ADDENDUM NO. 1

DATE: March 16th, 2022
PROJECT: **2022 Street Maintenance Program – Gurnee #8429**
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 167 pages. This Addendum contains the following revisions:

1. Revision to the Description of Work
2. Revision to Typical Cross Sections
3. Revision to Fire Station #2 Parking Lot
4. Revision to Schedule of Prices
5. Addition of Quantity Breakdown by Street
6. Addition of CCDD Report

CHANGES TO THE CONTRACT DOCUMENTS AND SPECIFICATIONS:

Project Manual:

- Item 1: Remove and replace Description of Work section in its entirety with pages 3, 4, and 5 of this Addendum
  - Revised description for Madison Ave and Ironwood Ct
- Item 2: Remove and replace the Typical Cross Sections in their entirety with pages 6, 7, 8, 9, 10, and 11 of this Addendum
  - Revised the 3" Mill cross section to reflect existing conditions more accurately
  - Revised the minimum HMA binder course thickness to be 2-1/4 inches.
- Item3: Remove and replace the Fire Station No. 2 page with page 12 of this Addendum
  - Revised the parking lot to receive milling, base prep, binder, and surface
- Item 4: Remove and replace Schedule of Prices in its entirety with pages 13, 14, and 15 of this Addendum
  - Revised BITUMINOUS MATERIAL (PRIME COAT) to BITUMINOUS MATERIAL (**TACK** COAT)
- Item 5: Add pages 16, 17, 18, and 19 of this Addendum to the bid documents
  - Provided a "Quantity Breakdown by Street" section
- Item 6: Add pages 20 through 167 of this Addendum to the bid documents
  - Provided the CCDD Report

Signed: N. Leach

Village of Gurnee
Nicholas Leach
Assistant Village Engineer

ADDENDUM NO. 1

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

VILLAGE OF GURNEE

2022 STREET MAINTENANCE PROGRAM
PROJECT # 8429
DESCRIPTION OF WORK

The following is a list of streets with limits and a brief work description for each street for the 2022 Street Maintenance Program:

Area 1	East Side of Gurnee	
STREETS	**LIMITS**	**DESCRIPTION**
Old Grand Ave	Fire Station #1 to East end	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
First St	Old Grand Ave to Route 132	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Centennial Ct	Depot Rd to East end	4" Milling, base prep., HMA binder course, surface placement, curb & sidewalk repairs
Porett Dr	Delany Rd to East End	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Swanson Ct	Northwestern Ave to Northwestern Ave	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Northwestern Ave	Pacific Ave to Grandville Ave	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Waveland Ave	Route 132 to Woodlawn Ave	3-1/2" Milling, base prep., HMA binder course, surface placement, curb & sidewalk repairs
Area 2	**Kensington**	
STREETS	**LIMITS**	**DESCRIPTION**
Brookhaven Rd	O'Plaine Rd to East end	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Kensington Ct	Brookhaven Rd to Brookhaven Rd	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Buckingham Dr	Brookhaven Rd to Frontage Rd	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Area 3	**Westgate & Pembrook Subdivisions**	
STREETS	**LIMITS**	**DESCRIPTION**
Garnet Ct	East end to Queen Ann Ln	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Liberty Ln	Constitution Ave to Lawson Blvd	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking

VILLAGE OF GURNEE

2022 STREET MAINTENANCE PROGRAM
PROJECT # 8429
DESCRIPTION OF WORK

The following is a list of streets with limits and a brief work description for each street for the 2022 Street Maintenance Program:

Constitution Ave	Liberty Ln to Madison Ave	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Quincy Ct	North end to Lawson Blvd	4" Milling, base prep., HMA binder course, surface placement, curb & sidewalk repairs
Madison Ave	North end to Lawson Blvd	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Franklin Ct	North end to Lawson Blvd	6" Milling, base prep., HMA binder course, surface placement, curb & sidewalk repairs
Cherrywood Ct	North end to Westfield Dr	5" Milling, base prep., HMA binder course, surface placement, curb & sidewalk repairs
Ashwood Ln	West end to Maplewood Dr	3" Milling, base prep., HMA binder course, surface placement, curb & sidewalk repairs
Ironwood Ct	North end to Lawson Blvd	6" Milling, base prep., HMA binder course, surface placement, curb & sidewalk repairs
Butternut Ct	West end to Lawson Blvd	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Boulders Dr	Fuller Rd to Ravine Dr	3" Milling, base prep., HMA binder course, surface placement, curb & sidewalk repairs
Pine Meadow Ct	North end to Boulders Dr	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Fox Meadow Ct	North end to Boulders Dr	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Maplewood Dr	Westfield Dr to Lawson Blvd	3" Milling, base prep., HMA binder course, surface placement, curb & sidewalk repairs
Lawson Blvd	Barnwood Dr to Beechwood Ave	3" Milling, base prep., HMA binder course, surface placement, curb & sidewalk repairs

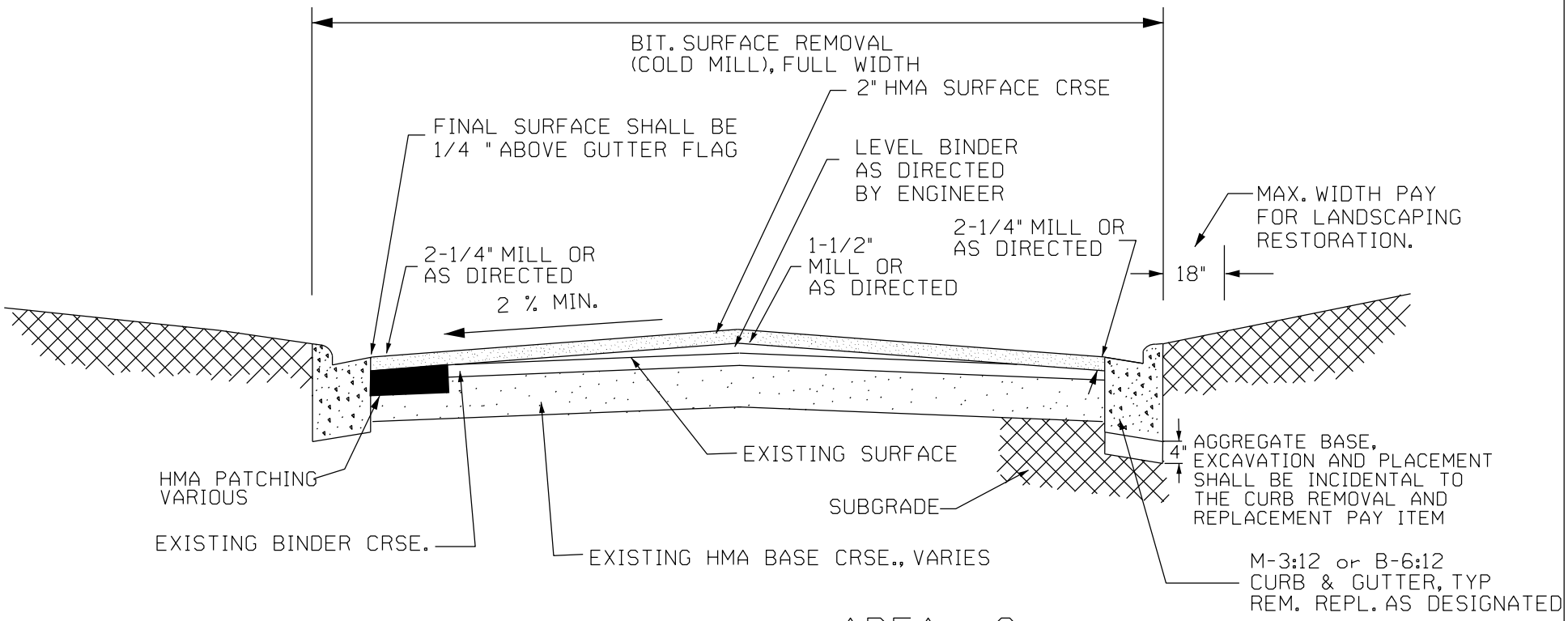
VILLAGE OF GURNEE

2022 STREET MAINTENANCE PROGRAM
PROJECT # 8429
DESCRIPTION OF WORK

The following is a list of streets with limits and a brief work description for each street for the 2022 Street Maintenance Program:

Area 4	Mendocino & Lockwood	
STREETS	**LIMITS**	**DESCRIPTION**
Mendocino Dr	Vineyard Dr to Vineyard Dr	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Garnacha Dr	100' West of Mendocino Dr to Mendocino Dr	Surface milling, HMA patching, curb & sidewalk repairs, leveling binder, surface overlay, pavement marking
Lockwood Ln	Hunt Club Rd to East end	3" Milling, base prep., HMA binder course, surface placement, curb & sidewalk repairs
Lockslee Ct	Lockwood Ln to South end	3" Milling, base prep., HMA binder course, surface placement, curb & sidewalk repairs

