.	1	0	0	0	0	0	0	0	0	0



BROWNFIELD
ENVIRONMENTAL ENGINEERING

CCDD Material Certification

2023 Street Maintenance

Village of Gurnee



Date: March 17, 2023

BROWNFIELD PROJECT No. 042-016

Prepared for:

Village of Gurnee

325 N. O'Plaine Road

Gurnee, IL 60031

Brownfield Environmental Engineering | 645 Third Street, Suite 250 | Beloit, WI 53511

608-856-5434 | 815-713-9165

www.brownfieldusa.com

Project Summary

Project Name & Address: 2023 MFT Street Resurfacing
Sutton Place, Abbey Road, Strawberry Fields, Sycamor Lane, Acacia Court, Hollyhock Court, Alder Court, Harper Avenue, Waveland Avenue, Grandville Avenue, Woodlawn Avenue, and Magnolia Avenue

Brownfield Project No.: 042-016

Client: Village of Gurnee
325 N. O'Plaine Rd.
Gurnee, IL 60031

Site Inspector: Bradley Brown, P.E.
Juliet Betke

Inspection & Sampling: March 7, 2023

Report Date: March 17, 2023

Report Attachments: Photo Log
Sample Location Maps
IEPA Document Explorer Maps
Sample VS Maximum Allowable Concentrations Summary Table
First Environmental Laboratory Analytical & Accreditation Report
IEPA Form LPC-663 Signed by P.E.

Executive Summary

The services of Brownfield Environmental Engineering Resources, LLC (Brownfield), an Illinois licensed Professional Engineering Design Firm, were retained by the Village of Gurnee of Gurnee, Illinois to perform a Clean Construction Demolition Debris (CCDD) Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Operation assessment. The assessment was performed for the proposed roadway improvements to be completed on Sutton Place, Abbey Road, Strawberry Fields, Sycamor Lane, Acacia Court, Hollyhock Court, Alder Court, Harper Avenue, Waveland Avenue, Grandville Avenue, Woodlawn Avenue, and Magnolia Avenue in Gurnee, IL, as part of their 2023 Street Resurfacing project.

The CCDD Site Assessment and associated material analyses were conducted in accordance with Illinois Environmental Protection Agency (IEPA) guidance regulations and the IL Admin. Code Title 35, Subtitle J CCDD, Part 1100. Chemical analyses were conducted in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" U.S. EPA Publication No. SW-846 as amended. The specific sampling protocol was selected to represent site conditions and the suspected contaminants as directed by the certifying licensed Professional Engineer who is responsible for certifying that the soil is uncontaminated.

Based on the observed site use, conditions and activities, soil screening procedures, and laboratory analytical test results, the excavated materials from the project may be certified as "Clean" for the purposes of CCDD regulations and disposal for the following locations: Sutton Place, Abbey Road, Strawberry Fields, Sycamor Lane, Acacia Court, Hollyhock Court, Alder Court, Harper Avenue, Waveland Avenue, Grandville Avenue, Woodlawn Avenue, and Magnolia Avenue in Gurnee, IL.

Potentially Impacted Property Assessment

To evaluate if the sites or adjacent sites for which historical or current use, or contaminant migration from a proximate (nearby or adjoining) site, increases the presence or potential presence of contamination; the IEPA's Document Explorer website

<http://external.epa.illinois.gov/DocumentExplorer/Home/About> was used as a reference. The site shows IEPA Agency records for air permits (construction and operating), National Pollution Discharge Elimination System (NPDES) water discharge permits, Leaking Underground Storage Tank (LUST), Site Remediation Program (SRP), and State Response Action technical documents by location.

The IEPA Document Explorer lists MGA Inc. at 3818 Grandville Avenue, Gurnee, IL. The property is listed as a leaking underground storage tank (LUST) site. The incident occurred in January 1986 and involved a 20,000-gallon underground storage tank (UST) containing diesel fuel; approximately 1,000 gallons of diesel fuel were released. The 20-Day Certification and 45-Day/Early Action Tier 1 Remediation Objectives Compliance Report was submitted in November 2011. A No Further Remediation (NFR) Letter was issued in December 2011.

The IEPA Document Explorer lists Speedway 7216 at 3688 W Grand Avenue, Gurnee, IL. This site is listed on the Office of the Illinois State Fire Marshall (OSFM) database to have one (1) 20,00-gallon UST containing gasoline, one (1) 12,000-gallon UST containing premium gasoline, one (1) 4,000-gallon UST containing B-11, one (1) 4,000-gallon UST containing kerosene, and one (1) 4,000-gallon UST

containing racing fuel that are active at this property. All USTs at this property passed the evaluation completed in November 2022 and are equipped with leak-detecting sensors.

This evaluation of Potentially Impacted Properties takes into consideration the depth of excavation and scope of work to be completed on the proposed CCDD certification area. Based upon the depth of excavation and screening measures conducted while on-site, Brownfield does not believe any of the above-mentioned records will impact the areas where excavation activities will occur.

Site Assessment & Sampling

On March 7, 2023, Bradley Brown, P.E. and Juliet Betke with Brownfield performed a site reconnaissance assessment to confirm the absence or presence of recognized environmental concerns, soil staining, and potential sources of soil contamination. A total of six (6) soil borings were advanced and grab soil samples were collected between three and five feet below ground the surface for laboratory analysis. The soil samples were collected in laboratory-provided containers, placed in a cooler with ice, and shipped via FedEx to First Environmental Laboratories, Inc. of Naperville, IL. Field screening with a photoionization detector (PID) was conducted at each soil boring location and at six (6) additional locations near the areas where the soil borings were advanced. Field screening with a handheld pH meter and PID was conducted at seven (7) individual locations throughout the project. A map depicting the soil sample locations and additional PID and/or pH field screenings is attached to this report. The table below outlines the results of the PID and/or pH field screenings.

Location	pH	PID (ppm)
SP-1 (Sutton Place)	6.6	0.0
AR-1 (Abbey Road)	7.1	0.0
SF-1 (Strawberry Fields)	6.6	0.0
SL-1 (Sycamor Lane)	6.5	0.0
AC-1 (Acacia Court)	6.9	0.0
HC-1 (Hollyhock Court)	6.7	0.0
ALC-1 (Alder Court)	6.8	0.0
Harper Avenue (West) Additional PID Screening	N/A	0.0
Harper Avenue (East) Additional PID Screening	N/A	0.0
Waveland Avenue (North) Additional PID Screening	N/A	0.0
Waveland Avenue (South) Additional PID Screening	N/A	0.0
Magnolia Avenue Additional PID Screening	N/A	0.0
Woodlawn Avenue Additional PID Screening	N/A	0.0

*Parts per million

Laboratory Analysis

First Environmental Laboratories, Inc. analyzed the six (6) soil boring grab samples in strict compliance with Illinois 5035A/8260B for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), Polynuclear Aromatic Hydrocarbons (PNAs), RCRA metals and iron, pH, and Toxicity Characteristic Leaching Procedure (TCLP) metals. The laboratory analysis indicated that five (5) soil samples contained iron over the IEPA Maximum Allowable Concentration (MAC). A table depicting the results of iron compared to the IEPA MAC is found below.

Sample ID	Iron	Maximum Allowable Concentration
HA – 1	21,800 mg/kg	15,900 mg/kg
GA – 1	19,500 mg/kg	15,900 mg/kg
GA – 2	24,500 mg/kg	15,900 mg/kg
MA – 1	23, 500 mg/kg	15,900 mg/kg
WA – 1	22,700 mg/kg	15,900 mg/kg

According to the Summary of Maximum Allowable Concentrations of Chemical Constituents in Uncontaminated Soil Used as Fill Material at Regulated Fill Operations (35 Ill. Adm. Code 1100. Subpart F), footnote ‘m’ states that as an alternative to the MAC value, compliance verification may be determined by comparing soil sample extraction results (TCLP/SPLP) for this constituent to the respective TACO Class I Soil Component of the Groundwater Ingestion Exposure Route. The results of the TCLP analysis for iron can be found below.

Sample ID	Iron	Soil Component Groundwater Ingestion Class I
HA – 1	0.1 mg/L	5 mg/L
GA – 1	1.2 mg/L	5 mg/L
GA – 2	<0.1 mg/L	5 mg/L
MA – 1	<0.1 mg/L	5 mg/L
WA – 1	1.1 mg /L	5 mg/L

Please note that SVOC constituents, n-Nitrosodi-n-propylamine and Pentachlorophenol, are flagged on the “Summary Analytical Table – Sample Vs. MACs” attachment. Laboratory detection limits are higher than the MACs for these constituents; therefore, these constituents are flagged as exceeding the MACs. However, based on the laboratory analytical data, we presume that levels of n-Nitrosodi-n-propylamine and Pentachlorophenol are consistent with other SVOC constituents and undetectable.

A complete listing of laboratory analytical results compared to IEPA MACs and Class I Soil Component Groundwater Ingestion is included as an attachment to this report.

Recommendations

Based on the observed site use, conditions and activities, soil screening procedures, and laboratory analytical test results, the excavated materials from the project are conditionally certified as “Clean” for the purposes of CCDD regulations and disposal for the following locations: Sutton Place, Abbey Road, Strawberry Fields, Sycamor Lane, Acacia Court, Hollyhock Court, Alder Court, Harper Avenue, Waveland Avenue, Grandville Avenue, Woodlawn Avenue, and Magnolia Avenue in Gurnee, IL.

This report has been prepared for the sole benefit of the Village of Gurnee and their designated CCDD site recipient and may not be relied upon by any other person or entity without the expressed written consent of Brownfield. Brownfield used professional judgment in gathering and presenting information as well as formulating opinions. Nevertheless, environmental assessments are inherently limited in the sense that information obtained is based on limited research and site investigation.

This assessment has been prepared in accordance with generally accepted environmental methodologies and contains all the limitations inherent in these methodologies. No other warranties, expressed or implied, are made as to the professional services provided under the terms of our original contract/proposal and included in this report.

Thank you for choosing Brownfield to be a part of the team for this project. Please contact us if you have any questions or need any additional information.

Sincerely,

Brownfield Environmental Engineering Resources, LLC



Bradley A. Brown, P.E.
Principal

Project #:	042-016
Client:	Village of Gurnee



Photo No. 1

Date: March 7, 2023

Direction: West

Description: Sample Location: WA – 1
Southwest quadrant of
Woodlawn Ave. and
Magnolia Ave.

Residential Area



Photo No. 2

Date: March 7, 2023

Direction: South

Description: Sample Location WVA-1

Near the northwest
quadrant of Grand Ave.
and Waveland Ave.

Commercial Area

Project #:	042-016
Client:	Village of Gurnee



Photo No. 3

Date: March 7, 2023

Direction: Northeast

Description: Sample Location WA – 1
Southeast quadrant of
Woodlawn Ave. and
Magnolia Ave.

Residential Area



Photo No. 4

Date: March 7, 2023

Direction: East

Description: Sample Location HA – 1

Harper Ave.

Residential Area

Project #:	042-016
Client:	Village of Gurnee



Photo No. 5

Date: March 7, 2023

Direction: Southeast

Description: Sample Location SL – 1

Sycamor Ln.

Residential Area



Photo No. 6

Date: March 7, 2023

Direction: South

Description: Sample Location HC - 1

Hollyhock Ct.

Residential Area

Project #:	042-016
Client:	Village of Gurnee



Photo No. 7

Date: March 7, 2023

Direction: East

Description: Sample Location GA - 1

Near the northwest
Grandville Ave. and
Northwestern Ave.

Commercial Area



Photo No. 8

Date: March 7, 2023

Direction: North

Description: Sample Location WVA - 1

Northwest quadrant of
Grand Ave. and Waveland
Ave.

Commercial Area.

Project #:	042-016
Client:	Village of Gurnee



Photo No. 9

Date: March 7, 2023

Direction: North

Description: Sample Location WA - 1

Intersection of Woodlawn
Ave. and Magnolia Ave.

Residential Area



Photo No. 10

Date: March 7, 2023

Direction: South

Description: Sample Location AC - 1

Acacia Ct.

Residential Area

Project #:	042-016
Client:	Village of Gurnee



Photo No. 11

Date: March 7, 2023

Direction: West

Description: Sample Location HA - 1.

Corner of Harper Ave. and
N Delany Rd.

Residential Area



Photo No. 12

Date: March 7, 2023

Direction: West

Description: Sample Location GA - 2

Grandville Ave. and
Waveland Ave.

Residential Area –
Commercial Area to West

Project #:	042-016
Client:	Village of Gurnee



Photo No. 13

Date: March 7, 2023

Direction: South

Description: Sample Location: GA – 2

Grandville Ave. and
Waveland Ave

Residential Area.



Photo No. 14

Date: March 7, 2023

Direction: West

Description: Sample Location GA - 1

Grandville Ave.

Residential Area

Project #:	042-016
Client:	Village of Gurnee



Photo No. 15

Date: March 7, 2023

Direction: North

Description: Sample Location SP - 1

Residential Area



Photo No. 16

Date: March 7, 2023

Direction: North

Description: Sample Location MA - 1

Magnolia Ave.

Residential Area

Project #:	042-016
Client:	Village of Gurnee



Photo No. 17

Date: March 7, 2023

Direction: West

Description: Sample Location HA - 1

Harper Ave. (east dead end)

Residential Area



Photo No. 18

Date: March 7, 2023

Direction: South

Description: Sample Location AR - 1

Abbey Rd.