MILL AND OVERLAY



AREA 1

FIRST ST
PORETT DR
OLD GRAND AV
NORTHWESTERN AV
SWANSON CT

AREA 2

BUCKINGHAM DR
KENSINGTON CT
BROOKHAVEN RD

AREA 4

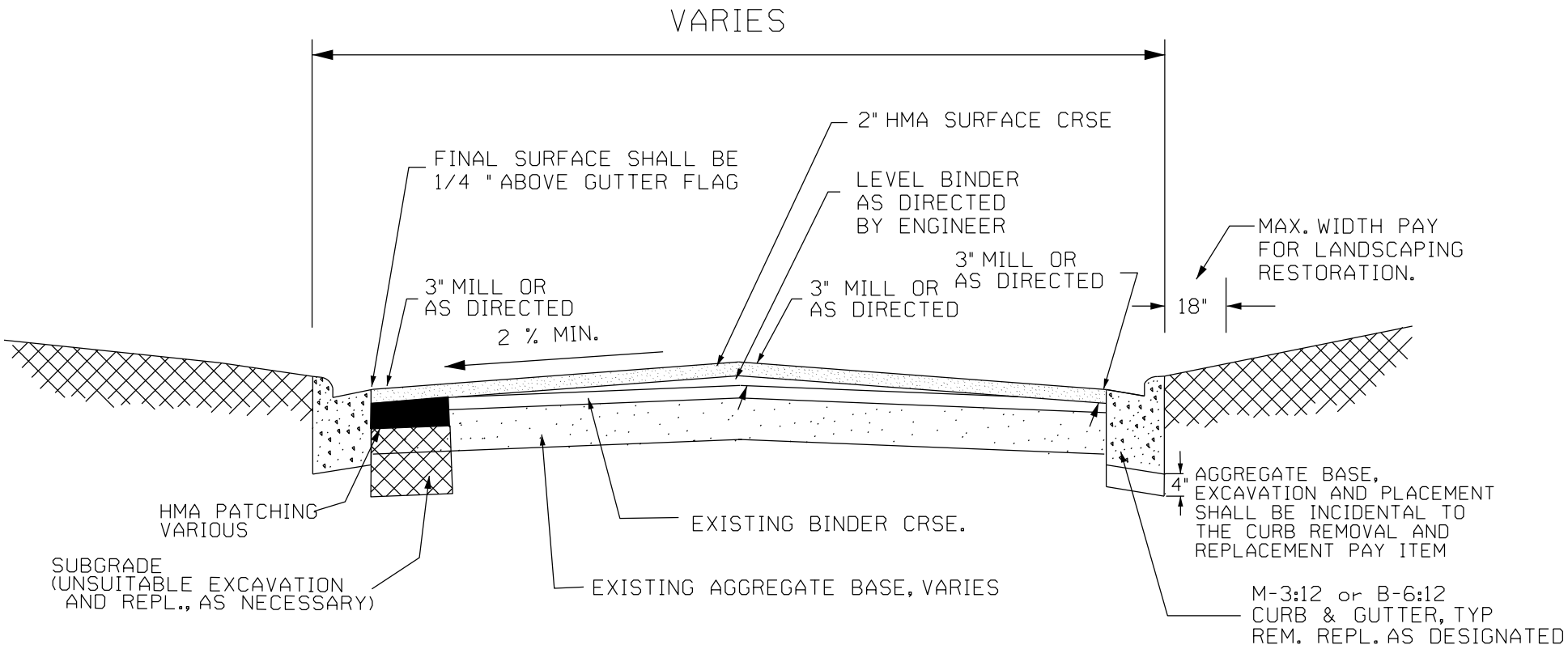
MENDOCINO DR

AREA 3

LIBERTY LN
MADISON AV
GARNET CT
BUTTERNUT CT
PINE MEADOW CT
FOX MEADOW CT

VILLAGE OF GURNEE
2022 STREET MAINTENANCE
PROJECT #8429

HMA REMOVAL 3" MILL, PREP., HMA BC & HMA SURFACE

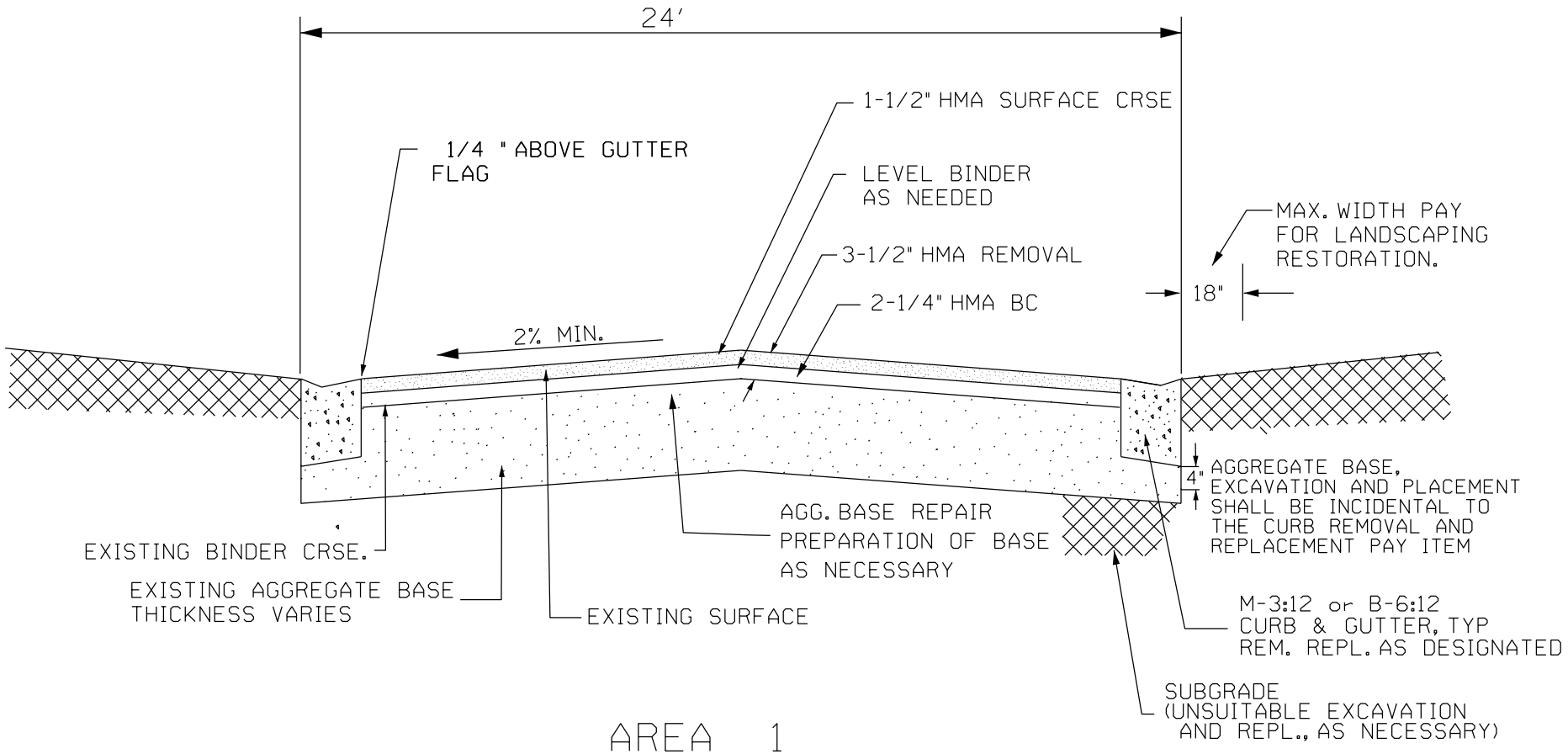


AREA 3

ASHWOOD LN
LOCKWOOD LN
BOULDERS DR
MAPLEWOOD DR
LAWSON BLVD

VILLAGE OF GURNEE
2022 STREET MAINTENANCE
PROJECT #8429

HMA REMOVAL 3-1/2" MILL, PREP., HMA BC & HMA SURFACE



AREA 1

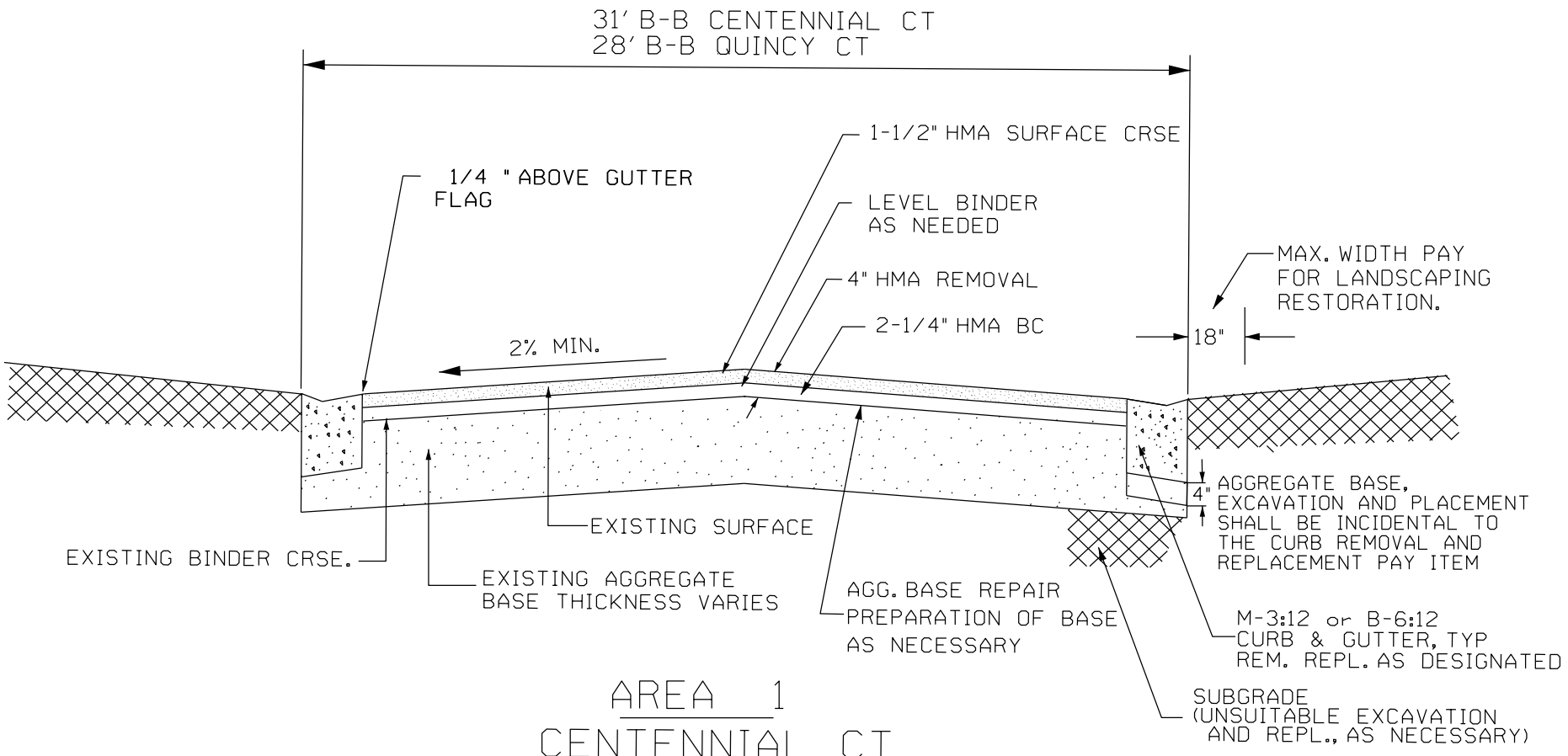
WAVELAND AV

VILLAGE OF GURNEE

2022 STREET MAINTENANCE

PROJECT #8429

HMA REMOVAL 4" MILL, PREP., HMA BC & HMA SURFACE

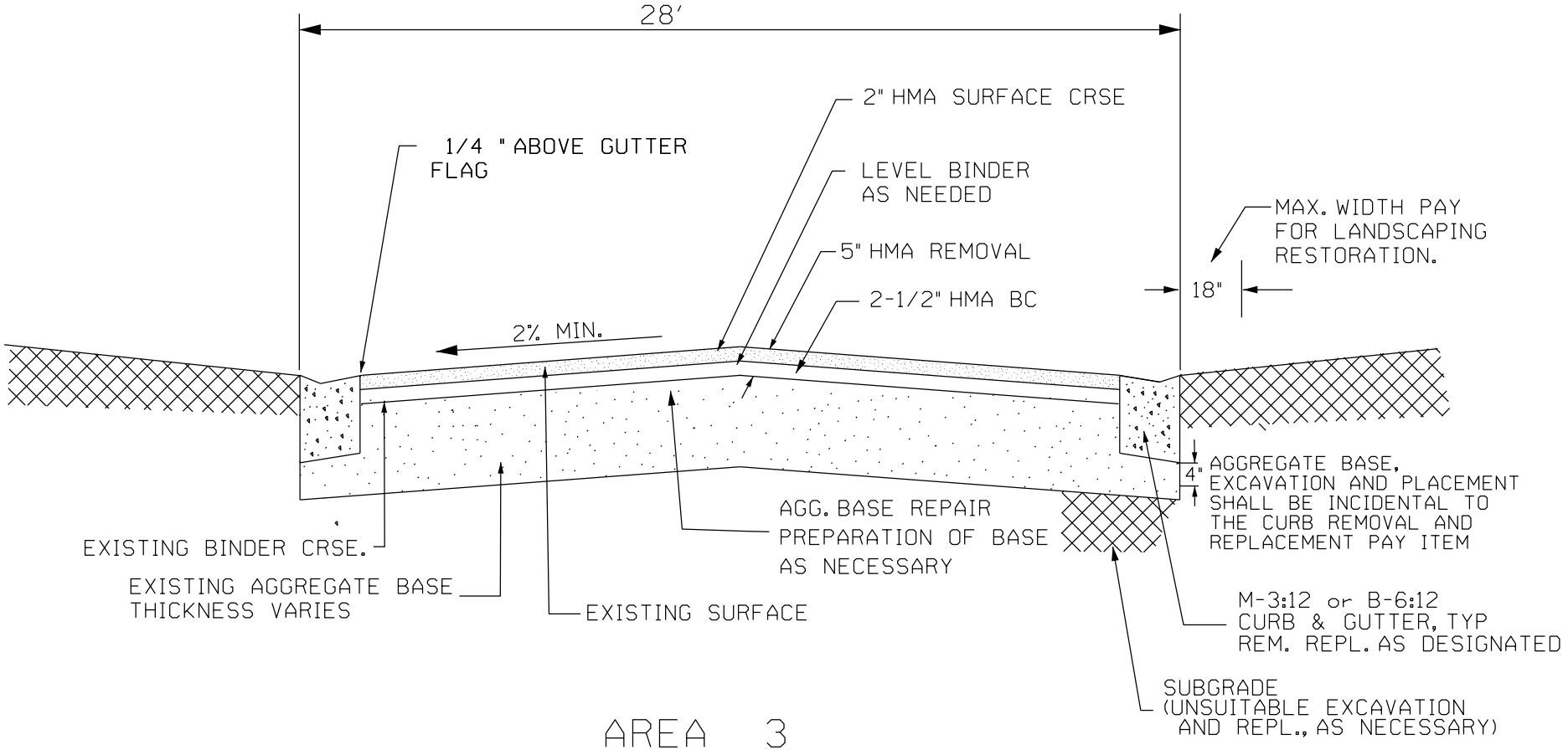


AREA 1
CENTENNIAL CT

AREA 3
QUINCY CT

VILLAGE OF GURNEE
2022 STREET MAINTENANCE
PROJECT #8429

HMA REMOVAL 5" MILL, PREP., HMA BC & HMA SURFACE

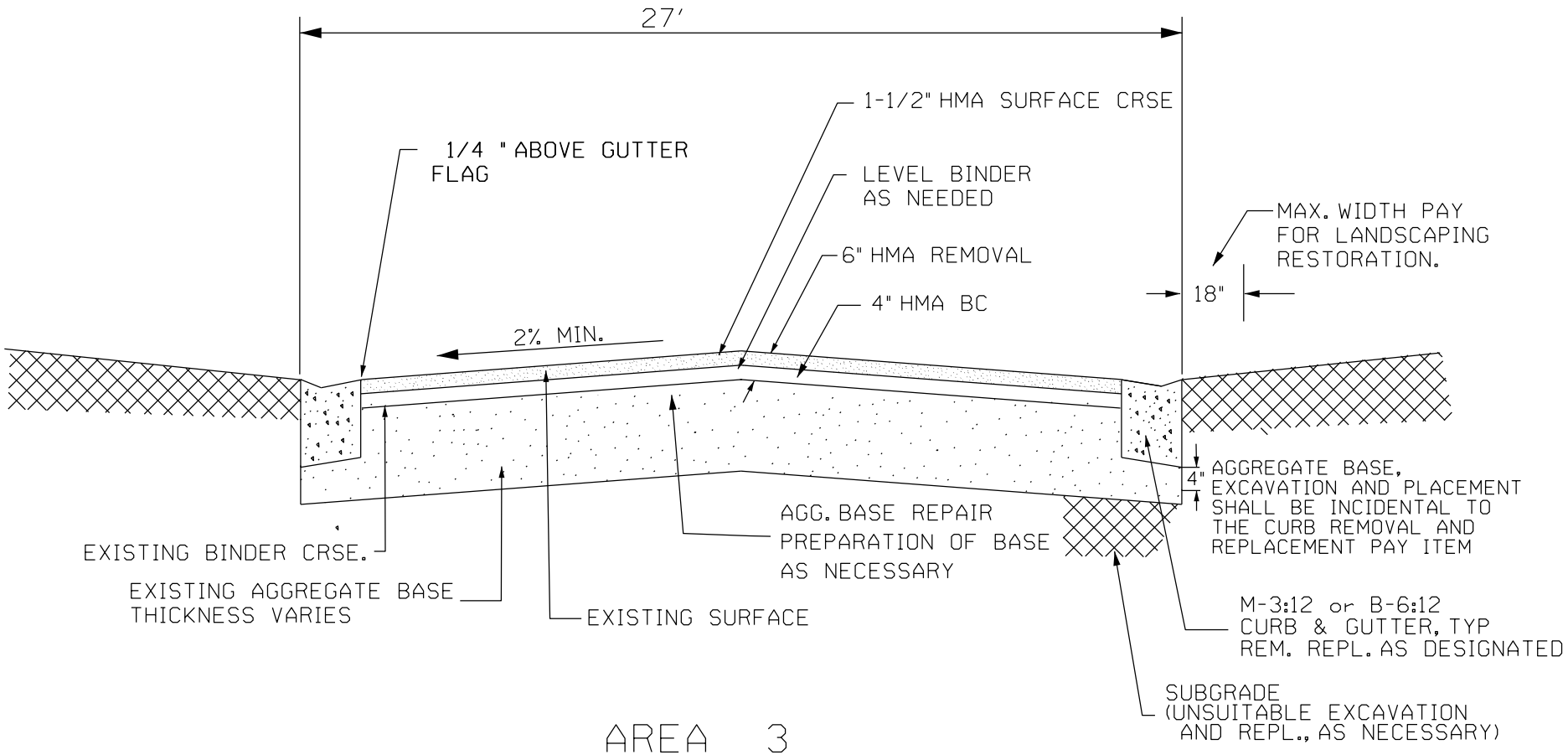


AREA 3

CHERRYWOOD CT

VILLAGE OF GURNEE
2022 STREET MAINTENANCE
PROJECT #8429

HMA REMOVAL 6" MILL, PREP., HMA BC & HMA SURFACE

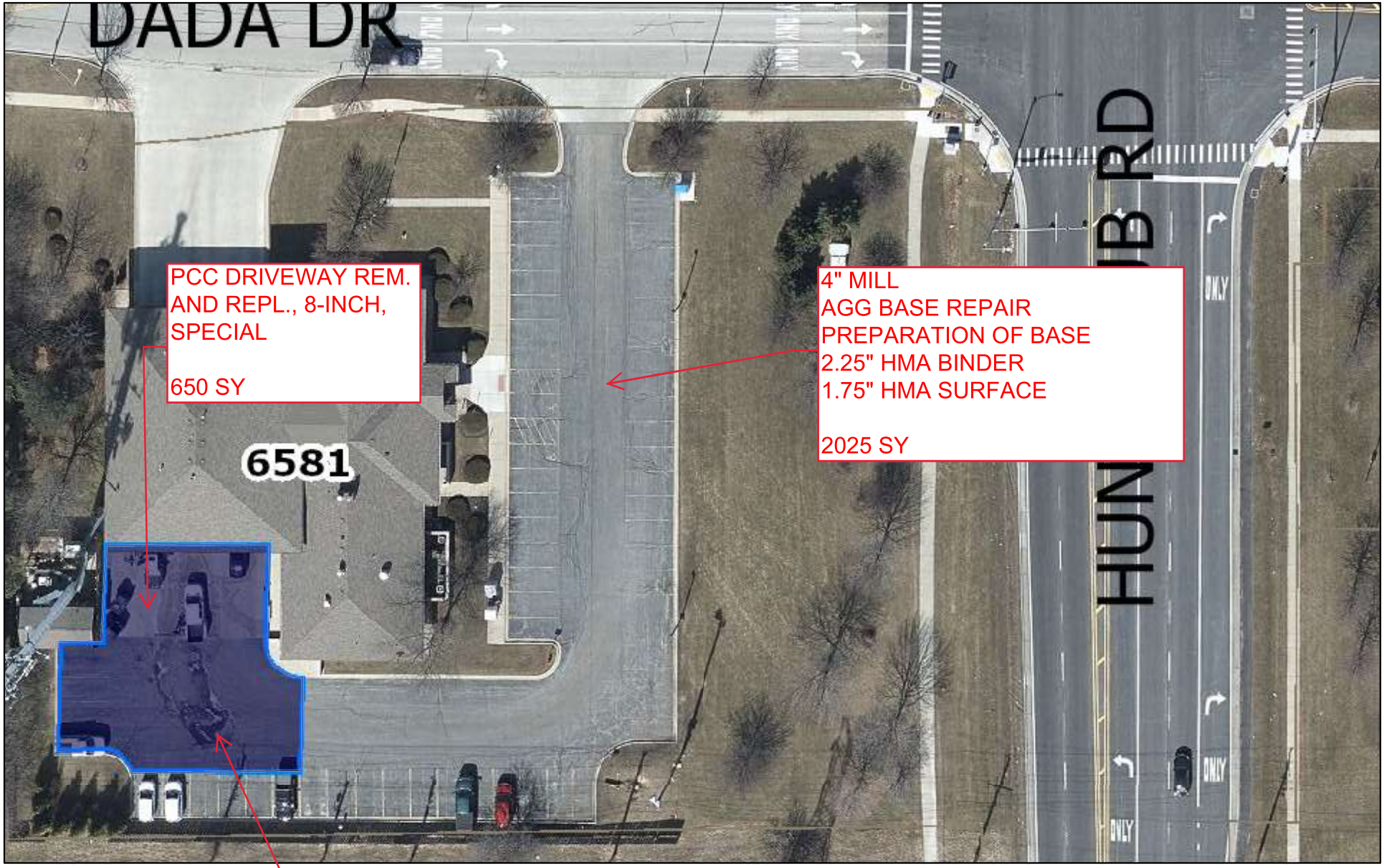


AREA 3

FRANKLIN CT
IRONWOOD CT

VILLAGE OF GURNEE
2022 STREET MAINTENANCE
PROJECT #8429

FIRE STATION NO. 2 - PATCHING



PCC DRIVEWAY REM. AND REPL., 8-INCH, SPECIAL

650 SY

4" MILL
AGG BASE REPAIR
PREPARATION OF BASE
2.25" HMA BINDER
1.75" HMA SURFACE

2025 SY

INLET TO BE ADJUSTED

Stripe the pavement to match original

Parcel Lines

Trails

Trails

N

2/4/2020, 10:51:40 AM

Scale
1:600

Illinois Department of Transportation

Schedule of Prices

Print Form | Print With Instructions | Reset Form

Contractor's Name

Contractor's Address | City | State | Zip Code

Local Public Agency | County | Section Number

Village of Gurnee | Lake | 22-00000-01-GM

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	4855		
2	COMB. CONC. CURB & GUTTER, TYPE M-3:12	FOOT	500		
3	COMB. CONC. CURB & GUTTER, TYPE M-6:12	FOOT	3250		
4	COMBINATION CURB & GUTTER REMOVAL	FOOT	8605		
5	SIDEWALK REMOVAL	S.F.	4766		
6	P.C.C. SIDEWALK	S.F.	4816		
7	DETECTABLE WARNING TILES	EA	41		
8	BRICK FLATWORK REMOVAL	S.F.	133		
9	P.C.C. DRIVEWAY, 8"	S.Y.	450		
10	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 8", SPECIAL	S.Y.	650		
11	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 6"	S.Y.	830		
12	HMA DRIVEWAY REMOVAL AND REPLACEMENT	S.Y.	2100		
13	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	9184		
14	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL-9.5, N70	TON	987		
15	HMA BINDER COURSE, IL-19.0, N50	TON	1802		
16	BITUMINOUS MATERIAL (TACK COAT)	LB	58507		
17	LEVELING BINDER (MACHINE MET.), N50	TON	4498		
18	HMA MAINTENANCE STRIP	S.Y.	145		
19	PAVEMENT PATCHING-CLASS D, 10-INCH	S.Y.	1289		
20	PAVEMENT PATCHING-CLASS D, 8-INCH	S.Y.	1564		

Local Public Agency	County	Section Number	Route(s) (Street/Road Name)
Village of Gurnee	Lake	22-00000-01-GM	Various

Item Number	Items	Unit	Quantity	Unit Price	Total
21	PAVEMENT PATCHING-CLASS D, 6-INCH	S.Y.	11232		
22	PAVEMENT PATCHING-CLASS D, 4-INCH	S.Y.	2656		
23	PAVEMENT PATCHING-CLASS D, 2-INCH, SPECIAL	S.Y.	2500		