Residential Area

Project #:	042-016
Client:	Village of Gurnee

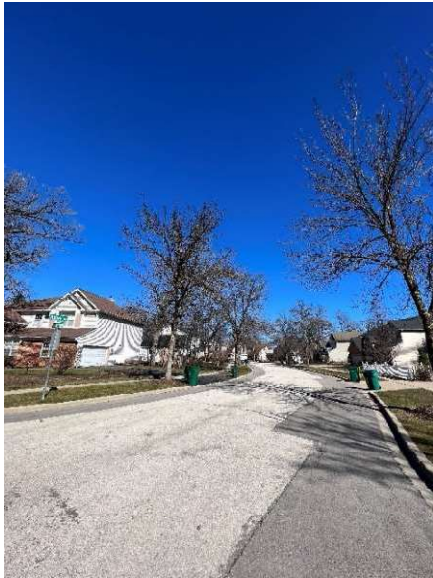


Photo No. 19

Date: March 7, 2023

Direction: Northeast

Description: Sample Location SF - 1

Strawberry Fields and
Abbey Rd. intersection

Residential Area



- PID & pH
- SVOCs, VOCs, PNAs, RCRA Metals, Iron, pH, TCLP Metals
- PID Only

Sample ID: SP-1
PID: 0.0
pH: 6.6



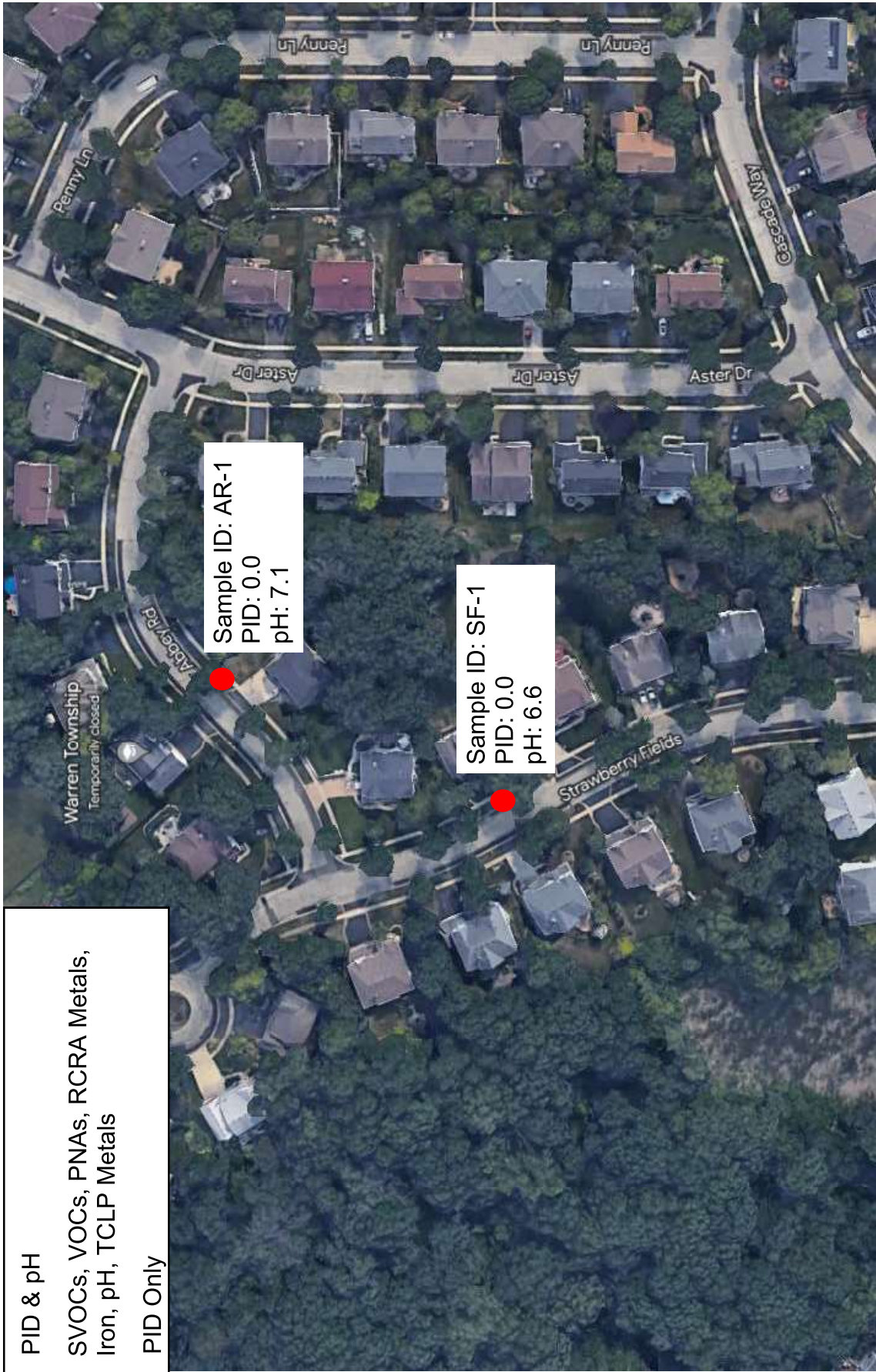
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(608) 856-5434 | (815) 713-9165 | www.brownfieldusa.com

Sample Location Map

LOCATION:	Sutton Place
CLIENT:	042-016
PROJECT:	2023 Street Maintenance
DATE:	3/7/2023



- PID & pH
- SVOCs, VOCs, PNAs, RCRA Metals, Iron, pH, TCLP Metals
- PID Only



Sample ID: AR-1
PID: 0.0
pH: 7.1

Sample ID: SF-1
PID: 0.0
pH: 6.6



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Sample Location Map			
LOCATION:	Strawberry Fields & Abbey Road		
CLIENT:	042-016		
PROJECT:	2023 Street Maintenance		
DATE:	3/7/2023		

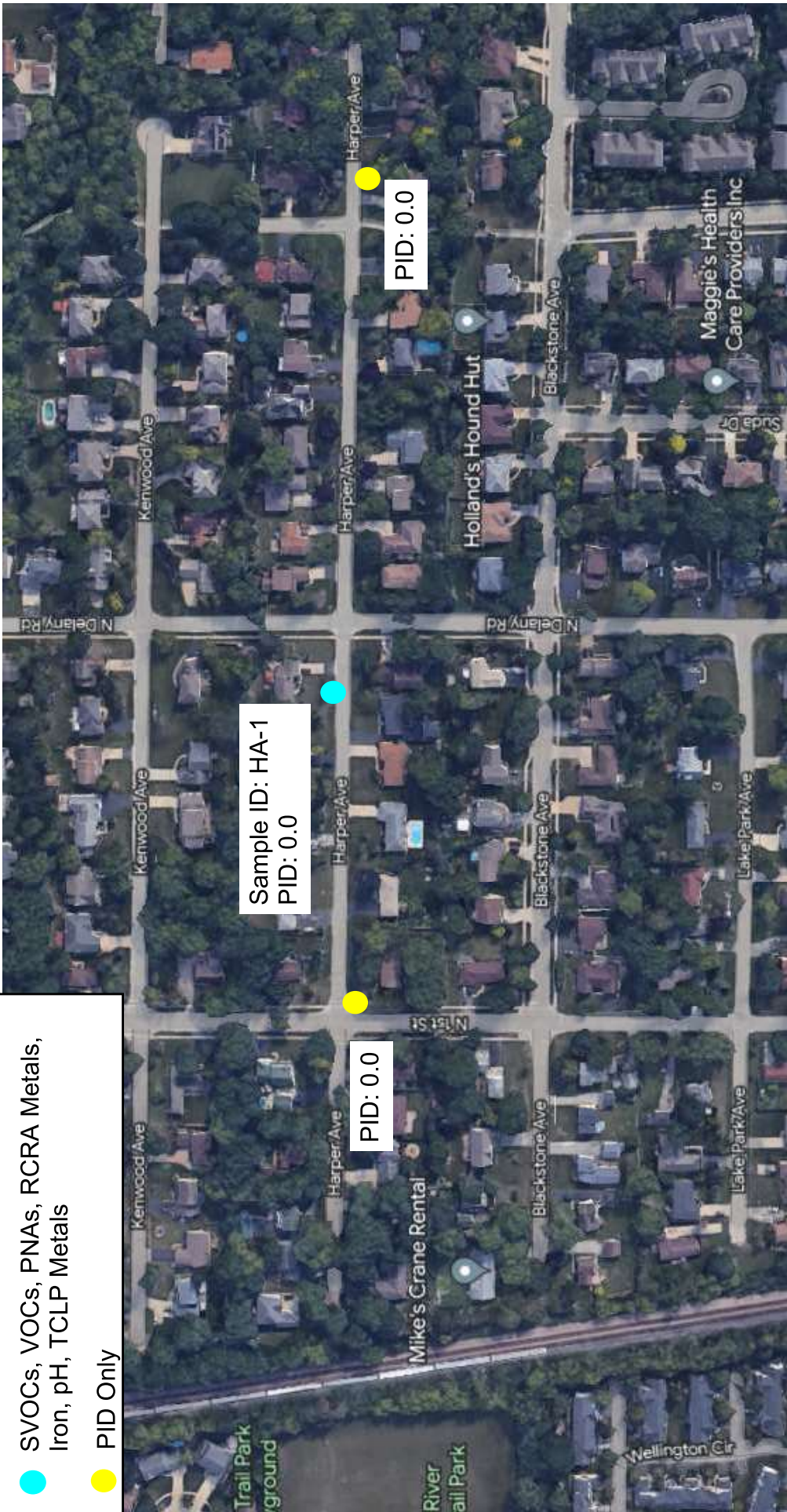




 BROWNFIELD ENVIRONMENTAL ENGINEERING			
		LOCATION:	Sample Location Map
		CLIENT:	Sycamor Lane, Acacia Court, Hollyhock Court, and Alder Court
		PROJECT:	042-016
		DATE:	2023 Street Maintenance
			3/7/2023

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- PID & pH
- SVOCs, VOCs, PNAS, RCRA Metals, Iron, pH, TCLP Metals
- PID Only





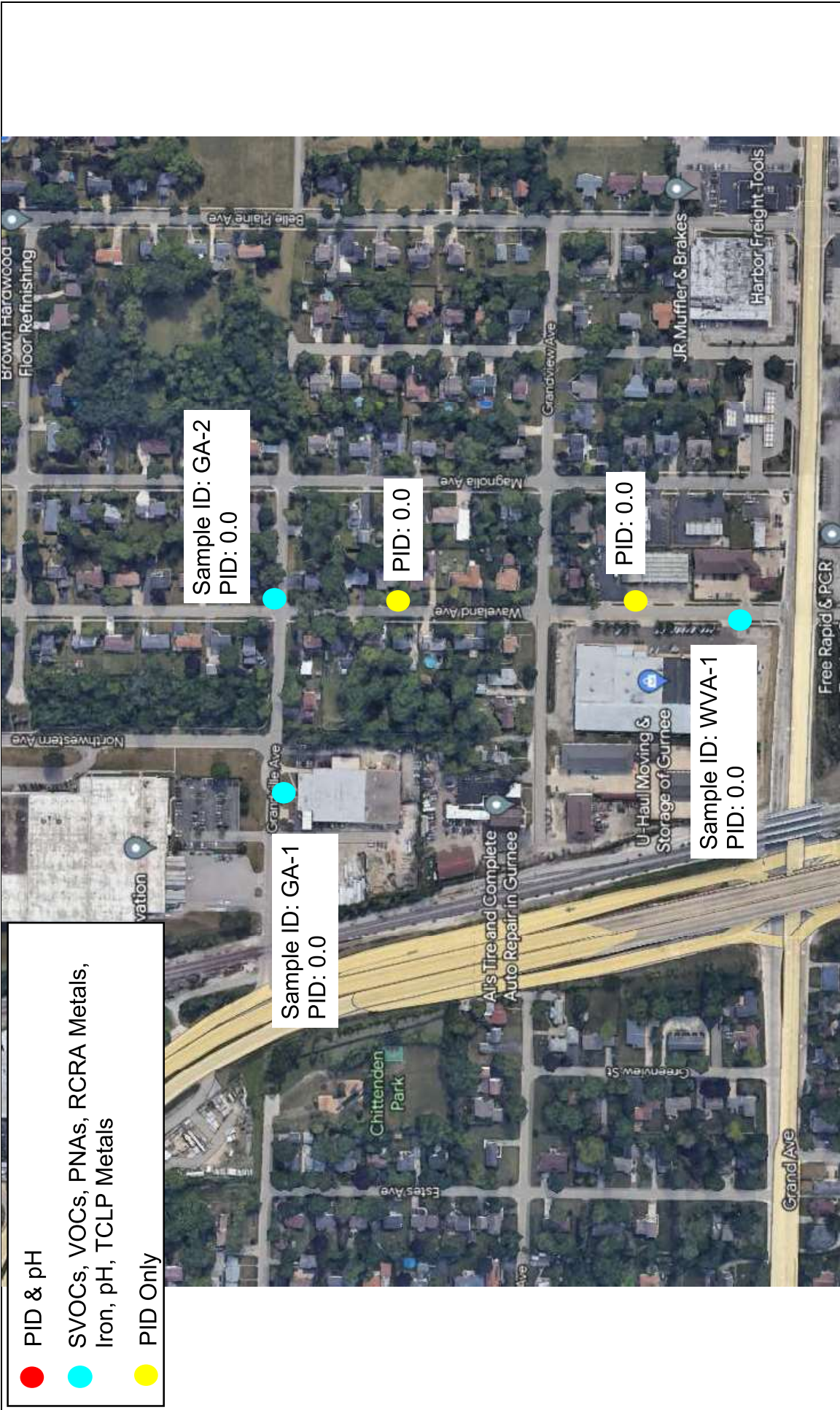
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Sample Location Map

LOCATION:	Harper Avenue	
CLIENT:	042-016	
PROJECT:	2023 Street Maintenance	
DATE:	3/7/2023	