24	PAVEMENT PATCHING-CLASS D, 4-INCH, SPECIAL	S.Y.	6550		
25	PAVEMENT PATCHING-CLASS D, 6-INCH, SPECIAL	S.Y.	1735		
26	CONCRETE PAD	L.S.	1		
27	HOT-MIX ASPHALT SURFACE REMOVAL-(COLD MILLING)	S.Y.	62267		
28	HOT-MIX ASPHALT PAVEMENT REMOVAL, 3 INCHES	S.Y.	15820		
29	HOT-MIX ASPHALT PAVEMENT REMOVAL, 3-1/2 INCHES	S.Y.	3351		
30	HOT-MIX ASPHALT PAVEMENT REMOVAL, 4-INCHES	S.Y.	4549		
31	HOT-MIX ASPHALT PAVEMENT REMOVAL, 5-INCHES	S.Y.	680		
32	HOT-MIX ASPHALT PAVEMENT REMOVAL, 6-INCHES	S.Y.	2204		
33	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	S.Y.	1220		
34	UNSUITABLE SUBGRADE EXCAVATION, CA-1 REPLACEMENT	C.Y.	2659		
35	UNSUITABLE SUBGRADE EXCAVATION, CA-6 REPLACEMENT	C.Y.	888		
36	EARTH EXCAVATION	C.Y.	325		
37	NON-SPECIAL WASTE DISPOSAL	C.Y.	20		
38	AGGREGATE BASE REPAIR	TON	606		
39	PREPARATION OF BASE	S.Y.	10964		
40	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	S.Y.	7508		
41	INLETS TO BE ADJUSTED	EA	165		
42	INLETS TO BE RECONSTRUCTED	EA	3		
43	MANHOLE TO BE ADJUSTED	EA	68		
44	LANDSCAPING	S.Y.	1892		
45	GRADING AND SHAPING OF DITCHES	S.Y.	80		
46	AGGREGATE FOR TEMORARY ACCESS	TON	20		
47	THERMOPLASTIC PVMT. MARKING, 24" LINE	FOOT	217		
48	THERMOPLASTIC PVMT. MARKING, 12" LINE	FOOT	1085		
49	THERMOPLASTIC PVMT. MARKING, 6" LINE	FOOT	5863		
50	THERMOPLASTIC PVMT. MARKING, 4" LINE	FOOT	14570		
51	THERMOPLASTIC PVMT. MARKING, LETTERS & SYMBOLS	S.F.	455		
52	MODIFIED URETHANE PVMT. MARKING - 4" LINE	FOOT	53		
53	TRAFFIC CONTROL AND PROTECTION	L.S.	1		
54	PVC UNDER DRAINS, 4 INCH	FOOT	100		
				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.