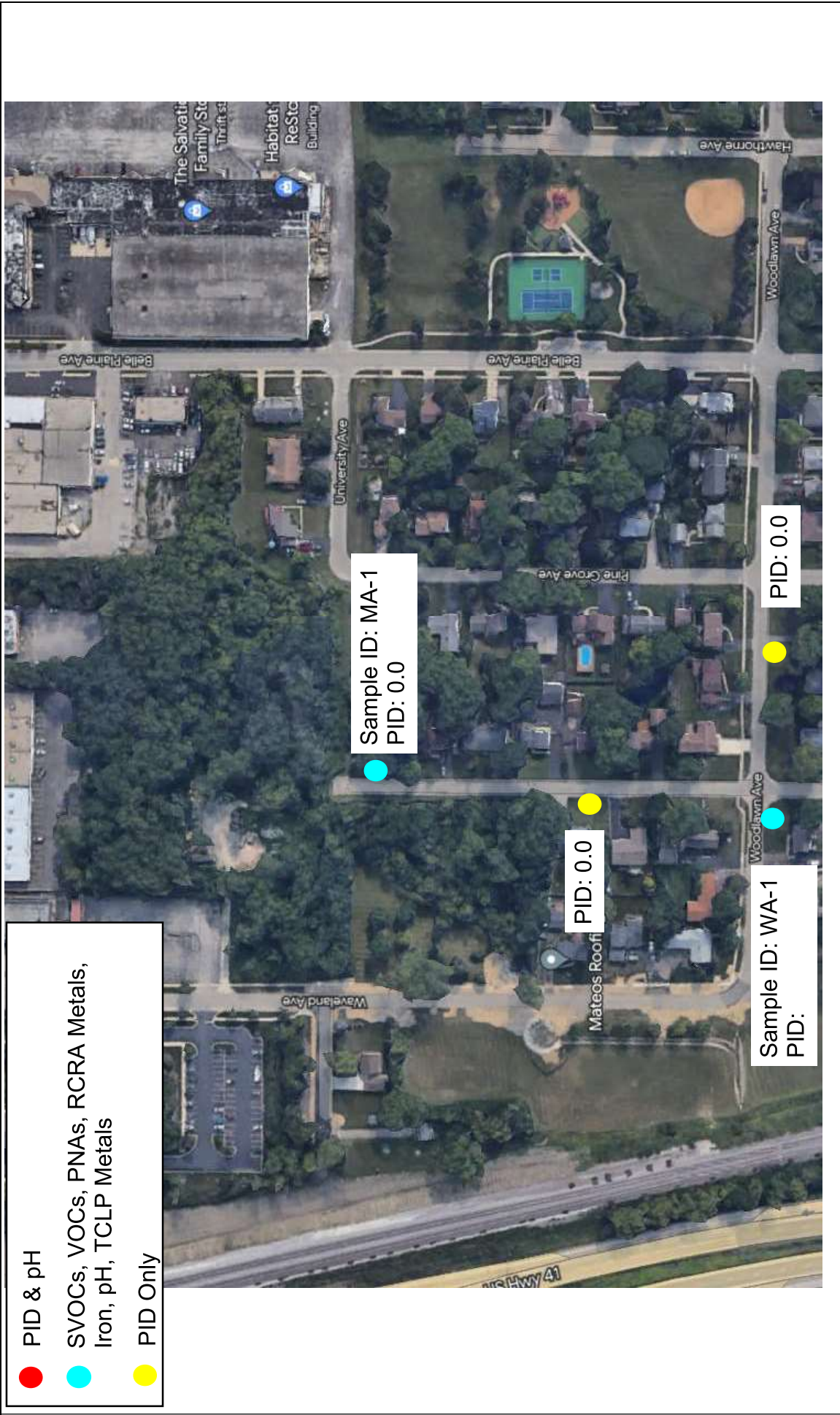


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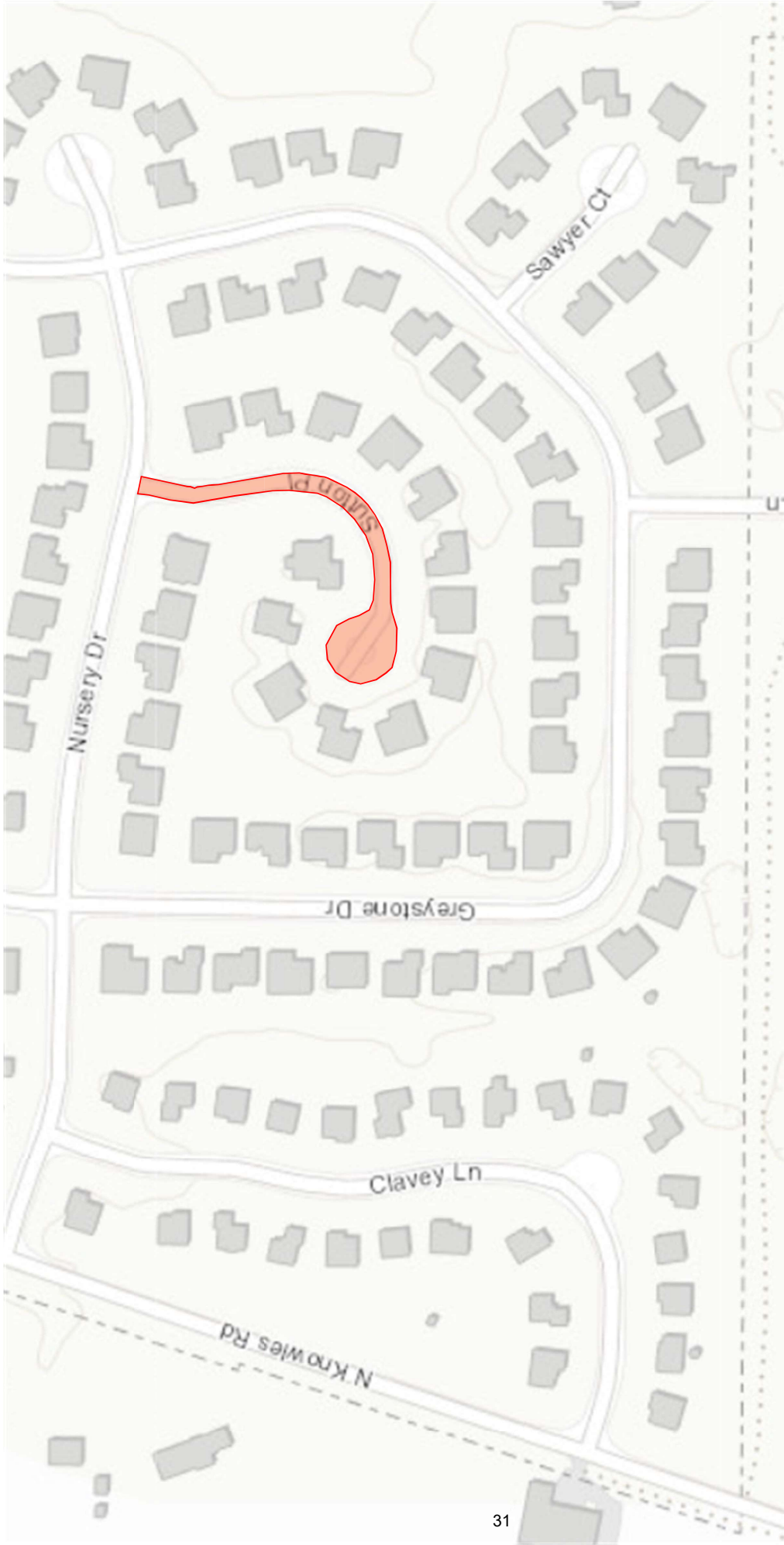
Sample Location Map

LOCATION:	Grandville Avenue and Waveland Avenue
CLIENT:	042-016
PROJECT:	2023 Street Maintenance
DATE:	3/7/2023





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IEPA Document Explorer Map

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LOCATION: Sutton Place – Gurnee, IL

CLIENT: Village of Gurnee

PROJECT: 042 – 016

DATE: March 8, 2023



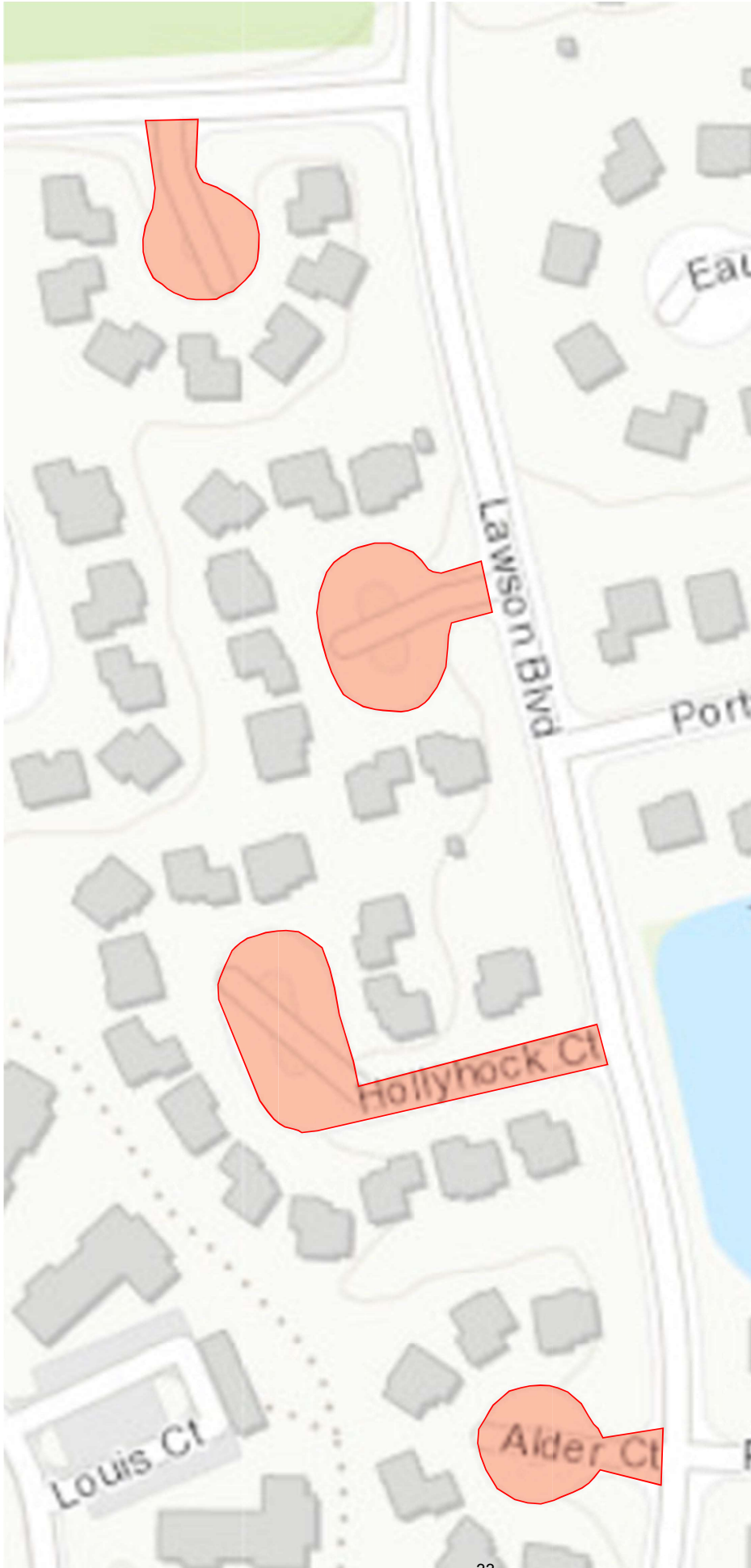


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IEPA Document Explorer Map

LOCATION:	Strawberry Fields and Abbey Road – Gurnee, IL
CLIENT:	Village of Gurnee
PROJECT:	042 – 016
DATE:	March 8, 2023



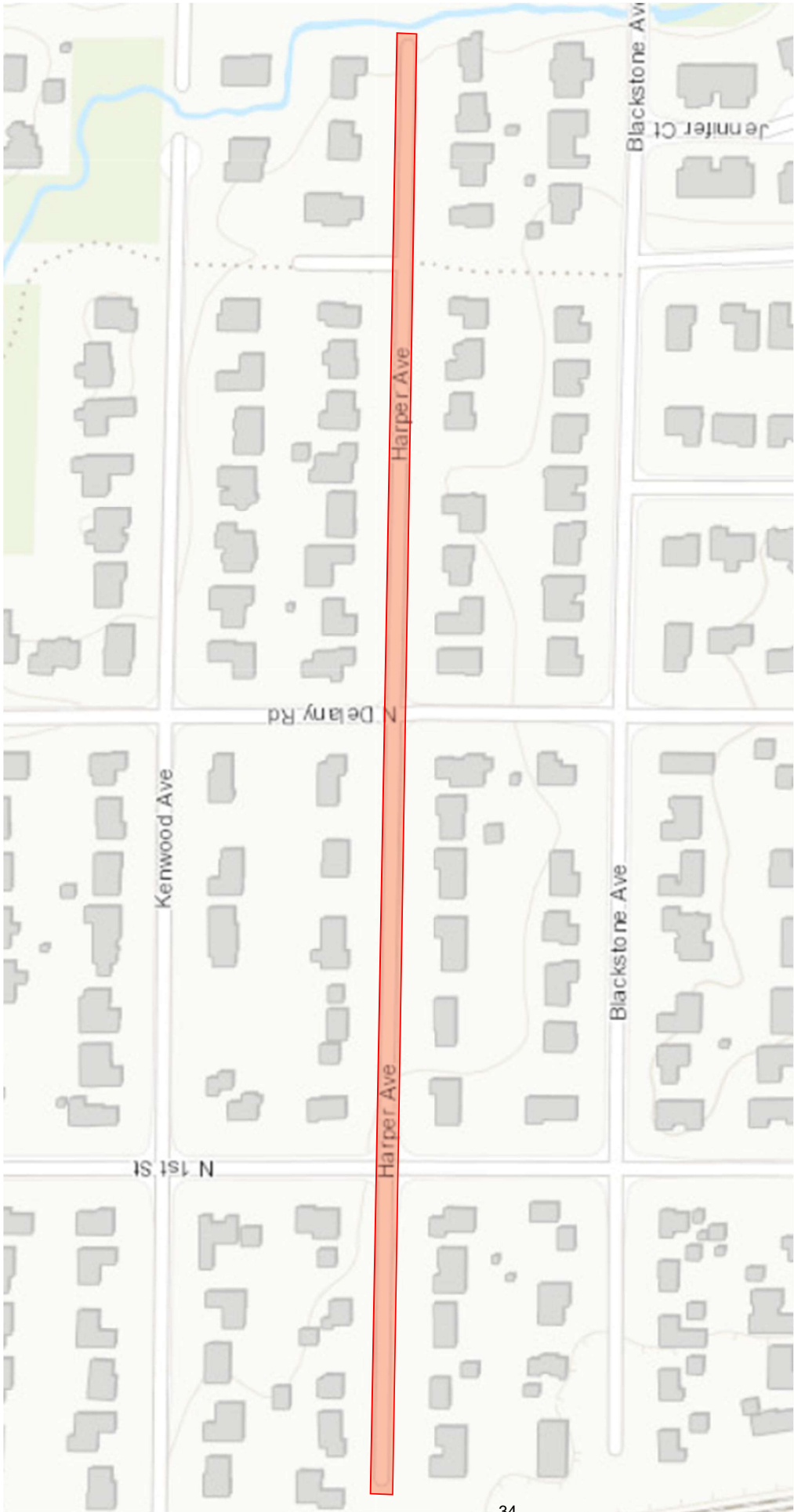


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IEPA Document Explorer Map



LOCATION:	Sycamor Lane, Acacia Court, Hollycock Court, and Alder Court – Gurnee, IL
CLIENT:	Village of Gurnee
PROJECT:	042 – 016
DATE:	March 8, 2023

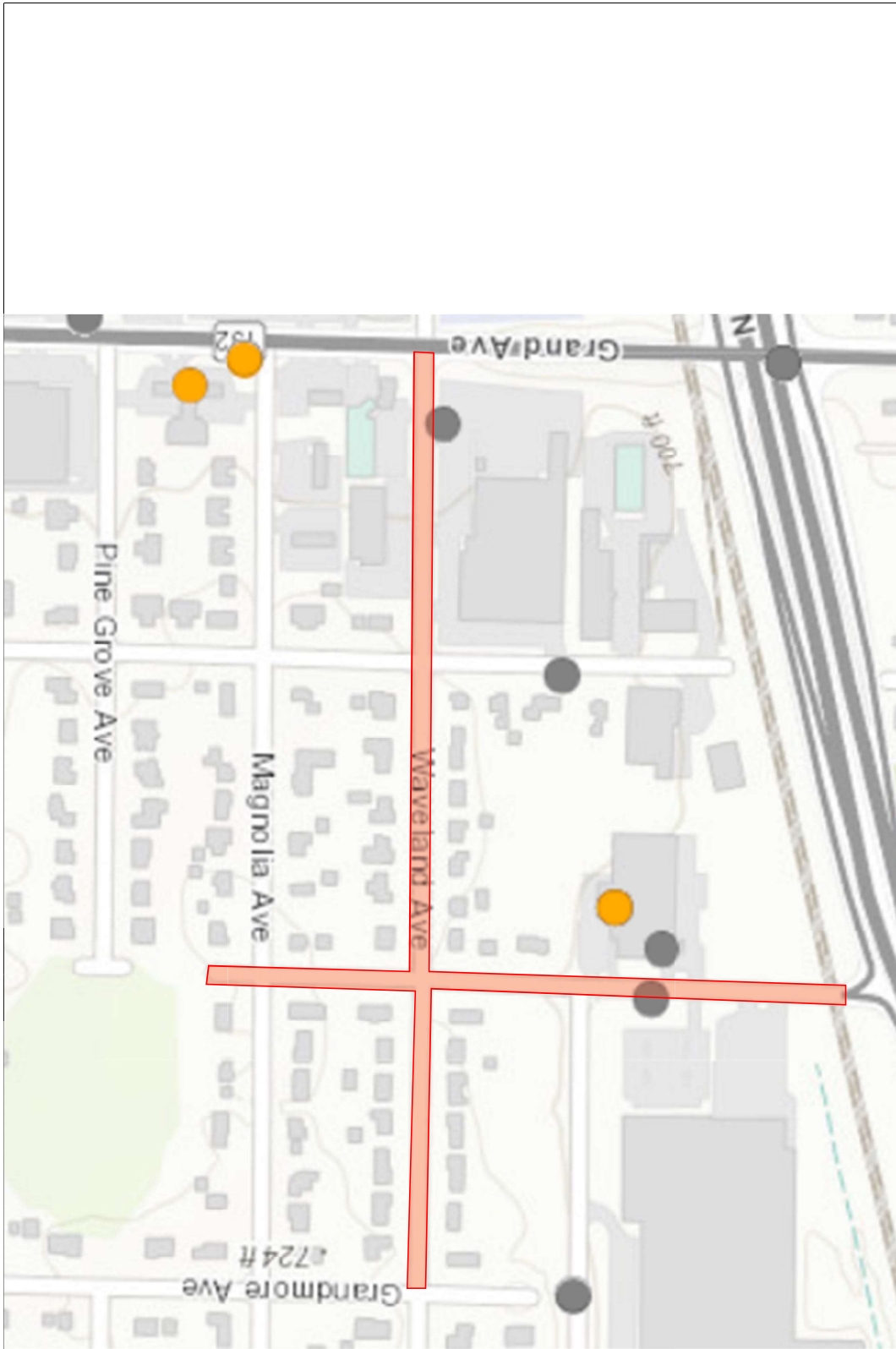


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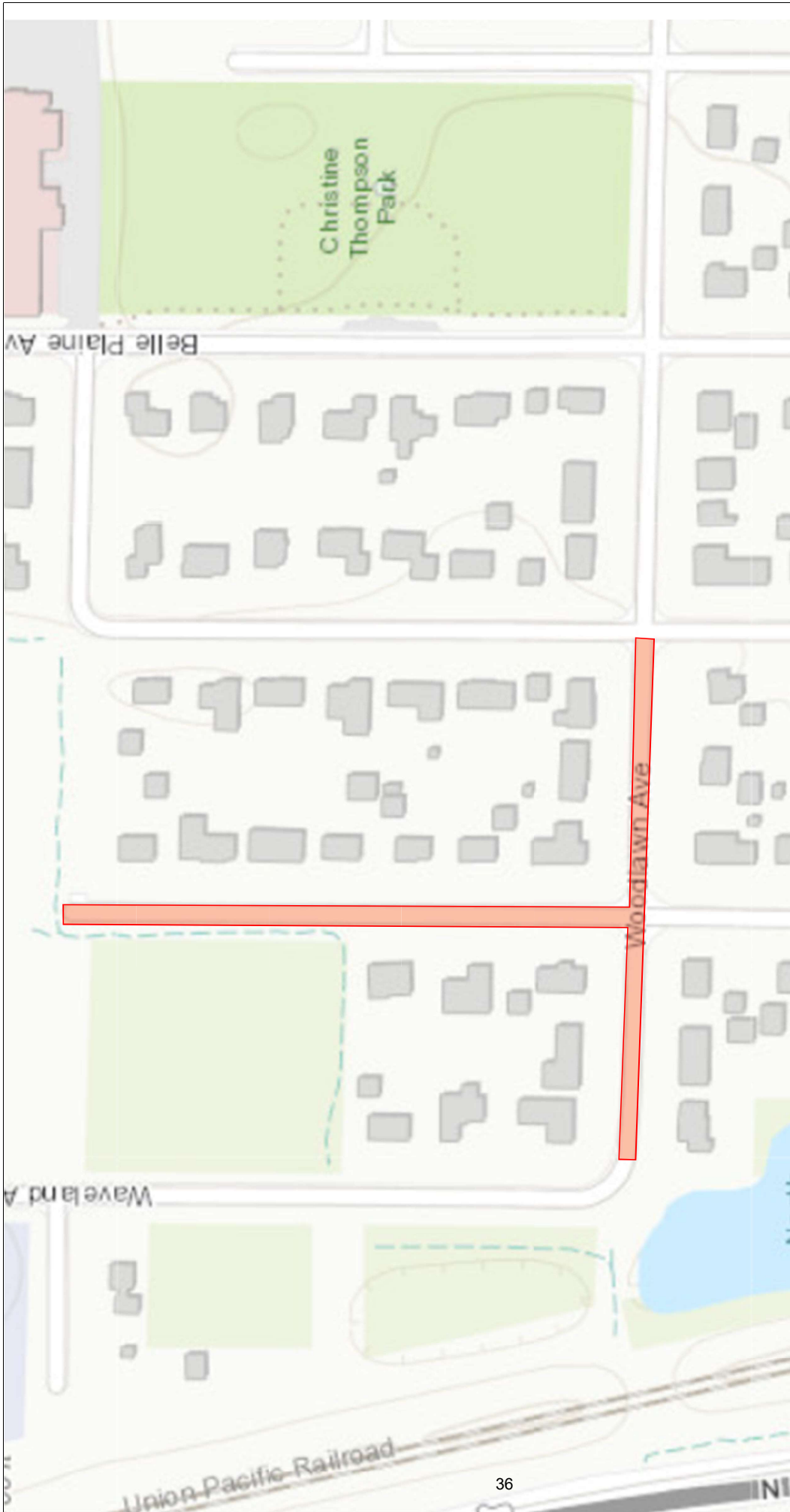
IEPA Document Explorer Map

LOCATION:	Harper Avenue – Gurnee, IL
CLIENT:	Village of Gurnee
PROJECT:	042 – 016
DATE:	March 8, 2023





 645 Third Street, Suite 250, Beloit, WI 53511 (608) 856-5434 (815) 713-9165 www.brownfieldusa.com		IEPA Document Explorer Map		
		LOCATION:	Grandville Avenue & Waveland Avenue – Gurnee, IL	
		CLIENT:	Village of Gurnee	
		PROJECT:	042 – 016	
		DATE:	March 8, 2023	



 BROWNFIELD ENVIRONMENTAL ENGINEERING 645 Third Street, Suite 250, Beloit, WI 53511 (608) 856-5434 (815) 713-9165 www.brownfieldusa.com		IEPA Document Explorer Map	
		LOCATION:	Woodlawn Avenue & Magnolia Avenue – Gurnee, IL
		CLIENT:	Village of Gurnee
		PROJECT:	042 – 016
		DATE:	March 8, 2023

BROWNFIELD ENVIRONMENTAL ENGINEERING												
042-016		HA-1	GA-1	GA-2	WVA-1	MA-1	WA-1	Maximum Allowable Concentration	MAC within a MSA County	MAC within a populated area in a MSA excluding Chicago	Soil Component Groundwater Ingestion Class I	
Date of Sample Collection:	3/7/2023	3/7/2023	3/7/2023	3/7/2023	3/7/2023	3/7/2023	3/7/2023					
Time of Sample Collection:	9:35 AM	11:45 AM	12:00 PM	23-1836-003	23-1836-004	23-1836-005	23-1836-006					
First Environmental Lab. Numbers:	23-1836-001	23-1836-002	23-1836-003	23-1836-004	23-1836-005	23-1836-006						
Contaminants of Concern:												
Volatile Organic Compounds (5035A/8260B)												
Date Analyzed:	Units	RDL	3/10/2023	3/10/2023	3/10/2023	3/10/2023	3/10/2023	3/10/2023	3/10/2023	3/10/2023		
Acetone	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	25	
Benzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.03	
Bromodichloromethane	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.6	
Bromoform	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.8	
Bromomethane	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.2	
Carbon disulfide	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	9	
Carbon tetrachloride	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.07	
Chlorobenzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	1	
Chlorodibromomethane	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.4	
Chloroform	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.3	
1,1-Dichloroethane	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	23	
1,2-Dichloroethane	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.02	
1,1-Dichloroethene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.06	
cis-1,2-Dichloroethene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.4	
trans-1,2-Dichloroethene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.7	
1,2-Dichloropropane	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.03	
cis-1,3-Dichloropropene	mg/kg	0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.005	
trans-1,3-Dichloropropene	mg/kg	0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.005	
Ethylbenzene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	13	
Methyl-tert-butylether (MTBE)	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.32	
Methylene chloride	mg/kg	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	
Styrene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	4	
Tetrachloroethene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.06	
Toluene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	12	
1,1,1-Trichloroethane	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	2	
1,1,2-Trichloroethane	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.02	
Trichloroethene	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.06	
Vinyl acetate	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	10	
Vinyl chloride	mg/kg	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	
Xylene, Total	mg/kg	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	5.6	
Semi-Volatile Compounds (8270C)												
Date Analyzed:	Units	RDL	3/14/2023	3/16/2023	3/16/2023	3/16/2023	3/16/2023	3/16/2023	3/16/2023	3/16/2023		
Acenaphthene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	570	
Anthracene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	12000	
Benzo(a)anthracene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	1.8	
Benzo(a)pyrene	mg/kg	0.09	<0.09	0.168	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	2.1	
Benzo(b)fluoranthene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	2.1	
Benzo(k)fluoranthene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	9	
Benzoic acid	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	400	
bis(2-Chloroethyl) ether	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	0.66	
bis(2-Ethylhexyl)phthalate	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	46	

BROWNFIELD ENVIRONMENTAL ENGINEERING												
042-016		HA-1	GA-1	GA-2	WVA-1	MA-1	WA-1	Maximum Allowable Concentration		MAC within a MSA County	MAC within a populated area in a MSA excluding Chicago	Soil Component Groundwater Ingestion Class I
Date of Sample Collection:		3/7/2023	3/7/2023	3/7/2023	3/7/2023	3/7/2023	3/7/2023	3/7/2023				
Time of Sample Collection:		9:35 AM	11:45 AM	12:00 PM	11:05 AM	10:10 AM	10:35 AM	10:35 AM				
First Environmental Lab. Numbers:		23-1836-001	23-1836-002	23-1836-003	23-1836-004	23-1836-005	23-1836-006					
Contaminants of Concern:												
Butyl benzyl phthalate	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	930		
Carbazole	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	0.6		
4-Chloroaniline	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	0.7		
2-Chlorophenol	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	1.5		
Chrysene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	88		
Dibenzol(a,h)anthracene	mg/kg	0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	0.42		
1,2-Dichlorobenzene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	17		
1,4-Dichlorobenzene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	2		
3,3'-Dichlorobenzidine	mg/kg	0.66	<0.66	<0.66	<0.66	<0.66	<0.66	<0.66	<0.66	1.3		
2,4-Dichlorophenol	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	0.48		
Diethyl phthalate	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	470		
2,4-Dimethylphenol	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	9		
Di-n-butyl phthalate	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	2300		
2,4-Dinitrophenol	mg/kg	1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	3.3		
2,4-Dinitrotoluene	mg/kg	0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.25		
2,6-Dinitrotoluene	mg/kg	0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	0.26		
Di-n-octylphthalate	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	1600		
Fluoranthene	mg/kg	0.33	<0.33	0.381	<0.33	<0.33	<0.33	<0.33	<0.33	3100		
Fluorene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	560		
Hexachlorobenzene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	0.4		
Hexachlorocyclopentadiene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	1.1		
Hexachloroethane	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	0.5		
Indeno(1,2,3-cd)pyrene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33		1.6	
Isophorone	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	8		
2-Methylphenol	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	15		
Naphthalene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	1.8		
Nitrobenzene	mg/kg	0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	0.26		
n-Nitrosodi-n-propylamine	mg/kg	0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	0.0018		
n-Nitrosodiphenylamine	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	1		
Pentachlorophenol	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	0.02		
Phenol	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	100		
Pyrene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	2300		
1,2,4-Trichlorobenzene	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	5		
2,4,5-Trichlorophenol	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	26		
2,4,6-Trichlorophenol	mg/kg	0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	0.66		
pH @ 25°C, 1:2 (9045D)												
Date Analyzed:	Units	3/10/2023	3/10/2023	3/10/2023	3/10/2023	3/10/2023	3/10/2023	3/10/2023	3/10/2023			
pH @ 25°C, 1:2	Units	8.05	8.95	8.97	8.81	8.76	7.96	6.25-9.00				
Total Metals (6010C)												
Date Analyzed:	Units	3/13/2023	3/13/2023	3/13/2023	3/13/2023	3/13/2023	3/13/2023	3/13/2023	3/13/2023			
Arsenic	mg/kg	1	5.1	4.4	6.9	2.8	8.5	6.1		13		
Barium	mg/kg	0.5	90.7	58.6	66.4	17.7	50.4	53.8		1500		
Cadmium	mg/kg	0.5	0.7	0.7	1	<0.5	0.8	0.9		5.2		
Chromium	mg/kg	0.5	18.1	19.8	20.3	6.9	13.9	17.6		21		