			TOTAL	CENTENNIAL CT	FIRST ST	FRANKLIN CT	LIBERTY LN	QUINCY CT	ASHWOOD LN	IRONWOOD CT
ITEM NO.	ITEM	UNIT	AMOUNT	Depot Rd to east end	Old Grand Ave to Rte 132	Lawson Blvd to north end	Constitution Ave to Lawson Blvd	Lawson Blvd to north end	Maplewood Dr to west end	Lawson Blvd to north end
1	COMB. CONC. CURB & GUTTER, TYPE B-6:12	FOOT	4855.00	220	40	0	0	0	0	0
2	COMB. CONC. CURB & GUTTER, TYPE M-3:12	FOOT	500.00	0	0	0	0	0	0	0
3	COMB. CONC. CURB & GUTTER, TYPE M-6:12	FOOT	3250.00	0	0	120	170	40	245	50
4	COMBINATION CURB & GUTTER REMOVAL	FOOT	8605.00	220	40	120	170	40	245	50
5	SIDEWALK REMOVAL	S.F.	4766.00	140	55	80	180	20	20	160
6	P.C.C. SIDEWALK	S.F.	4816.00	140	55	80	180	20	20	160
7	DETECTABLE WARNING TILES	EA.	41.00	0	1	0	2	0	0	2
8	BRICK FLATWORK REMOVAL	S.F.	133.00	0	0	0	0	0	0	0
9	P.C.C. DRIVEWAY, 8"	S.Y.	450.00	0	0	0	0	0	0	0
10	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 8", SPECIAL	S.Y.	650.00	0	0	0	0	0	0	0
11	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 6"	S.Y.	830.00	0	0	0	0	0	0	0
12	HMA DRIVEWAY REMOVAL AND REPLACEMENT	S.Y.	2100.00	80	10	50	230	40	120	20
13	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	9184.00	146	96	131	328	80	192	65
14	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL-9.5, N70	TON	987.00	0	0	0	0	0	0	0
15	HMA BINDER COURSE, IL-19.0, N50	TON	1802.00	218	0	349	0	119	0	173
16	BITUMINOUS MATERIAL (TACK COAT)	LB	58507.00	1137	560	1000	2000	620	1130	500
17	LEVELING BINDER (MACHINE MET.), N50	TON	4498.00	0	48	0	164	0	96	0
18	HMA MAINTENANCE STRIP	S.Y.	145.00	0	0	0	0	0	0	0
19	PAVEMENT PATCHING-CLASS D, 10-INCH	S.Y.	1289.00	0	0	0	0	0	0	0
20	PAVEMENT PATCHING-CLASS D, 8-INCH	S.Y.	1564.00	0	0	0	0	0	0	0
21	PAVEMENT PATCHING-CLASS D, 6-INCH	S.Y.	11232.00	0	245	0	725	0	0	0
22	PAVEMENT PATCHING-CLASS D, 4-INCH	S.Y.	2656.00	0	0	0	0	0	0	0
23	PAVEMENT PATCHING-CLASS D, 2-INCH, SPECIAL	S.Y.	2500.00	0	0	0	0	0	0	0
24	PAVEMENT PATCHING-CLASS D, 4-INCH, SPECIAL	S.Y.	6550.00	0	0	0	0	0	0	0
25	PAVEMENT PATCHING-CLASS D, 6-INCH, SPECIAL	S.Y.	1735.00	0	0	0	0	0	0	0
26	CONCRETE PAD	L.S.	1.00	0	0	0	0	0	0	0
27	HOT-MIX ASPHALT SURFACE REMOVAL-(COLD MILLING)	S.Y.	62267.00	0	795	0	2790	0	0	0
28	HOT-MIX ASPHALT PAVEMENT REMOVAL, 3 INCHES	S.Y.	15820.00	0	0	0	0	0	1637	0
29	HOT-MIX ASPHALT PAVEMENT REMOVAL, 3-1/2- INCHES	S.Y.	3351.00	0	0	0	0	0	0	0
30	HOT-MIX ASPHALT PAVEMENT REMOVAL, 4-INCHES	S.Y.	4549.00	1634	0	0	0	890	0	0
31	HOT-MIX ASPHALT PAVEMENT REMOVAL, 5-INCHES	S.Y.	680.00	0	0	0	0	0	0	0
32	HOT-MIX ASPHALT PAVEMENT REMOVAL, 6-INCHES	S.Y.	2204.00	0	0	1484	0	0	0	720
33	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	S.Y.	1220.00	50	30	30	60	30	30	30
34	UNSUITABLE SUBGRADE EXCAVATION, CA-1 REPLACEMENT	C.Y.	2659.00	281	0	252	0	153	215	125
35	UNSUITABLE SUBGRADE EXCAVATION, CA-6 REPLACEMENT	C.Y.	888.00	94	0	84	0	51	72	42
36	EARTH EXCAVATION	C.Y.	325.00	0	0	0	0	0	0	0
37	NON-SPECIAL WASTE DISPOSAL	C.Y.	20.00	0	0	0	0	0	0	0
38	AGGREGATE BASE REPAIR	TON	606.00	90	0	84	0	51	0	42
39	PREPARATION OF BASE	S.Y.	10964.00	1634	0	1514	0	920	0	750
40	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	S.Y.	7508.00	842	0	757	0	460	645	375
41	INLETS TO BE ADJUSTED	EA.	165.00	4	0	3	6	1	3	2
42	INLETS TO BE RECONSTRUCTED	EA.	3.00	0	0	0	0	0	0	0
43	MANHOLE TO BE ADJUSTED	EA.	68.00	2	1	1	0	0	0	0
44	LANDSCAPING	S.Y.	1892.00	60	5	60	70	20	75	40
45	GRADING AND SHAPING OF DITCHES	S.Y.	80.00	0	0	0	0	0	0	0
46	AGGREGATE FOR TEMORARY ACCESS	TON	20.00	0	0	0	0	0	0	0
47	THERM0PLASTIC PVMT. MARKING, 24" LINE	FOOT	217.00	15	13	14	0	0	0	0
48	THERMOPLASTIC PVMT. MARKING, 12" LINE	FOOT	1085.00	0	60	0	0	0	0	0
49	THERMOPLASTIC PVMT. MARKING, 6" LINE	FOOT	5863.00	0	0	0	0	0	0	0
50	THERMOPLASTIC PVMT. MARKING, 4" LINE	FOOT	14570.00	0	515	0	0	0	0	0
51	THERMOPLASTIC PVMT. MARKING, LETTERS & SYMBOLS	S.F.	455.00	0	0	0	0	0	0	0
52	MODIFIED URETHANE PVMT. MARKING - 4" LINE	FOOT	53.00							
53	TRAFFIC CONTROL AND PROTECTION	L.S.	1.00	0	0	0	0	0	0	0
54	PVC UNDER DRAINS, 4 INCH	FOOT	100.00	0	0	0	0	0	0	0

*Quantities for Constitution Ave (from Liberty Ln to Madison Ave) are included in Liberty Ln quantities

			TOTAL	MADISON AVE	MENDOCINO DR	GARNET CT	PORETT DR	WAVELAND AVE	OLD GRAND AVE	LOCKWOOD LN
ITEM NO.	ITEM	UNIT	AMOUNT	North end to Lawson Blvd	Vineyard Dr to Vineyard Dr	Queen Ann Ln to east end	East end to Delany Rd	Route 132 to Woodlawn Ave	East end to Fire Station #1	Hunt Club Rd to east end
1	COMB. CONC. CURB & GUTTER, TYPE B-6:12	FOOT	4855.00	0	205	0	225	40	1000	215
2	COMB. CONC. CURB & GUTTER, TYPE M-3:12	FOOT	500.00	0	0	0	0	0	0	0
3	COMB. CONC. CURB & GUTTER, TYPE M-6:12	FOOT	3250.00	245	0	245	735	0	0	0
4	COMBINATION CURB & GUTTER REMOVAL	FOOT	8605.00	245	205	245	1085	40	1000	215
5	SIDEWALK REMOVAL	S.F.	4766.00	135	630	0	0	100	1000	435
6	P.C.C. SIDEWALK	S.F.	4816.00	135	630	0	0	100	1000	435
7	DETECTABLE WARNING TILES	EA.	41.00	2	6	0	0	0	8	2
8	BRICK FLATWORK REMOVAL	S.F.	133.00	0	0	0	0	0	0	0
9	P.C.C. DRIVEWAY, 8"	S.Y.	450.00	0	0	0	0	0	0	0
10	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 8", SPECIAL	S.Y.	650.00	0	0	0	0	0	0	0
11	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 6"	S.Y.	830.00	0	0	180	0	0	0	0
12	HMA DRIVEWAY REMOVAL AND REPLACEMENT	S.Y.	2100.00	200	220	0	260	60	0	110
13	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	9184.00	539	564	112	618	295	1610	448
14	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL-9.5, N70	TON	987.00	0	0	0	0	0	0	0
15	HMA BINDER COURSE, IL-19.0, N50	TON	1802.00	0	0	0	107	442	0	0
16	BITUMINOUS MATERIAL (TACK COAT)	LB	58507.00	3200	3300	675	3300	2300	9450	2630
17	LEVELING BINDER (MACHINE MET.), N50	TON	4498.00	270	282	56	282	0	805	224
18	HMA MAINTENANCE STRIP	S.Y.	145.00	0	0	0	0	0	0	0
19	PAVEMENT PATCHING-CLASS D, 10-INCH	S.Y.	1289.00	0	0	0	200	0	264	0
20	PAVEMENT PATCHING-CLASS D, 8-INCH	S.Y.	1564.00	0	0	0	375	0	264	0
21	PAVEMENT PATCHING-CLASS D, 6-INCH	S.Y.	11232.00	1174	1333	292	350	0	1056	0
22	PAVEMENT PATCHING-CLASS D, 4-INCH	S.Y.	2656.00	0	0	0	375	0	1056	0
23	PAVEMENT PATCHING-CLASS D, 2-INCH, SPECIAL	S.Y.	2500.00	0	0	0	0	0	0	0
24	PAVEMENT PATCHING-CLASS D, 4-INCH, SPECIAL	S.Y.	6550.00	0	0	0	0	0	0	0
25	PAVEMENT PATCHING-CLASS D, 6-INCH, SPECIAL	S.Y.	1735.00	0	0	0	0	0	0	0
26	CONCRETE PAD	L.S.	1.00	0	0	0	0	0	0	0
27	HOT-MIX ASPHALT SURFACE REMOVAL-(COLD MILLING)	S.Y.	62267.00	4655	4810	972	4862	0	13790	0
28	HOT-MIX ASPHALT PAVEMENT REMOVAL, 3 INCHES	S.Y.	15820.00	0	0	0	0	0	0	3860
29	HOT-MIX ASPHALT PAVEMENT REMOVAL, 3-1/2- INCHES	S.Y.	3351.00	0	0	0	0	3351	0	0
30	HOT-MIX ASPHALT PAVEMENT REMOVAL, 4-INCHES	S.Y.	4549.00	0	0	0	0	0	0	0
31	HOT-MIX ASPHALT PAVEMENT REMOVAL, 5-INCHES	S.Y.	680.00	0	0	0	0	0	0	0
32	HOT-MIX ASPHALT PAVEMENT REMOVAL, 6-INCHES	S.Y.	2204.00	0	0	0	0	0	0	0
33	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	S.Y.	1220.00	30	90	30	30	60	210	30
34	UNSUITABLE SUBGRADE EXCAVATION, CA-1 REPLACEMENT	C.Y.	2659.00	0	0	0	155	310	0	232
35	UNSUITABLE SUBGRADE EXCAVATION, CA-6 REPLACEMENT	C.Y.	888.00	0	0	0	52	103	0	78
36	EARTH EXCAVATION	C.Y.	325.00	0	0	0	283	0	0	0
37	NON-SPECIAL WASTE DISPOSAL	C.Y.	20.00	0	0	0	0	0	0	0
38	AGGREGATE BASE REPAIR	TON	606.00	0	0	0	0	188	0	0
39	PREPARATION OF BASE	S.Y.	10964.00	0	0	0	0	3411	0	0
40	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	S.Y.	7508.00	0	0	0	0	930	0	694
41	INLETS TO BE ADJUSTED	EA.	165.00	11	7	5	7	3	17	20
42	INLETS TO BE RECONSTRUCTED	EA.	3.00	0	0	0	0	0	0	0
43	MANHOLE TO BE ADJUSTED	EA.	68.00	1	0	0	2	5	36	0
44	LANDSCAPING	S.Y.	1892.00	65	95	45	140	25	0	105
45	GRADING AND SHAPING OF DITCHES	S.Y.	80.00	0	0	0	0	0	0	0
46	AGGREGATE FOR TEMORARY ACCESS	TON	20.00	0	0	0	0	0	0	0
47	THERM0PLASTIC PVMT. MARKING, 24" LINE	FOOT	217.00	0	0	0	40	0	111	0
48	THERMOPLASTIC PVMT. MARKING, 12" LINE	FOOT	1085.00	0	0	0	0	0	1025	0
49	THERMOPLASTIC PVMT. MARKING, 6" LINE	FOOT	5863.00	0	0	0	60	0	533	0
50	THERMOPLASTIC PVMT. MARKING, 4" LINE	FOOT	14570.00	0	0	0	80	0	7867	0
51	THERMOPLASTIC PVMT. MARKING, LETTERS & SYMBOLS	S.F.	455.00	0	0	0	75	0	280	0
52	MODIFIED URETHANE PVMT. MARKING - 4" LINE	FOOT	53.00							
53	TRAFFIC CONTROL AND PROTECTION	L.S.	1.00	0	0	0	0	0	0	0
54	PVC UNDER DRAINS, 4 INCH	FOOT	100.00	0	0	0	0	0	0	0

*Quantities for Garnacha Dr are included in Mendocino Dr quantities

*Quantities for Lockslee Ct are included in Lockwood Ln quantities

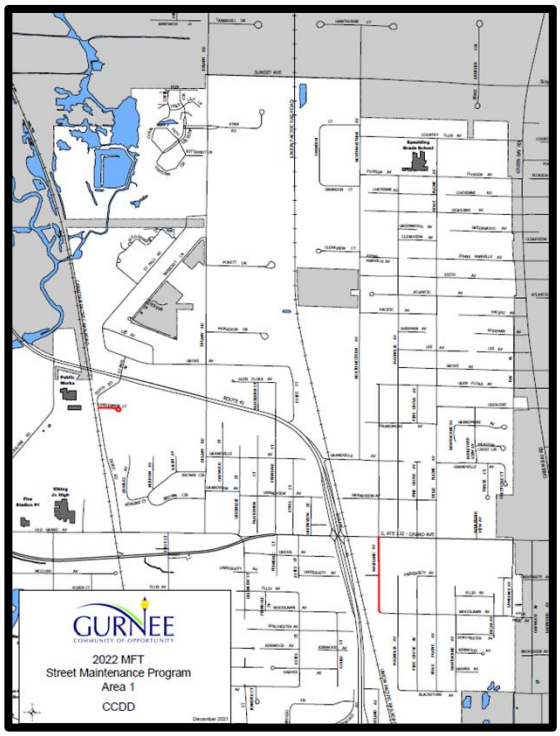
			TOTAL	NORTHWESTERN AVE	BUTTERNUT CT	CHERRYWOOD CT	BROOKHAVEN RD	KENSINGTON CT	SWANSON CT
ITEM NO.	ITEM	UNIT	AMOUNT	Pacific Ave to Grandville Ave	Lawson Blvd to west end	Westfield Dr to north end	O'Plaine Rd to east end	Brookhaven Rd to Brookhaven Rd	Northwestern Ave to Northwestern Ave
1	COMB. CONC. CURB & GUTTER, TYPE B-6:12	FOOT	4855.00	1185	125	0	55	0	1025
2	COMB. CONC. CURB & GUTTER, TYPE M-3:12	FOOT	500.00	0	0	0	0	0	0
3	COMB. CONC. CURB & GUTTER, TYPE M-6:12	FOOT	3250.00	0	145	120	235	225	0
4	COMBINATION CURB & GUTTER REMOVAL	FOOT	8605.00	1185	145	120	290	225	1025
5	SIDEWALK REMOVAL	S.F.	4766.00	35	70	140	610	30	0
6	P.C.C. SIDEWALK	S.F.	4816.00	35	70	140	610	30	0
7	DETECTABLE WARNING TILES	EA.	41.00	0	2	2	8	1	0
8	BRICK FLATWORK REMOVAL	S.F.	133.00	0	0	0	0	0	0
9	P.C.C. DRIVEWAY, 8"	S.Y.	450.00	0	0	0	0	0	0
10	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 8", SPECIAL	S.Y.	650.00	0	0	0	0	0	0
11	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 6"	S.Y.	830.00	200	0	0	0	0	100
12	HMA DRIVEWAY REMOVAL AND REPLACEMENT	S.Y.	2100.00	80	30	25	20	60	200
13	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	9184.00	0	100	102	326	288	872
14	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL-9.5, N70	TON	987.00	987	0	0	0	0	0
15	HMA BINDER COURSE, IL-19.0, N50	TON	1802.00	0	50	82	0	0	0
16	BITUMINOUS MATERIAL (TACK COAT)	LB	58507.00	5800	575	480	1950	1700	5100
17	LEVELING BINDER (MACHINE MET.), N50	TON	4498.00	494	0	0	163	144	436
18	HMA MAINTENANCE STRIP	S.Y.	145.00	0	0	0	0	0	0
19	PAVEMENT PATCHING-CLASS D, 10-INCH	S.Y.	1289.00	350	0	0	0	0	475
20	PAVEMENT PATCHING-CLASS D, 8-INCH	S.Y.	1564.00	350	0	0	0	0	575
21	PAVEMENT PATCHING-CLASS D, 6-INCH	S.Y.	11232.00	550	425	0	690	694	300
22	PAVEMENT PATCHING-CLASS D, 4-INCH	S.Y.	2656.00	650	0	0	0	0	575
23	PAVEMENT PATCHING-CLASS D, 2-INCH, SPECIAL	S.Y.	2500.00	0	0	0	0	0	0
24	PAVEMENT PATCHING-CLASS D, 4-INCH, SPECIAL	S.Y.	6550.00	0	0	0	0	0	0
25	PAVEMENT PATCHING-CLASS D, 6-INCH, SPECIAL	S.Y.	1735.00	0	0	0	0	0	0
26	CONCRETE PAD	L.S.	1.00	0	0	0	0	0	0
27	HOT-MIX ASPHALT SURFACE REMOVAL-(COLD MILLING)	S.Y.	62267.00	8494	820	0	2830	2500	7523
28	HOT-MIX ASPHALT PAVEMENT REMOVAL, 3 INCHES	S.Y.	15820.00	0	0	0	0	0	0
29	HOT-MIX ASPHALT PAVEMENT REMOVAL, 3-1/2- INCHES	S.Y.	3351.00	0	0	0	0	0	0
30	HOT-MIX ASPHALT PAVEMENT REMOVAL, 4-INCHES	S.Y.	4549.00	0	0	0	0	0	0
31	HOT-MIX ASPHALT PAVEMENT REMOVAL, 5-INCHES	S.Y.	680.00	0	0	680	0	0	0
32	HOT-MIX ASPHALT PAVEMENT REMOVAL, 6-INCHES	S.Y.	2204.00	0	0	0	0	0	0
33	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	S.Y.	1220.00	90	30	30	60	0	60
34	UNSUITABLE SUBGRADE EXCAVATION, CA-1 REPLACEMENT	C.Y.	2659.00	0	0	118	0	0	0
35	UNSUITABLE SUBGRADE EXCAVATION, CA-6 REPLACEMENT	C.Y.	888.00	0	0	39	0	0	0
36	EARTH EXCAVATION	C.Y.	325.00	0	30	0	0	0	0
37	NON-SPECIAL WASTE DISPOSAL	C.Y.	20.00	0	0	0	0	0	0
38	AGGREGATE BASE REPAIR	TON	606.00	0	0	39	0	0	0
39	PREPARATION OF BASE	S.Y.	10964.00	0	0	710	0	0	0
40	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	S.Y.	7508.00	0	0	355	0	0	0
41	INLETS TO BE ADJUSTED	EA.	165.00	12	2	2	6	4	20
42	INLETS TO BE RECONSTRUCTED	EA.	3.00	0	0	0	0	0	0
43	MANHOLE TO BE ADJUSTED	EA.	68.00	3	0	0	0	0	0
44	LANDSCAPING	S.Y.	1892.00	175	165	32	100	40	100
45	GRADING AND SHAPING OF DITCHES	S.Y.	80.00	0	0	0	0	0	0
46	AGGREGATE FOR TEMORARY ACCESS	TON	20.00	0	0	0	0	0	0
47	THERM0PLASTIC PVMT. MARKING, 24" LINE	FOOT	217.00	0	0	0	0	24	0
48	THERMOPLASTIC PVMT. MARKING, 12" LINE	FOOT	1085.00	0	0	0	0	0	0
49	THERMOPLASTIC PVMT. MARKING, 6" LINE	FOOT	5863.00	5150	0	0	120	0	0
50	THERMOPLASTIC PVMT. MARKING, 4" LINE	FOOT	14570.00	5150	0	0	240	0	0
51	THERMOPLASTIC PVMT. MARKING, LETTERS & SYMBOLS	S.F.	455.00	0	0	0	100	0	0
52	MODIFIED URETHANE PVMT. MARKING - 4" LINE	FOOT	53.00						
53	TRAFFIC CONTROL AND PROTECTION	L.S.	1.00	0	0	0	0	0	0
54	PVC UNDER DRAINS, 4 INCH	FOOT	100.00	0	0	0	0	0	0