BROWNFIELD ENVIRONMENTAL ENGINEERING											
042-016		HA-1	GA-1	GA-2	WVA-1	MA-1	WA-1	Maximum Allowable Concentration	MAC within a MSA County	MAC within a populated area in a MSA excluding Chicago	Soil Component Groundwater Ingestion Class 1
Date of Sample Collection:		3/7/2023	3/7/2023	3/7/2023	3/7/2023	3/7/2023	3/7/2023				
Time of Sample Collection:		9:35 AM	11:45 AM	12:00 PM	11:05 AM	10:10 AM	10:35 AM				
First Environmental Lab. Numbers:		23-1836-001	23-1836-002	23-1836-003	23-1836-004	23-1836-005	23-1836-006				
Contaminants of Concern:											
Iron	mg/kg	5	21800	19500	24500	9140	23500	22700	15900		
Lead	mg/kg	0.5	22.9	13	14.2	10.8	21.7	17.1		107	
Selenium	mg/kg	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		1.3	
Silver	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		4.4	
Total Mercury (7471B)											
Date Analyzed:	Units	RDL	3/15/2023	3/15/2023	3/15/2023	3/15/2023	3/15/2023	3/15/2023			
Mercury	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		0.89	
TCCLP Metals Method 1311 (6010C)											
Date Analyzed:	Units	RDL	3/14/2023	3/14/2023	3/14/2023	3/14/2023	3/14/2023	3/14/2023			
Arsenic	mg/L	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010			0.05
Barium	mg/L	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0			2
Cadmium	mg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			0.005
Chromium	mg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			0.1
Iron	mg/L	0.1	1.2	<0.1	<0.1	<0.1	<0.1	1.1			5
Lead	mg/L	0.005	0.02	<0.005	<0.005	<0.005	<0.005	<0.005			0.0075
Selenium	mg/L	0.01	0.014	<0.010	<0.010	<0.010	0.015	<0.010			0.05
Silver	mg/L	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			0.05
TCCLP Mercury Method 1311 (7470A)											
Date Analyzed:	Units	RDL	3/15/2023	3/15/2023	3/15/2023	3/15/2023	3/15/2023	3/15/2023			
Mercury	mg/L	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			0.002
TCCLP Extraction (1311)											
Date Analyzed:	Units	RDL	3/9/2023	3/9/2023	3/9/2023	3/9/2023	3/9/2023	3/9/2023			
TCCLP Extraction			Complete	Complete	Complete	Complete	Complete	Complete			



March 16, 2023

Ms. Juliet Betke

BROWNFIELD ENVIRONMENTAL ENGINEERING

645 Third Street

Suite 250

Beloit, WI 53511

Project ID: 042-016

First Environmental File ID: 23-1836

Date Received: March 09, 2023

Dear Ms. Juliet Betke:

The above referenced project was analyzed as directed on the enclosed chain of custody record.

All Quality Control criteria as outlined in the methods and current IL ELAP/NELAP have been met unless otherwise noted. QA/QC documentation and raw data will remain on file for future reference. Our accreditation number is 100292 and our current certificate is number:

1002922023-10: effective 03/07/2023 through 02/28/2024.

I thank you for the opportunity to be of service to you and look forward to working with you again in the future. Should you have any questions regarding any of the enclosed analytical data or need additional information, please contact me at (630) 778-1200.

Sincerely,

Ryan Gerrick
Project Manager



Case Narrative

BROWNFIELD ENVIRONMENTAL ENGINEERING

Lab File ID: **23-1836**

Project ID: **042-016**

Date Received: **March 09, 2023**

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

The results in this report apply to the samples in the following table:

Laboratory Sample ID	Client Sample Identifier	Date/Time Collected	
23-1836-001	HA-1	3/7/2023	9:35
23-1836-002	GA-1	3/7/2023	11:45
23-1836-003	GA-2	3/7/2023	12:00
23-1836-004	WVA-1	3/7/2023	11:05
23-1836-005	MA-1	3/7/2023	10:10
23-1836-006	WA-1	3/7/2023	10:35

Sample Batch Comments:

Sample acceptance criteria were met.



Case Narrative

BROWNFIELD ENVIRONMENTAL ENGINEERING

Lab File ID: **23-1836**

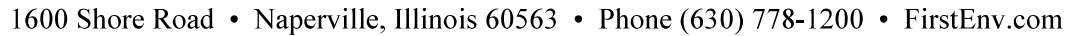
Project ID: **042-016**

Date Received: **March 09, 2023**

All quality control criteria, as outlined in the methods, have been met except as noted below or on the following analytical report.

The following is a definition of flags that may be used in this report:

Flag	Description	Flag	Description
A	Method holding time is 15 minutes from collection. Lab analysis was performed as soon as possible.		
B	Analyte was found in the method blank.	L	LCS recovery outside control limits.
<	Analyte not detected at or above the reporting limit.	M	MS recovery outside control limits; LCS acceptable.
C	Sample received in an improper container for this test.	P	Chemical preservation pH adjusted in lab.
D	Surrogates diluted out; recovery not available.	Q	Result was determined by a GC/MS database search.
E	Estimated result; concentration exceeds calibration range.	S	Analysis was subcontracted to another laboratory.
G	Surrogate recovery outside control limits.	T	Result is less than three times the MDL value.
H	Analysis or extraction holding time exceeded.	W	Reporting limit elevated due to sample matrix.
I	ICVS % rec outside 95-105% but within 90-110%		
J	Estimated result; concentration is less than routine RL but greater than MDL.	N	Analyte is not part of our NELAC accreditation or accreditation may not be available for this parameter.
RL	Routine Reporting Limit (Lowest amount that can be detected when routine weights/volumes are used without dilution.)	ND	Analyte was not detected using a library search routine; No calibration standard was analyzed.





Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: HA-1
Sample No: 23-1836-001

Date Collected: 03/07/23
Time Collected: 9:35
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds		Method: 5035A/8260B		
Analysis Date: 03/10/23				
Vinyl acetate	< 10.0	10.0	ug/kg	
Vinyl chloride	< 10.0	10.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	

Semi-Volatile Compounds		Method: 8270C	Preparation Method 3540C	
Analysis Date: 03/14/23			Preparation Date: 03/14/23	
Acenaphthene	< 330	330	ug/kg	
Acenaphthylene	< 330	330	ug/kg	
Anthracene	< 330	330	ug/kg	
Benzidine	< 330	330	ug/kg	
Benzo(a)anthracene	< 330	330	ug/kg	
Benzo(a)pyrene	< 90	90	ug/kg	
Benzo(b)fluoranthene	< 330	330	ug/kg	
Benzo(k)fluoranthene	< 330	330	ug/kg	
Benzo(ghi)perylene	< 330	330	ug/kg	
Benzoic acid	< 330	330	ug/kg	
Benzyl alcohol	< 330	330	ug/kg	
bis(2-Chloroethoxy)methane	< 330	330	ug/kg	
bis(2-Chloroethyl)ether	< 330	330	ug/kg	
bis(2-Chloroisopropyl)ether	< 330	330	ug/kg	
bis(2-Ethylhexyl)phthalate	< 330	330	ug/kg	
4-Bromophenyl phenyl ether	< 330	330	ug/kg	
Butyl benzyl phthalate	< 330	330	ug/kg	
Carbazole	< 330	330	ug/kg	
4-Chloroaniline	< 330	330	ug/kg	
4-Chloro-3-methylphenol	< 330	330	ug/kg	
2-Chloronaphthalene	< 330	330	ug/kg	
2-Chlorophenol	< 330	330	ug/kg	
4-Chlorophenyl phenyl ether	< 330	330	ug/kg	
Chrysene	< 330	330	ug/kg	
Dibenzo(a,h)anthracene	< 90	90	ug/kg	
Dibenzofuran	< 330	330	ug/kg	
1,2-Dichlorobenzene	< 330	330	ug/kg	
1,3-Dichlorobenzene	< 330	330	ug/kg	
1,4-Dichlorobenzene	< 330	330	ug/kg	
3,3'-Dichlorobenzidine	< 660	660	ug/kg	
2,4-Dichlorophenol	< 330	330	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: HA-1
Sample No: 23-1836-001

Date Collected: 03/07/23
Time Collected: 9:35
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds		Method: 8270C		
Analysis Date: 03/14/23		Preparation Method 3540C		
		Preparation Date: 03/14/23		
Diethyl phthalate	< 330	330	ug/kg	
2,4-Dimethylphenol	< 330	330	ug/kg	
Dimethyl phthalate	< 330	330	ug/kg	
Di-n-butyl phthalate	< 330	330	ug/kg	
4,6-Dinitro-2-methylphenol	< 1,600	1600	ug/kg	
2,4-Dinitrophenol	< 1,600	1600	ug/kg	
2,4-Dinitrotoluene	< 250	250	ug/kg	
2,6-Dinitrotoluene	< 260	260	ug/kg	
Di-n-octylphthalate	< 330	330	ug/kg	
Fluoranthene	< 330	330	ug/kg	
Fluorene	< 330	330	ug/kg	
Hexachlorobenzene	< 330	330	ug/kg	
Hexachlorobutadiene	< 330	330	ug/kg	
Hexachlorocyclopentadiene	< 330	330	ug/kg	
Hexachloroethane	< 330	330	ug/kg	
Indeno(1,2,3-cd)pyrene	< 330	330	ug/kg	
Isophorone	< 330	330	ug/kg	
2-Methylnaphthalene	< 330	330	ug/kg	
2-Methylphenol	< 330	330	ug/kg	
3 & 4-Methylphenol	< 330	330	ug/kg	
Naphthalene	< 330	330	ug/kg	
2-Nitroaniline	< 1,600	1600	ug/kg	
3-Nitroaniline	< 1,600	1600	ug/kg	
4-Nitroaniline	< 1,600	1600	ug/kg	
Nitrobenzene	< 260	260	ug/kg	
2-Nitrophenol	< 1,600	1600	ug/kg	
4-Nitrophenol	< 1,600	1600	ug/kg	
n-Nitrosodi-n-propylamine	< 90	90	ug/kg	
n-Nitrosodimethylamine	< 330	330	ug/kg	
n-Nitrosodiphenylamine	< 330	330	ug/kg	
Pentachlorophenol	< 330	330	ug/kg	
Phenanthrene	< 330	330	ug/kg	
Phenol	< 330	330	ug/kg	
Pyrene	< 330	330	ug/kg	
Pyridine	< 330	330	ug/kg	
1,2,4-Trichlorobenzene	< 330	330	ug/kg	
2,4,5-Trichlorophenol	45 < 330	330	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: HA-1
Sample No: 23-1836-001

Date Collected: 03/07/23
Time Collected: 9:35
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds	Method: 8270C	Preparation Method 3540C		
Analysis Date: 03/14/23		Preparation Date: 03/14/23		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
pH @ 25°C, 1:2	Method: 9045D			
Analysis Date: 03/10/23 11:30				
pH @ 25°C, 1:2	8.05		Units	
Total Metals	Method: 6010C	Preparation Method 3050B		
Analysis Date: 03/13/23		Preparation Date: 03/10/23		
Arsenic	5.1	1.0	mg/kg	
Barium	90.7	0.5	mg/kg	
Cadmium	0.7	0.5	mg/kg	
Chromium	18.1	0.5	mg/kg	
Iron	21,800	5.0	mg/kg	
Lead	22.9	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Total Mercury	Method: 7471B			
Analysis Date: 03/15/23				
Mercury	< 0.05	0.05	mg/kg	
TCLP Extraction	Method: 1311			
Analysis Date: 03/09/23				
TCLP Extraction	Complete			
TCLP Metals Method 1311	Method: 6010C	Preparation Method 3010A		
Analysis Date: 03/14/23		Preparation Date: 03/14/23		
Arsenic	< 0.010	0.010	mg/L	
Barium	< 1.0	1.0	mg/L	
Cadmium	< 0.005	0.005	mg/L	
Chromium	< 0.005	0.005	mg/L	
Iron	1.2	0.1	mg/L	
Lead	0.020	0.005	mg/L	
Selenium	0.014	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
TCLP Mercury Method 1311	Method: 7470A			
Analysis Date: 03/15/23				
Mercury	< 0.0005	0.0005	mg/L	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: GA-1
Sample No: 23-1836-002

Date Collected: 03/07/23
Time Collected: 11:45
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total Method: 2540G 2011				
Analysis Date: 03/09/23				
Total Solids	80.91		%	
Volatile Organic Compounds Method: 5035A/8260B				
Analysis Date: 03/10/23				
Acetone	< 200	200	ug/kg	
Benzene	< 5.0	5.0	ug/kg	
Bromodichloromethane	< 5.0	5.0	ug/kg	
Bromoform	< 5.0	5.0	ug/kg	
Bromomethane	< 10.0	10.0	ug/kg	
2-Butanone (MEK)	< 100	100	ug/kg	
Carbon disulfide	< 5.0	5.0	ug/kg	
Carbon tetrachloride	< 5.0	5.0	ug/kg	
Chlorobenzene	< 5.0	5.0	ug/kg	
Chlorodibromomethane	< 5.0	5.0	ug/kg	
Chloroethane	< 10.0	10.0	ug/kg	
Chloroform	< 5.0	5.0	ug/kg	
Chloromethane	< 10.0	10.0	ug/kg	
1,1-Dichloroethane	< 5.0	5.0	ug/kg	
1,2-Dichloroethane	< 5.0	5.0	ug/kg	
1,1-Dichloroethene	< 5.0	5.0	ug/kg	
cis-1,2-Dichloroethene	< 5.0	5.0	ug/kg	
trans-1,2-Dichloroethene	< 5.0	5.0	ug/kg	
1,2-Dichloropropane	< 5.0	5.0	ug/kg	
cis-1,3-Dichloropropene	< 4.0	4.0	ug/kg	
trans-1,3-Dichloropropene	< 4.0	4.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
2-Hexanone	< 10.0	10.0	ug/kg	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/kg	
4-Methyl-2-pentanone (MIBK)	< 10.0	10.0	ug/kg	
Methylene chloride	< 20.0	20.0	ug/kg	
Styrene	< 5.0	5.0	ug/kg	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	ug/kg	
Tetrachloroethene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
1,1,1-Trichloroethane	< 5.0	5.0	ug/kg	
1,1,2-Trichloroethane	< 5.0	5.0	ug/kg	
Trichloroethene	< 5.0	5.0	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: GA-1
Sample No: 23-1836-002

Date Collected: 03/07/23
Time Collected: 11:45
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds Method: 5035A/8260B				
Analysis Date: 03/10/23				
Vinyl acetate	< 10.0	10.0	ug/kg	
Vinyl chloride	< 10.0	10.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	
Semi-Volatile Compounds Method: 8270C Preparation Method 3540C				
Analysis Date: 03/16/23 Preparation Date: 03/15/23				
Acenaphthene	< 330	330	ug/kg	
Acenaphthylene	< 330	330	ug/kg	
Anthracene	< 330	330	ug/kg	
Benzidine	< 330	330	ug/kg	
Benzo(a)anthracene	< 330	330	ug/kg	
Benzo(a)pyrene	168	90	ug/kg	
Benzo(b)fluoranthene	< 330	330	ug/kg	
Benzo(k)fluoranthene	< 330	330	ug/kg	
Benzo(ghi)perylene	< 330	330	ug/kg	
Benzoic acid	< 330	330	ug/kg	
Benzyl alcohol	< 330	330	ug/kg	
bis(2-Chloroethoxy)methane	< 330	330	ug/kg	
bis(2-Chloroethyl)ether	< 330	330	ug/kg	
bis(2-Chloroisopropyl)ether	< 330	330	ug/kg	
bis(2-Ethylhexyl)phthalate	< 330	330	ug/kg	
4-Bromophenyl phenyl ether	< 330	330	ug/kg	
Butyl benzyl phthalate	< 330	330	ug/kg	
Carbazole	< 330	330	ug/kg	
4-Chloroaniline	< 330	330	ug/kg	
4-Chloro-3-methylphenol	< 330	330	ug/kg	
2-Chloronaphthalene	< 330	330	ug/kg	
2-Chlorophenol	< 330	330	ug/kg	
4-Chlorophenyl phenyl ether	< 330	330	ug/kg	
Chrysene	< 330	330	ug/kg	
Dibenzo(a,h)anthracene	< 90	90	ug/kg	
Dibenzofuran	< 330	330	ug/kg	
1,2-Dichlorobenzene	< 330	330	ug/kg	
1,3-Dichlorobenzene	< 330	330	ug/kg	
1,4-Dichlorobenzene	< 330	330	ug/kg	
3,3'-Dichlorobenzidine	< 660	660	ug/kg	
2,4-Dichlorophenol	< 330	330	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: GA-1
Sample No: 23-1836-002

Date Collected: 03/07/23
Time Collected: 11:45
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds		Method: 8270C		
Analysis Date: 03/16/23		Preparation Method 3540C		
		Preparation Date: 03/15/23		
Diethyl phthalate	< 330	330	ug/kg	
2,4-Dimethylphenol	< 330	330	ug/kg	
Dimethyl phthalate	< 330	330	ug/kg	
Di-n-butyl phthalate	< 330	330	ug/kg	
4,6-Dinitro-2-methylphenol	< 1,600	1600	ug/kg	
2,4-Dinitrophenol	< 1,600	1600	ug/kg	
2,4-Dinitrotoluene	< 250	250	ug/kg	
2,6-Dinitrotoluene	< 260	260	ug/kg	
Di-n-octylphthalate	< 330	330	ug/kg	
Fluoranthene	381	330	ug/kg	
Fluorene	< 330	330	ug/kg	
Hexachlorobenzene	< 330	330	ug/kg	
Hexachlorobutadiene	< 330	330	ug/kg	
Hexachlorocyclopentadiene	< 330	330	ug/kg	
Hexachloroethane	< 330	330	ug/kg	
Indeno(1,2,3-cd)pyrene	< 330	330	ug/kg	
Isophorone	< 330	330	ug/kg	
2-Methylnaphthalene	< 330	330	ug/kg	
2-Methylphenol	< 330	330	ug/kg	
3 & 4-Methylphenol	< 330	330	ug/kg	
Naphthalene	< 330	330	ug/kg	
2-Nitroaniline	< 1,600	1600	ug/kg	
3-Nitroaniline	< 1,600	1600	ug/kg	
4-Nitroaniline	< 1,600	1600	ug/kg	
Nitrobenzene	< 260	260	ug/kg	
2-Nitrophenol	< 1,600	1600	ug/kg	
4-Nitrophenol	< 1,600	1600	ug/kg	
n-Nitrosodi-n-propylamine	< 90	90	ug/kg	
n-Nitrosodimethylamine	< 330	330	ug/kg	
n-Nitrosodiphenylamine	< 330	330	ug/kg	
Pentachlorophenol	< 330	330	ug/kg	
Phenanthrene	< 330	330	ug/kg	
Phenol	< 330	330	ug/kg	
Pyrene	< 330	330	ug/kg	
Pyridine	< 330	330	ug/kg	
1,2,4-Trichlorobenzene	< 330	330	ug/kg	
2,4,5-Trichlorophenol	49 < 330	330	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: GA-1
Sample No: 23-1836-002

Date Collected: 03/07/23
Time Collected: 11:45
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds	Method: 8270C	Preparation Method 3540C		
Analysis Date: 03/16/23		Preparation Date: 03/15/23		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
pH @ 25°C, 1:2	Method: 9045D			
Analysis Date: 03/10/23 11:30				
pH @ 25°C, 1:2	8.95		Units	
Total Metals	Method: 6010C	Preparation Method 3050B		
Analysis Date: 03/13/23		Preparation Date: 03/10/23		
Arsenic	4.4	1.0	mg/kg	
Barium	58.6	0.5	mg/kg	
Cadmium	0.7	0.5	mg/kg	
Chromium	19.8	0.5	mg/kg	
Iron	19,500	5.0	mg/kg	
Lead	13.0	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Total Mercury	Method: 7471B			
Analysis Date: 03/15/23				
Mercury	< 0.05	0.05	mg/kg	
TCLP Extraction	Method: 1311			
Analysis Date: 03/09/23				
TCLP Extraction	Complete			
TCLP Metals Method 1311	Method: 6010C	Preparation Method 3010A		
Analysis Date: 03/14/23		Preparation Date: 03/14/23		
Arsenic	< 0.010	0.010	mg/L	
Barium	< 1.0	1.0	mg/L	
Cadmium	< 0.005	0.005	mg/L	
Chromium	< 0.005	0.005	mg/L	
Iron	< 0.1	0.1	mg/L	
Lead	< 0.005	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
TCLP Mercury Method 1311	Method: 7470A			
Analysis Date: 03/15/23				
Mercury	< 0.0005	0.0005	mg/L	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: GA-2
Sample No: 23-1836-003

Date Collected: 03/07/23
Time Collected: 12:00
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total Method: 2540G 2011				
Analysis Date: 03/09/23				
Total Solids	83.68		%	
Volatile Organic Compounds Method: 5035A/8260B				
Analysis Date: 03/10/23				
Acetone	< 200	200	ug/kg	
Benzene	< 5.0	5.0	ug/kg	
Bromodichloromethane	< 5.0	5.0	ug/kg	
Bromoform	< 5.0	5.0	ug/kg	
Bromomethane	< 10.0	10.0	ug/kg	
2-Butanone (MEK)	< 100	100	ug/kg	
Carbon disulfide	< 5.0	5.0	ug/kg	
Carbon tetrachloride	< 5.0	5.0	ug/kg	
Chlorobenzene	< 5.0	5.0	ug/kg	
Chlorodibromomethane	< 5.0	5.0	ug/kg	
Chloroethane	< 10.0	10.0	ug/kg	
Chloroform	< 5.0	5.0	ug/kg	
Chloromethane	< 10.0	10.0	ug/kg	
1,1-Dichloroethane	< 5.0	5.0	ug/kg	
1,2-Dichloroethane	< 5.0	5.0	ug/kg	
1,1-Dichloroethene	< 5.0	5.0	ug/kg	
cis-1,2-Dichloroethene	< 5.0	5.0	ug/kg	
trans-1,2-Dichloroethene	< 5.0	5.0	ug/kg	
1,2-Dichloropropane	< 5.0	5.0	ug/kg	
cis-1,3-Dichloropropene	< 4.0	4.0	ug/kg	
trans-1,3-Dichloropropene	< 4.0	4.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
2-Hexanone	< 10.0	10.0	ug/kg	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/kg	
4-Methyl-2-pentanone (MIBK)	< 10.0	10.0	ug/kg	
Methylene chloride	< 20.0	20.0	ug/kg	
Styrene	< 5.0	5.0	ug/kg	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	ug/kg	
Tetrachloroethene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
1,1,1-Trichloroethane	< 5.0	5.0	ug/kg	
1,1,2-Trichloroethane	< 5.0	5.0	ug/kg	
Trichloroethene	< 5.0	5.0	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: GA-2
Sample No: 23-1836-003

Date Collected: 03/07/23
Time Collected: 12:00
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds				
Method: 5035A/8260B				
Analysis Date: 03/10/23				
Vinyl acetate	< 10.0	10.0	ug/kg	
Vinyl chloride	< 10.0	10.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	
Semi-Volatile Compounds				
Method: 8270C				
Preparation Method 3540C				
Analysis Date: 03/16/23				
Preparation Date: 03/15/23				
Acenaphthene	< 330	330	ug/kg	
Acenaphthylene	< 330	330	ug/kg	
Anthracene	< 330	330	ug/kg	
Benzidine	< 330	330	ug/kg	
Benzo(a)anthracene	< 330	330	ug/kg	
Benzo(a)pyrene	< 90	90	ug/kg	
Benzo(b)fluoranthene	< 330	330	ug/kg	
Benzo(k)fluoranthene	< 330	330	ug/kg	
Benzo(ghi)perylene	< 330	330	ug/kg	
Benzoic acid	< 330	330	ug/kg	
Benzyl alcohol	< 330	330	ug/kg	
bis(2-Chloroethoxy)methane	< 330	330	ug/kg	
bis(2-Chloroethyl)ether	< 330	330	ug/kg	
bis(2-Chloroisopropyl)ether	< 330	330	ug/kg	
bis(2-Ethylhexyl)phthalate	< 330	330	ug/kg	
4-Bromophenyl phenyl ether	< 330	330	ug/kg	
Butyl benzyl phthalate	< 330	330	ug/kg	
Carbazole	< 330	330	ug/kg	
4-Chloroaniline	< 330	330	ug/kg	
4-Chloro-3-methylphenol	< 330	330	ug/kg	
2-Chloronaphthalene	< 330	330	ug/kg	
2-Chlorophenol	< 330	330	ug/kg	
4-Chlorophenyl phenyl ether	< 330	330	ug/kg	
Chrysene	< 330	330	ug/kg	
Dibenzo(a,h)anthracene	< 90	90	ug/kg	
Dibenzofuran	< 330	330	ug/kg	
1,2-Dichlorobenzene	< 330	330	ug/kg	
1,3-Dichlorobenzene	< 330	330	ug/kg	
1,4-Dichlorobenzene	< 330	330	ug/kg	
3,3'-Dichlorobenzidine	< 660	660	ug/kg	
2,4-Dichlorophenol	< 330	330	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: GA-2
Sample No: 23-1836-003

Date Collected: 03/07/23
Time Collected: 12:00
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds		Method: 8270C		
Analysis Date: 03/16/23		Preparation Method 3540C		
		Preparation Date: 03/15/23		
Diethyl phthalate	< 330	330	ug/kg	
2,4-Dimethylphenol	< 330	330	ug/kg	
Dimethyl phthalate	< 330	330	ug/kg	
Di-n-butyl phthalate	< 330	330	ug/kg	
4,6-Dinitro-2-methylphenol	< 1,600	1600	ug/kg	
2,4-Dinitrophenol	< 1,600	1600	ug/kg	
2,4-Dinitrotoluene	< 250	250	ug/kg	
2,6-Dinitrotoluene	< 260	260	ug/kg	
Di-n-octylphthalate	< 330	330	ug/kg	
Fluoranthene	< 330	330	ug/kg	
Fluorene	< 330	330	ug/kg	
Hexachlorobenzene	< 330	330	ug/kg	
Hexachlorobutadiene	< 330	330	ug/kg	
Hexachlorocyclopentadiene	< 330	330	ug/kg	
Hexachloroethane	< 330	330	ug/kg	
Indeno(1,2,3-cd)pyrene	< 330	330	ug/kg	
Isophorone	< 330	330	ug/kg	
2-Methylnaphthalene	< 330	330	ug/kg	
2-Methylphenol	< 330	330	ug/kg	
3 & 4-Methylphenol	< 330	330	ug/kg	
Naphthalene	< 330	330	ug/kg	
2-Nitroaniline	< 1,600	1600	ug/kg	
3-Nitroaniline	< 1,600	1600	ug/kg	
4-Nitroaniline	< 1,600	1600	ug/kg	
Nitrobenzene	< 260	260	ug/kg	
2-Nitrophenol	< 1,600	1600	ug/kg	
4-Nitrophenol	< 1,600	1600	ug/kg	
n-Nitrosodi-n-propylamine	< 90	90	ug/kg	
n-Nitrosodimethylamine	< 330	330	ug/kg	
n-Nitrosodiphenylamine	< 330	330	ug/kg	
Pentachlorophenol	< 330	330	ug/kg	
Phenanthrene	< 330	330	ug/kg	
Phenol	< 330	330	ug/kg	
Pyrene	< 330	330	ug/kg	
Pyridine	< 330	330	ug/kg	
1,2,4-Trichlorobenzene	< 330	330	ug/kg	
2,4,5-Trichlorophenol	53 < 330	330	ug/kg	



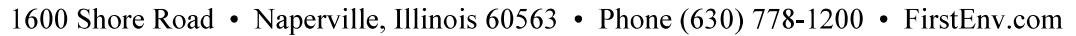
Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: GA-2
Sample No: 23-1836-003

Date Collected: 03/07/23
Time Collected: 12:00
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds	Method: 8270C	Preparation Method 3540C		
Analysis Date: 03/16/23		Preparation Date: 03/15/23		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
pH @ 25°C, 1:2	Method: 9045D			
Analysis Date: 03/10/23 11:30				
pH @ 25°C, 1:2	8.97		Units	
Total Metals	Method: 6010C	Preparation Method 3050B		
Analysis Date: 03/13/23		Preparation Date: 03/10/23		
Arsenic	6.9	1.0	mg/kg	
Barium	66.4	0.5	mg/kg	
Cadmium	1.0	0.5	mg/kg	
Chromium	20.3	0.5	mg/kg	
Iron	24,500	5.0	mg/kg	
Lead	14.2	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Total Mercury	Method: 7471B			
Analysis Date: 03/15/23				
Mercury	< 0.05	0.05	mg/kg	
TCLP Extraction	Method: 1311			
Analysis Date: 03/09/23				
TCLP Extraction	Complete			
TCLP Metals Method 1311	Method: 6010C	Preparation Method 3010A		
Analysis Date: 03/14/23		Preparation Date: 03/14/23		
Arsenic	< 0.010	0.010	mg/L	
Barium	< 1.0	1.0	mg/L	
Cadmium	< 0.005	0.005	mg/L	
Chromium	< 0.005	0.005	mg/L	
Iron	< 0.1	0.1	mg/L	
Lead	< 0.005	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
TCLP Mercury Method 1311	Method: 7470A			
Analysis Date: 03/15/23				
Mercury	< 0.0005	0.0005	mg/L	





Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: WVA-1
Sample No: 23-1836-004

Date Collected: 03/07/23
Time Collected: 11:05
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds Method: 5035A/8260B				
Analysis Date: 03/10/23				
Vinyl acetate	< 10.0	10.0	ug/kg	
Vinyl chloride	< 10.0	10.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	
Semi-Volatile Compounds Method: 8270C Preparation Method 3540C				
Analysis Date: 03/16/23 Preparation Date: 03/15/23				
Acenaphthene	< 330	330	ug/kg	
Acenaphthylene	< 330	330	ug/kg	
Anthracene	< 330	330	ug/kg	
Benzidine	< 330	330	ug/kg	
Benzo(a)anthracene	< 330	330	ug/kg	
Benzo(a)pyrene	< 90	90	ug/kg	
Benzo(b)fluoranthene	< 330	330	ug/kg	
Benzo(k)fluoranthene	< 330	330	ug/kg	
Benzo(ghi)perylene	< 330	330	ug/kg	
Benzoic acid	< 330	330	ug/kg	
Benzyl alcohol	< 330	330	ug/kg	
bis(2-Chloroethoxy)methane	< 330	330	ug/kg	
bis(2-Chloroethyl)ether	< 330	330	ug/kg	
bis(2-Chloroisopropyl)ether	< 330	330	ug/kg	
bis(2-Ethylhexyl)phthalate	< 330	330	ug/kg	
4-Bromophenyl phenyl ether	< 330	330	ug/kg	
Butyl benzyl phthalate	< 330	330	ug/kg	
Carbazole	< 330	330	ug/kg	
4-Chloroaniline	< 330	330	ug/kg	
4-Chloro-3-methylphenol	< 330	330	ug/kg	
2-Chloronaphthalene	< 330	330	ug/kg	
2-Chlorophenol	< 330	330	ug/kg	
4-Chlorophenyl phenyl ether	< 330	330	ug/kg	
Chrysene	< 330	330	ug/kg	
Dibenzo(a,h)anthracene	< 90	90	ug/kg	
Dibenzofuran	< 330	330	ug/kg	
1,2-Dichlorobenzene	< 330	330	ug/kg	
1,3-Dichlorobenzene	< 330	330	ug/kg	
1,4-Dichlorobenzene	< 330	330	ug/kg	
3,3'-Dichlorobenzidine	< 660	660	ug/kg	
2,4-Dichlorophenol	< 330	330	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: WVA-1
Sample No: 23-1836-004

Date Collected: 03/07/23
Time Collected: 11:05
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds		Method: 8270C		
Analysis Date: 03/16/23		Preparation Method 3540C		
		Preparation Date: 03/15/23		
Diethyl phthalate	< 330	330	ug/kg	
2,4-Dimethylphenol	< 330	330	ug/kg	
Dimethyl phthalate	< 330	330	ug/kg	
Di-n-butyl phthalate	< 330	330	ug/kg	
4,6-Dinitro-2-methylphenol	< 1,600	1600	ug/kg	
2,4-Dinitrophenol	< 1,600	1600	ug/kg	
2,4-Dinitrotoluene	< 250	250	ug/kg	
2,6-Dinitrotoluene	< 260	260	ug/kg	
Di-n-octylphthalate	< 330	330	ug/kg	
Fluoranthene	< 330	330	ug/kg	
Fluorene	< 330	330	ug/kg	
Hexachlorobenzene	< 330	330	ug/kg	
Hexachlorobutadiene	< 330	330	ug/kg	
Hexachlorocyclopentadiene	< 330	330	ug/kg	
Hexachloroethane	< 330	330	ug/kg	
Indeno(1,2,3-cd)pyrene	< 330	330	ug/kg	
Isophorone	< 330	330	ug/kg	
2-Methylnaphthalene	< 330	330	ug/kg	
2-Methylphenol	< 330	330	ug/kg	
3 & 4-Methylphenol	< 330	330	ug/kg	
Naphthalene	< 330	330	ug/kg	
2-Nitroaniline	< 1,600	1600	ug/kg	
3-Nitroaniline	< 1,600	1600	ug/kg	
4-Nitroaniline	< 1,600	1600	ug/kg	
Nitrobenzene	< 260	260	ug/kg	
2-Nitrophenol	< 1,600	1600	ug/kg	
4-Nitrophenol	< 1,600	1600	ug/kg	
n-Nitrosodi-n-propylamine	< 90	90	ug/kg	
n-Nitrosodimethylamine	< 330	330	ug/kg	
n-Nitrosodiphenylamine	< 330	330	ug/kg	
Pentachlorophenol	< 330	330	ug/kg	
Phenanthrene	< 330	330	ug/kg	
Phenol	< 330	330	ug/kg	
Pyrene	< 330	330	ug/kg	
Pyridine	< 330	330	ug/kg	
1,2,4-Trichlorobenzene	< 330	330	ug/kg	
2,4,5-Trichlorophenol	57 < 330	330	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: WVA-1
Sample No: 23-1836-004

Date Collected: 03/07/23
Time Collected: 11:05
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds	Method: 8270C	Preparation Method 3540C		
Analysis Date: 03/16/23		Preparation Date: 03/15/23		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
pH @ 25°C, 1:2	Method: 9045D			
Analysis Date: 03/10/23 11:30				
pH @ 25°C, 1:2	8.81		Units	
Total Metals	Method: 6010C	Preparation Method 3050B		
Analysis Date: 03/13/23		Preparation Date: 03/10/23		
Arsenic	2.8	1.0	mg/kg	
Barium	17.7	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	6.9	0.5	mg/kg	
Iron	9,140	5.0	mg/kg	
Lead	10.8	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Total Mercury	Method: 7471B			
Analysis Date: 03/15/23				
Mercury	< 0.05	0.05	mg/kg	
TCLP Extraction	Method: 1311			
Analysis Date: 03/09/23				
TCLP Extraction	Complete			
TCLP Metals Method 1311	Method: 6010C	Preparation Method 3010A		
Analysis Date: 03/14/23		Preparation Date: 03/14/23		
Arsenic	< 0.010	0.010	mg/L	
Barium	< 1.0	1.0	mg/L	
Cadmium	< 0.005	0.005	mg/L	
Chromium	< 0.005	0.005	mg/L	
Iron	< 0.1	0.1	mg/L	
Lead	< 0.005	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
TCLP Mercury Method 1311	Method: 7470A			
Analysis Date: 03/15/23				
Mercury	< 0.0005	0.0005	mg/L	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: MA-1
Sample No: 23-1836-005

Date Collected: 03/07/23
Time Collected: 10:10
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total Method: 2540G 2011				
Analysis Date: 03/09/23				
Total Solids	87.31		%	
Volatile Organic Compounds Method: 5035A/8260B				
Analysis Date: 03/10/23				
Acetone	< 200	200	ug/kg	
Benzene	< 5.0	5.0	ug/kg	
Bromodichloromethane	< 5.0	5.0	ug/kg	
Bromoform	< 5.0	5.0	ug/kg	
Bromomethane	< 10.0	10.0	ug/kg	
2-Butanone (MEK)	< 100	100	ug/kg	
Carbon disulfide	< 5.0	5.0	ug/kg	
Carbon tetrachloride	< 5.0	5.0	ug/kg	
Chlorobenzene	< 5.0	5.0	ug/kg	
Chlorodibromomethane	< 5.0	5.0	ug/kg	
Chloroethane	< 10.0	10.0	ug/kg	
Chloroform	< 5.0	5.0	ug/kg	
Chloromethane	< 10.0	10.0	ug/kg	
1,1-Dichloroethane	< 5.0	5.0	ug/kg	
1,2-Dichloroethane	< 5.0	5.0	ug/kg	
1,1-Dichloroethene	< 5.0	5.0	ug/kg	
cis-1,2-Dichloroethene	< 5.0	5.0	ug/kg	
trans-1,2-Dichloroethene	< 5.0	5.0	ug/kg	
1,2-Dichloropropane	< 5.0	5.0	ug/kg	
cis-1,3-Dichloropropene	< 4.0	4.0	ug/kg	
trans-1,3-Dichloropropene	< 4.0	4.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
2-Hexanone	< 10.0	10.0	ug/kg	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/kg	
4-Methyl-2-pentanone (MIBK)	< 10.0	10.0	ug/kg	
Methylene chloride	< 20.0	20.0	ug/kg	
Styrene	< 5.0	5.0	ug/kg	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	ug/kg	
Tetrachloroethene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
1,1,1-Trichloroethane	< 5.0	5.0	ug/kg	
1,1,2-Trichloroethane	< 5.0	5.0	ug/kg	
Trichloroethene	< 5.0	5.0	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: MA-1
Sample No: 23-1836-005

Date Collected: 03/07/23
Time Collected: 10:10
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds				
Method: 5035A/8260B				
Analysis Date: 03/10/23				
Vinyl acetate	< 10.0	10.0	ug/kg	
Vinyl chloride	< 10.0	10.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	
Semi-Volatile Compounds				
Method: 8270C				
Preparation Method 3540C				
Analysis Date: 03/16/23				
Preparation Date: 03/15/23				
Acenaphthene	< 330	330	ug/kg	
Acenaphthylene	< 330	330	ug/kg	
Anthracene	< 330	330	ug/kg	
Benzidine	< 330	330	ug/kg	
Benzo(a)anthracene	< 330	330	ug/kg	
Benzo(a)pyrene	< 90	90	ug/kg	
Benzo(b)fluoranthene	< 330	330	ug/kg	
Benzo(k)fluoranthene	< 330	330	ug/kg	
Benzo(ghi)perylene	< 330	330	ug/kg	
Benzoic acid	< 330	330	ug/kg	
Benzyl alcohol	< 330	330	ug/kg	
bis(2-Chloroethoxy)methane	< 330	330	ug/kg	
bis(2-Chloroethyl)ether	< 330	330	ug/kg	
bis(2-Chloroisopropyl)ether	< 330	330	ug/kg	
bis(2-Ethylhexyl)phthalate	< 330	330	ug/kg	
4-Bromophenyl phenyl ether	< 330	330	ug/kg	
Butyl benzyl phthalate	< 330	330	ug/kg	
Carbazole	< 330	330	ug/kg	
4-Chloroaniline	< 330	330	ug/kg	
4-Chloro-3-methylphenol	< 330	330	ug/kg	
2-Chloronaphthalene	< 330	330	ug/kg	
2-Chlorophenol	< 330	330	ug/kg	
4-Chlorophenyl phenyl ether	< 330	330	ug/kg	
Chrysene	< 330	330	ug/kg	
Dibenzo(a,h)anthracene	< 90	90	ug/kg	
Dibenzofuran	< 330	330	ug/kg	
1,2-Dichlorobenzene	< 330	330	ug/kg	
1,3-Dichlorobenzene	< 330	330	ug/kg	
1,4-Dichlorobenzene	< 330	330	ug/kg	
3,3'-Dichlorobenzidine	< 660	660	ug/kg	
2,4-Dichlorophenol	< 330	330	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: MA-1
Sample No: 23-1836-005

Date Collected: 03/07/23
Time Collected: 10:10
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds		Method: 8270C		
Analysis Date: 03/16/23		Preparation Method 3540C		
		Preparation Date: 03/15/23		
Diethyl phthalate	< 330	330	ug/kg	
2,4-Dimethylphenol	< 330	330	ug/kg	
Dimethyl phthalate	< 330	330	ug/kg	
Di-n-butyl phthalate	< 330	330	ug/kg	
4,6-Dinitro-2-methylphenol	< 1,600	1600	ug/kg	
2,4-Dinitrophenol	< 1,600	1600	ug/kg	
2,4-Dinitrotoluene	< 250	250	ug/kg	
2,6-Dinitrotoluene	< 260	260	ug/kg	
Di-n-octylphthalate	< 330	330	ug/kg	
Fluoranthene	< 330	330	ug/kg	
Fluorene	< 330	330	ug/kg	
Hexachlorobenzene	< 330	330	ug/kg	
Hexachlorobutadiene	< 330	330	ug/kg	
Hexachlorocyclopentadiene	< 330	330	ug/kg	
Hexachloroethane	< 330	330	ug/kg	
Indeno(1,2,3-cd)pyrene	< 330	330	ug/kg	
Isophorone	< 330	330	ug/kg	
2-Methylnaphthalene	< 330	330	ug/kg	
2-Methylphenol	< 330	330	ug/kg	
3 & 4-Methylphenol	< 330	330	ug/kg	
Naphthalene	< 330	330	ug/kg	
2-Nitroaniline	< 1,600	1600	ug/kg	
3-Nitroaniline	< 1,600	1600	ug/kg	
4-Nitroaniline	< 1,600	1600	ug/kg	
Nitrobenzene	< 260	260	ug/kg	
2-Nitrophenol	< 1,600	1600	ug/kg	
4-Nitrophenol	< 1,600	1600	ug/kg	
n-Nitrosodi-n-propylamine	< 90	90	ug/kg	
n-Nitrosodimethylamine	< 330	330	ug/kg	
n-Nitrosodiphenylamine	< 330	330	ug/kg	
Pentachlorophenol	< 330	330	ug/kg	
Phenanthrene	< 330	330	ug/kg	
Phenol	< 330	330	ug/kg	
Pyrene	< 330	330	ug/kg	
Pyridine	< 330	330	ug/kg	
1,2,4-Trichlorobenzene	< 330	330	ug/kg	
2,4,5-Trichlorophenol	61 < 330	330	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: MA-1
Sample No: 23-1836-005

Date Collected: 03/07/23
Time Collected: 10:10
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds	Method: 8270C	Preparation Method 3540C		
Analysis Date: 03/16/23		Preparation Date: 03/15/23		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
pH @ 25°C, 1:2	Method: 9045D			
Analysis Date: 03/10/23 11:30				
pH @ 25°C, 1:2	8.76		Units	
Total Metals	Method: 6010C	Preparation Method 3050B		
Analysis Date: 03/13/23		Preparation Date: 03/10/23		
Arsenic	8.5	1.0	mg/kg	
Barium	50.4	0.5	mg/kg	
Cadmium	0.8	0.5	mg/kg	
Chromium	13.9	0.5	mg/kg	
Iron	23,500	5.0	mg/kg	
Lead	21.7	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Total Mercury	Method: 7471B			
Analysis Date: 03/15/23				
Mercury	< 0.05	0.05	mg/kg	
TCLP Extraction	Method: 1311			
Analysis Date: 03/09/23				
TCLP Extraction	Complete			
TCLP Metals Method 1311	Method: 6010C	Preparation Method 3010A		
Analysis Date: 03/14/23		Preparation Date: 03/14/23		
Arsenic	< 0.010	0.010	mg/L	
Barium	< 1.0	1.0	mg/L	
Cadmium	< 0.005	0.005	mg/L	
Chromium	< 0.005	0.005	mg/L	
Iron	< 0.1	0.1	mg/L	
Lead	< 0.005	0.005	mg/L	
Selenium	0.015	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
TCLP Mercury Method 1311	Method: 7470A			
Analysis Date: 03/15/23				
Mercury	< 0.0005	0.0005	mg/L	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: WA-1
Sample No: 23-1836-006