			TOTAL	BUCKINGHAM DR	BOULDERS DR	PINE MEADOW CT	FOX MEADOW CT	MAPLEWOOD DR	LAWSON BLVD
ITEM NO.	ITEM	UNIT	AMOUNT	Brookhaven Rd to Frontage Rd	Fuller Rd to Ravine Dr	Boulders Dr to north end	Boulders Dr to north end	Westfield Dr to Lawson Blvd	Barnwood Dr to Beechwood Ave
1	COMB. CONC. CURB & GUTTER, TYPE B-6:12	FOOT	4855.00	520	0	0	0	0	0
2	COMB. CONC. CURB & GUTTER, TYPE M-3:12	FOOT	500.00	0	200	150	150	0	0
3	COMB. CONC. CURB & GUTTER, TYPE M-6:12	FOOT	3250.00	0	0	0	0	375	300
4	COMBINATION CURB & GUTTER REMOVAL	FOOT	8605.00	520	200	150	150	375	300
5	SIDEWALK REMOVAL	S.F.	4766.00	255	100	80	80	150	150
6	P.C.C. SIDEWALK	S.F.	4816.00	255	100	80	80	150	150
7	DETECTABLE WARNING TILES	EA.	41.00	3	2	0	0	0	0
8	BRICK FLATWORK REMOVAL	S.F.	133.00	0	0	0	0	0	0
9	P.C.C. DRIVEWAY, 8"	S.Y.	450.00	0	0	0	0	0	0
10	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 8", SPECIAL	S.Y.	650.00	0	0	0	0	0	0
11	P.C.C. DRIVEWAY REMOVAL AND REPLACEMENT, 6"	S.Y.	830.00	0	75	100	100	60	15
12	HMA DRIVEWAY REMOVAL AND REPLACEMENT	S.Y.	2100.00	100	0	0	0	60	125
13	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	9184.00	496	302	180	186	440	464
14	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL-9.5, N70	TON	987.00	0	0	0	0	0	0
15	HMA BINDER COURSE, IL-19.0, N50	TON	1802.00	0	0	0	0	0	0
16	BITUMINOUS MATERIAL (TACK COAT)	LB	58507.00	1900	1800	1100	1100	2500	2700
17	LEVELING BINDER (MACHINE MET.), N50	TON	4498.00	248	151	90	93	220	232
18	HMA MAINTENANCE STRIP	S.Y.	145.00	0	0	0	0	0	0
19	PAVEMENT PATCHING-CLASS D, 10-INCH	S.Y.	1289.00	0	0	0	0	0	0
20	PAVEMENT PATCHING-CLASS D, 8-INCH	S.Y.	1564.00	0	0	0	0	0	0
21	PAVEMENT PATCHING-CLASS D, 6-INCH	S.Y.	11232.00	1070	0	780	805	0	0
22	PAVEMENT PATCHING-CLASS D, 4-INCH	S.Y.	2656.00	0	0	0	0	0	0
23	PAVEMENT PATCHING-CLASS D, 2-INCH, SPECIAL	S.Y.	2500.00	0	0	0	0	0	0
24	PAVEMENT PATCHING-CLASS D, 4-INCH, SPECIAL	S.Y.	6550.00	0	0	0	0	0	0
25	PAVEMENT PATCHING-CLASS D, 6-INCH, SPECIAL	S.Y.	1735.00	0	0	0	0	0	0
26	CONCRETE PAD	L.S.	1.00	0	0	0	0	0	0
27	HOT-MIX ASPHALT SURFACE REMOVAL-(COLD MILLING)	S.Y.	62267.00	4252	0	1563	1611	0	0
28	HOT-MIX ASPHALT PAVEMENT REMOVAL, 3 INCHES	S.Y.	15820.00	0	2566	0	0	3789	3968
29	HOT-MIX ASPHALT PAVEMENT REMOVAL, 3-1/2- INCHES	S.Y.	3351.00	0	0	0	0	0	0
30	HOT-MIX ASPHALT PAVEMENT REMOVAL, 4-INCHES	S.Y.	4549.00	0	0	0	0	0	0
31	HOT-MIX ASPHALT PAVEMENT REMOVAL, 5-INCHES	S.Y.	680.00	0	0	0	0	0	0
32	HOT-MIX ASPHALT PAVEMENT REMOVAL, 6-INCHES	S.Y.	2204.00	0	0	0	0	0	0
33	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	S.Y.	1220.00	60	60	0	0	30	60
34	UNSUITABLE SUBGRADE EXCAVATION, CA-1 REPLACEMENT	C.Y.	2659.00	0	194	0	0	327	297
35	UNSUITABLE SUBGRADE EXCAVATION, CA-6 REPLACEMENT	C.Y.	888.00	0	65	0	0	109	99
36	EARTH EXCAVATION	C.Y.	325.00	0	0	0	0	0	0
37	NON-SPECIAL WASTE DISPOSAL	C.Y.	20.00	0	0	0	0	0	0
38	AGGREGATE BASE REPAIR	TON	606.00	0	0	0	0	0	0
39	PREPARATION OF BASE	S.Y.	10964.00	0	0	0	0	0	0
40	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	S.Y.	7508.00	0	580	0	0	980	890
41	INLETS TO BE ADJUSTED	EA.	165.00	15	0	0	0	7	7
42	INLETS TO BE RECONSTRUCTED	EA.	3.00	0	0	0	0	0	0
43	MANHOLE TO BE ADJUSTED	EA.	68.00	0	9	3	3	1	1
44	LANDSCAPING	S.Y.	1892.00	100	50	50	50	80	80
45	GRADING AND SHAPING OF DITCHES	S.Y.	80.00	0	0	0	0	0	0
46	AGGREGATE FOR TEMORARY ACCESS	TON	20.00	0	0	0	0	0	0
47	THERM0PLASTIC PVMT. MARKING, 24" LINE	FOOT	217.00	0	0	0	0	0	0
48	THERMOPLASTIC PVMT. MARKING, 12" LINE	FOOT	1085.00	0	0	0	0	0	0
49	THERMOPLASTIC PVMT. MARKING, 6" LINE	FOOT	5863.00	0	0	0	0	0	0
50	THERMOPLASTIC PVMT. MARKING, 4" LINE	FOOT	14570.00	0	0	0	0	0	0
51	THERMOPLASTIC PVMT. MARKING, LETTERS & SYMBOLS	S.F.	455.00	0	0	0	0	0	0
52	MODIFIED URETHANE PVMT. MARKING - 4" LINE	FOOT	53.00						
53	TRAFFIC CONTROL AND PROTECTION	L.S.	1.00	0	0	0	0	0	0
54	PVC UNDER DRAINS, 4 INCH	FOOT	100.00	0	0	0	0	0	0

BROWNFIELD
ENVIRONMENTAL ENGINEERING

CCDD Material Certification

2022 Street Maintenance Area No. 1



Date: March 15, 2022

Brownfield Project No. 042-015

Prepared for:

Village of Gurnee

325 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:	2022 Street Maintenance Area No. 1 Centennial Court and Waveland Avenue, Village of Gurnee, IL
Brownfield Project No.:	042-015
Client:	Village of Gurnee 325 N. O'Plaine Road Gurnee, IL 60031
Site Inspectors:	Cory Knudson Bradley Brown, P.E.
Inspection & Sampling:	March 1, 2022
Report Date:	March 15, 2022
Report Attachments:	Photo Log Sample Location Map IEPA Document Explorer Map Sample Summary Comparison Table First Environmental Laboratory Analytical & Accreditation Report

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 to perform a Clean Construction Demolition Debris (CCDD) Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation assessment for the proposed resurfacing locations along Centennial Court and Waveland Avenue in Gurnee, IL. The project involves site development work including excavation, grading, and resurfacing of Centennial Court and Waveland Avenue in Gurnee, IL

The project worksite is currently developed as residential streets. There is no evidence of current or past underground storage tanks, waste treatment or disposal, reported releases or environmental cleanups, environmental liens or governmental environmental notifications, or the use, storage, or disposal of transformers manufactured before 1979 being present at the site outlined within the scope of work.