Date Collected: 03/07/23
Time Collected: 10:35
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total Method: 2540G 2011				
Analysis Date: 03/09/23				
Total Solids	84.62		%	
Volatile Organic Compounds Method: 5035A/8260B				
Analysis Date: 03/10/23				
Acetone	< 200	200	ug/kg	
Benzene	< 5.0	5.0	ug/kg	
Bromodichloromethane	< 5.0	5.0	ug/kg	
Bromoform	< 5.0	5.0	ug/kg	
Bromomethane	< 10.0	10.0	ug/kg	
2-Butanone (MEK)	< 100	100	ug/kg	
Carbon disulfide	< 5.0	5.0	ug/kg	
Carbon tetrachloride	< 5.0	5.0	ug/kg	
Chlorobenzene	< 5.0	5.0	ug/kg	
Chlorodibromomethane	< 5.0	5.0	ug/kg	
Chloroethane	< 10.0	10.0	ug/kg	
Chloroform	< 5.0	5.0	ug/kg	
Chloromethane	< 10.0	10.0	ug/kg	
1,1-Dichloroethane	< 5.0	5.0	ug/kg	
1,2-Dichloroethane	< 5.0	5.0	ug/kg	
1,1-Dichloroethene	< 5.0	5.0	ug/kg	
cis-1,2-Dichloroethene	< 5.0	5.0	ug/kg	
trans-1,2-Dichloroethene	< 5.0	5.0	ug/kg	
1,2-Dichloropropane	< 5.0	5.0	ug/kg	
cis-1,3-Dichloropropene	< 4.0	4.0	ug/kg	
trans-1,3-Dichloropropene	< 4.0	4.0	ug/kg	
Ethylbenzene	< 5.0	5.0	ug/kg	
2-Hexanone	< 10.0	10.0	ug/kg	
Methyl-tert-butylether (MTBE)	< 5.0	5.0	ug/kg	
4-Methyl-2-pentanone (MIBK)	< 10.0	10.0	ug/kg	
Methylene chloride	< 20.0	20.0	ug/kg	
Styrene	< 5.0	5.0	ug/kg	
1,1,2,2-Tetrachloroethane	< 5.0	5.0	ug/kg	
Tetrachloroethene	< 5.0	5.0	ug/kg	
Toluene	< 5.0	5.0	ug/kg	
1,1,1-Trichloroethane	< 5.0	5.0	ug/kg	
1,1,2-Trichloroethane	< 5.0	5.0	ug/kg	
Trichloroethene	< 5.0	5.0	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: WA-1
Sample No: 23-1836-006

Date Collected: 03/07/23
Time Collected: 10:35
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds Method: 5035A/8260B				
Analysis Date: 03/10/23				
Vinyl acetate	< 10.0	10.0	ug/kg	
Vinyl chloride	< 10.0	10.0	ug/kg	
Xylene, Total	< 5.0	5.0	ug/kg	
Semi-Volatile Compounds Method: 8270C Preparation Method 3540C				
Analysis Date: 03/16/23 Preparation Date: 03/15/23				
Acenaphthene	< 330	330	ug/kg	
Acenaphthylene	< 330	330	ug/kg	
Anthracene	< 330	330	ug/kg	
Benzidine	< 330	330	ug/kg	
Benzo(a)anthracene	< 330	330	ug/kg	
Benzo(a)pyrene	< 90	90	ug/kg	
Benzo(b)fluoranthene	< 330	330	ug/kg	
Benzo(k)fluoranthene	< 330	330	ug/kg	
Benzo(ghi)perylene	< 330	330	ug/kg	
Benzoic acid	< 330	330	ug/kg	
Benzyl alcohol	< 330	330	ug/kg	
bis(2-Chloroethoxy)methane	< 330	330	ug/kg	
bis(2-Chloroethyl)ether	< 330	330	ug/kg	
bis(2-Chloroisopropyl)ether	< 330	330	ug/kg	
bis(2-Ethylhexyl)phthalate	< 330	330	ug/kg	
4-Bromophenyl phenyl ether	< 330	330	ug/kg	
Butyl benzyl phthalate	< 330	330	ug/kg	
Carbazole	< 330	330	ug/kg	
4-Chloroaniline	< 330	330	ug/kg	
4-Chloro-3-methylphenol	< 330	330	ug/kg	
2-Chloronaphthalene	< 330	330	ug/kg	
2-Chlorophenol	< 330	330	ug/kg	
4-Chlorophenyl phenyl ether	< 330	330	ug/kg	
Chrysene	< 330	330	ug/kg	
Dibenzo(a,h)anthracene	< 90	90	ug/kg	
Dibenzofuran	< 330	330	ug/kg	
1,2-Dichlorobenzene	< 330	330	ug/kg	
1,3-Dichlorobenzene	< 330	330	ug/kg	
1,4-Dichlorobenzene	< 330	330	ug/kg	
3,3'-Dichlorobenzidine	< 660	660	ug/kg	
2,4-Dichlorophenol	< 330	330	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: WA-1
Sample No: 23-1836-006

Date Collected: 03/07/23
Time Collected: 10:35
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds		Method: 8270C		
Analysis Date: 03/16/23		Preparation Method 3540C		
		Preparation Date: 03/15/23		
Diethyl phthalate	< 330	330	ug/kg	
2,4-Dimethylphenol	< 330	330	ug/kg	
Dimethyl phthalate	< 330	330	ug/kg	
Di-n-butyl phthalate	< 330	330	ug/kg	
4,6-Dinitro-2-methylphenol	< 1,600	1600	ug/kg	
2,4-Dinitrophenol	< 1,600	1600	ug/kg	
2,4-Dinitrotoluene	< 250	250	ug/kg	
2,6-Dinitrotoluene	< 260	260	ug/kg	
Di-n-octylphthalate	< 330	330	ug/kg	
Fluoranthene	< 330	330	ug/kg	
Fluorene	< 330	330	ug/kg	
Hexachlorobenzene	< 330	330	ug/kg	
Hexachlorobutadiene	< 330	330	ug/kg	
Hexachlorocyclopentadiene	< 330	330	ug/kg	
Hexachloroethane	< 330	330	ug/kg	
Indeno(1,2,3-cd)pyrene	< 330	330	ug/kg	
Isophorone	< 330	330	ug/kg	
2-Methylnaphthalene	< 330	330	ug/kg	
2-Methylphenol	< 330	330	ug/kg	
3 & 4-Methylphenol	< 330	330	ug/kg	
Naphthalene	< 330	330	ug/kg	
2-Nitroaniline	< 1,600	1600	ug/kg	
3-Nitroaniline	< 1,600	1600	ug/kg	
4-Nitroaniline	< 1,600	1600	ug/kg	
Nitrobenzene	< 260	260	ug/kg	
2-Nitrophenol	< 1,600	1600	ug/kg	
4-Nitrophenol	< 1,600	1600	ug/kg	
n-Nitrosodi-n-propylamine	< 90	90	ug/kg	
n-Nitrosodimethylamine	< 330	330	ug/kg	
n-Nitrosodiphenylamine	< 330	330	ug/kg	
Pentachlorophenol	< 330	330	ug/kg	
Phenanthrene	< 330	330	ug/kg	
Phenol	< 330	330	ug/kg	
Pyrene	< 330	330	ug/kg	
Pyridine	< 330	330	ug/kg	
1,2,4-Trichlorobenzene	< 330	330	ug/kg	
2,4,5-Trichlorophenol	65 < 330	330	ug/kg	



Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-016
Sample ID: WA-1
Sample No: 23-1836-006

Date Collected: 03/07/23
Time Collected: 10:35
Date Received: 03/09/23
Date Reported: 03/16/23

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds	Method: 8270C	Preparation Method 3540C		
Analysis Date: 03/16/23		Preparation Date: 03/15/23		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
pH @ 25°C, 1:2	Method: 9045D			
Analysis Date: 03/10/23 11:30				
pH @ 25°C, 1:2	7.96		Units	
Total Metals	Method: 6010C	Preparation Method 3050B		
Analysis Date: 03/13/23		Preparation Date: 03/10/23		
Arsenic	6.1	1.0	mg/kg	
Barium	53.8	0.5	mg/kg	
Cadmium	0.9	0.5	mg/kg	
Chromium	17.6	0.5	mg/kg	
Iron	22,700	5.0	mg/kg	
Lead	17.1	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Total Mercury	Method: 7471B			
Analysis Date: 03/15/23				
Mercury	< 0.05	0.05	mg/kg	
TCLP Extraction	Method: 1311			
Analysis Date: 03/09/23				
TCLP Extraction	Complete			
TCLP Metals Method 1311	Method: 6010C	Preparation Method 3010A		
Analysis Date: 03/14/23		Preparation Date: 03/14/23		
Arsenic	< 0.010	0.010	mg/L	
Barium	< 1.0	1.0	mg/L	
Cadmium	< 0.005	0.005	mg/L	
Chromium	< 0.005	0.005	mg/L	
Iron	1.1	0.1	mg/L	
Lead	< 0.005	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
TCLP Mercury Method 1311	Method: 7470A			
Analysis Date: 03/15/23				
Mercury	< 0.0005	0.0005	mg/L	



Illinois Environmental Protection Agency

1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276 • (217) 782-3397

Uncontaminated Soil Certification by Licensed Professional Engineer or Licensed Professional Geologist for Use of Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation LPC-663

Revised in accordance with 35 Ill. Adm. Code 1100, as
amended by PCB R2012-009 (eff. Aug. 27, 2012)

This certification form is to be used by professional engineers and professional geologists to certify, pursuant to 35 Ill. Adm. Code 1100.205(a)(1)(B), that soil (i) is uncontaminated soil and (ii) is within a pH range of 6.26 to 9.0. If you have questions about this form, please telephone the Bureau of Land Permit Section at 217/524-3300.

This form may be completed online, saved locally, printed and signed, and submitted to prospective clean construction or demolition debris (CCDD) fill operations or uncontaminated soil fill operations.

I. Source Location Information

(Describe the location of the source of the uncontaminated soil)

Project Name: 2023 Street Maintenance Office Phone Number, if available: _____

Physical Site Location (address, including number and street):

Woodlawn Ave., Magnolia Ave., Waveland Ave., Grandville Ave., Harper Ave., Sutton Pl., Strawberry Fields, Abbey Rd., Sycam

City: Gurnee State: IL Zip Code: 60031

County: Lake Township: Warren

Lat/Long of approximate center of site in decimal degrees (DD.ddddd) to five decimal places (e.g., 40.67890, -90.12345):

Latitude: 42.36111 Longitude: - 87.89556

(Decimal Degrees) (-Decimal Degrees)

Identify how the lat/long data were determined:

☐ GPS ☐ Map Interpolation ☐ Photo Interpolation ☐ Survey ☒ Other

Google Earth

IEPA Site Number(s), if assigned: BOL: _____ BOW: _____ BOA: _____

Approximate Start Date (mm/dd/yyyy): 05/1/2023 Approximate End Date (mm/dd/yyyy): 09/30/2023

Estimated Volume of debris (cu. Yd.): 2,450

II. Owner/Operator Information for Source Site

Site Owner

Name: Village of Gurnee

Street Address: 325 North O'Plaine Road

PO Box: _____

City: Gurnee State: IL

Zip Code: 60031 Phone: 847-599-7584

Contact: Jake Benner

Email, if available: jbenner@village.gurnee.il.us

Site Operator

Name: Village of Gurnee

Street Address: 325 North O'Plaine Road

PO Box: _____

City: Gurnee State: IL

Zip Code: 60031 Phone: 847-599-7584

Contact: Jake Benner

Email, if available: jbenner@village.gurnee.il.us

This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42). This form has been approved by the Forms Management Center.

Uncontaminated Soil Certification**III. Basis for Certification and Attachments**

For each item listed below, reference the attachments to this form that provide the required information.

- a. A Description of the soil sample points and how they were determined to be sufficient in number and appropriately located 35 Ill. Adm. Code 1100.610(a):

The material sample locations were selected to represent major areas of work where materials are to be excavated or removed from the project. The material samples were obtained from locations most likely to exhibit the highest levels of contamination, if any. A sample location map is included with this report.

- b. Analytical soil testing results to show that soil chemical constituents comply with the maximum allowable concentrations established pursuant to 35 Ill. Adm. Code Part 1100, Subpart F and that the soil pH is within the range of 6.25 to 9.0, including the documentation of chain of custody control, a copy of the lab analysis; the accreditation status of the laboratory performing the analysis; and certification by an authorized agent of the laboratory that the analysis has been performed in accordance with the Agency's rules for the accreditation of environmental and the scope of the accreditation [35 Ill. Adm. Code 1100.201 (g), 1100.205(a), 1100.610]:

Six (6) soil borings were advanced within the right-of-way (ROW) at select locations, grab soil samples were analyzed for VOCs, SVOCs, PNAs, RCRA metals and iron, pH, and TCLP metals. Field screening was performed with a photo-ionization detector (PID) and/or handheld pH meter at various locations throughout the proposed project area.

IV. Certification Statement, Signature and Seal of Licensed Professional Engineer or Licensed Professional Geologist

I, Bradley A. Brown (name of licensed professional engineer or geologist) certify under penalty of law that the information submitted, including but not limited to, all attachments and other information, is to the best of my knowledge and belief, true, accurate and complete. In accordance with the Environmental Protection Act [415 ILCS 5/22.51 or 22.51a] and 35 Ill. Adm. Code 1100.205(a), I certify that the soil from this site is uncontaminated soil. I also certify that the soil pH is within the range of 6.25 to 9.0. In addition, I certify that the soil has not been removed from the site as part of a cleanup or removal of contaminants. All necessary documentation is attached.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))

Company Name: Brownfield Environmental Engineering Resources, LLC

Street Address: 645 Third St., Suite 250

City: Beloit State: WI Zip Code: 53511

Phone: 608-856-5434

Bradley A. Brown

Printed Name:



Licensed Professional Engineer or
Licensed Professional Geologist Signature:

March 17, 2023

Date:



P.E or L.P.G. Seal:

EXA 11/30/23