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 projects may be considered “Clean” but **may not** be certified as eligible for the purposes of CCDD management and disposal.

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’s Document Explorer website does not show any incidents on the Centennial Court or Waveland Avenue where the proposed work is to be completed.

The IEPA’s Document Explorer website detail a site listed as Treder, Herb located at 1168 Rte. 41, Gurnee, IL 60031 had a release from a leaking underground storage tank (LUST). However, a no

further remediation (NFR) inspection evaluation document dated March 26, 2019, labels the address of the site as 1188 Route 41, Gurnee, IL. The same document indicated that the LUST incident was granted a LUST Incident number of 940041 and identifies CITGO gas station as the name of the current business on the property. Another NFR inspection evaluation report dated April 25, 2019, lists a Quik Mart as the name of the current business on the property. Both of the NFR inspection evaluation documents detailed above list May 26, 2000, as the date of the NFR letter.

The IEPA's Document Explorer website showed records of a LUST incident for Gurnee, Village of located N of Old Grand on Depot rd. Gurnee, IL 60031. The Illinois Emergency Management Agency (IEMA) field report dated September 23, 1993, details that the incident involved a release of gasoline from a 2,000-gallon underground storage tank (UST). The amount of substance released, and the cause of the release were both listed as unknown, and the incident was granted an IEMA incident number of 932560. The log of underground storage tank removal from the Office of the State Fire Marshall (OFSM) specifies the facility address as 700 North of Grand Ave. on Depot Rd., Gurnee, IL. The LUST was removed by Ecology Services Inc. on September 23, 1993. The IEPA 20 Day Certification form lists the date of release confirmation as October 23, 1993, for IEPA incident number 932560. A log of UST removal from the OSFM details that a 1,000-gallon UST and a 450-gallon UST, both containing gasoline, were removed from the property by Ecology Services Inc. on November 17, 1993. The two USTs were also associated with IEMA incident number 932560. A Letter from the Village of Gurnee to the IEPA dated August 4, 2021, explains that the OSFM determined that there was no evidence of any hazardous substance during the removal of the LUSTs and includes the State Fire Marshal report for the incident. As of the date of this CCDD Material Certification Report, the site has not been granted an NFR determination from the IEPA.

The IEPA's Document Explorer website showed records of a LUST incident for Kaney Transportation located at 3688 W. Grand Ave. Rte. 132, Gurnee, IL 60031. According to the IEPA incident report form dated April 26, 1989, a UST of unknown size released an estimated 81-gallons of gasoline. The incident was granted an Illinois Emergency Services and Disaster Agency (IEDSA) incident number of 890670. A Letter from EMRO Marketing Company to the IEPA dated May 4, 1989, detailed that Beaver Oil Company removed approximately 20 gallons of water and hydrocarbons from the observation well located on the site and that an investigation of equipment on the site indicated that some of the dispensers had been leaking. An IESDA report form dated January 2, 1991, detailed that a release of gasoline occurred on the site due to a customer ripping off the dispenser while driving away. The IESDA field report detailed that the incident occurred on December 29, 1990 and was designated an IESDA incident number of 910006. A Letter from the IEPA to EMRO Marketing dated May 15, 1991, detailed that further remediation is not necessary regarding IESDA incident number 910006. However, the letter details that IESDA incident number 890670 is still subject to all Corrective Action Requirements. An IESDA field report dated January 28, 1992, details that four (4) 8,000-gallon USTs and one (1) 10,000-gallon UST released an unknown amount of unleaded gasoline that was discovered on

January 28, 1992. EMRO Marketing Company was listed as the responsible party, and the incident was granted an IESDA incident number of 920248. A letter to the IEPA from ASI Environmental Technologies specifies that the release for IESDA incident number 920248 was from a Mid-Grade Unleaded line that failed the tightness testing. The Illinois HazMat Report Incident form dated January 5, 2001, details that a 10,000-gallon UST containing premium unleaded gasoline had a release caused by a flex line failure. The spill extent was estimated to be 10 square feet and the incident was designated an Illinois HazMat report incident of 20020028 which also incorporates the remaining remedial activities associated with IESDA Incidents 890760 and 920248. The incident report dated December 19, 2003, detailed that two (2) 8,000-gallon USTs released an unspecified amount of gasoline at the site. Speedway Super America was listed as the responsible party and the incident was designated an Illinois HazMat report incident number of 20031853. The incident report dated January 23, 2004, detailed that two (2) 8,000-gallon USTs released an unspecified amount of gasoline at the site. The incident report detailed Speedway Super America as the responsible party and the incident was granted an Illinois HazMat report incident number of 20040096. A letter from the IEPA addressed to Speedway Super America and dated January 16, 2004, detailed that the IEPA has no reporting requirements regarding LUST incident number 20031853. A letter from the IEPA addressed to Speedway Super America and dated March 3, 2004, detailed that the IEPA has no reporting requirements regarding LUST incident number 20040096. A letter from the IEPA addressed to Speedway Super America and dated March 16, 2004, detailed that the IEPA has no reporting requirements regarding LUST incident number 20040293. The Illinois HazMat report dated September 1, 2004, detailed that four (4) 8,000-gallon USTs and one (1) 10,000-gallon UST released an unspecified amount of gasoline onto the site. The cause of release was detailed to be a leaking product line, Speedway Super America was listed as the responsible party, and the incident was designated an Illinois HazMat report incident number of 20041236. The LUST Technical Review Notes dated July 27, 2006, detailed that one (1) 8,000-gallon UST containing diesel, three (3) 8,000-gallon USTs containing gasoline, and one (1) 10,000-gallon UST containing diesel were removed from the property on September 1 & 2, 2004, by DRW Services, Inc. A letter from the IEPA dated November 24, 2010, notified Speedway Super America that no further remediation determination for LUST incidents 20041236, 20020028, 920248, & 890670 was granted.

The IEPA's Document Explorer website showed records of a LUST incident for Eric Christensen Inc. located at 1820 Skokie Hwy., Gurnee, IL 60031. An Illinois HazMat Report dated June 15, 2000, detailed that a UST containing diesel fuel released approximately 5-gallons. The estimated spill extent was estimated to be 250 square feet, and the incident was granted an Illinois HazMat Report Incident Number of 20001150. The Corrective Action Completion Report dated November 2000, details that two (2) 4,000-gallon USTs containing diesel fuel and gasoline respectively, were removed on September 12, 2000, along with all associated piping. A letter from the IEPA dated November 16, 2005, detailed that a Corrective Action Completion Report for the LUST incident still has not been received and is required for a no further remediation determination. As of the

date of this CCDD Material Certification Report, no further information is available on the IEPA Document Explorer website.

The IEPA's Document Explorer website detailed that the site listed as Rose Cleaners located at 3567-d Grand Ave., Gurnee, IL 60031 had site remediation activities conducted in the past. A Focused Subsurface Site Investigation & Remediation Objectives Report dated April 30, 2004, detailing the results of a focused subsurface investigation that was conducted at the site due to the ongoing dry-cleaning operations. The report determined that the subject property has satisfied the criteria for the IEPA's NFR Letter and recommended that the IEPA grant an NFR letter to this site under the condition that groundwater usage restrictions are applied to the remediation site area. The site was granted an NFR letter from the IEPA on November 20, 2006. Additionally, a letter from the IEPA dated October 27, 2021, confirms that Rose Cleaners is registered in the Registration of Smaller Sources (ROSS) Program.

Sites adjacent to the proposed work areas have been evaluated for this certification. Based on NFR letters that have been issued and the distance(s) from the proposed work area, the above-listed sites are unlikely to impact the proposed work areas. This evaluation of Potentially Impacted Properties takes into consideration the depth of excavation and scope of work to be completed on the proposed work areas.

Site Assessment & Sampling

On March 1, 2022, Cory Knudson and Bradley Brown, P.E. performed a site reconnaissance assessment to confirm the absence or presence of recognized environmental concerns, soil staining, and potential sources of soil contamination. The site materials were screened with a Photo Ionization Detector (PID) and two (2) soil samples were collected. The soil samples were collected in laboratory-provided containers and shipped to First Environmental Laboratories, Inc. of Naperville, IL.

Laboratory Analysis

First Environmental Laboratories, Inc. analyzed two (2) soil samples in strict compliance with IL 5035A/8260B for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), RCRA metals, Iron, pH, and Polynuclear Aromatic Hydrocarbons (PNAs). The laboratory analysis indicated that the soil samples contained iron and chromium above IEPA Maximum Allowable Concentrations (MACs) Remediation Objectives. A table depicting the results of iron and chromium compared to the IEPA MACs is found below.

Sample ID	Iron	Maximum Allowable Concentration
G-1A	20,000 mg/kg	15,900 mg/kg
G-1B	31,900 mg/kg	15,900 mg/kg

Sample ID	Chromium	Maximum Allowable Concentration
G-1B	25.8 mg/kg	21 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 two (2) samples were analyzed for toxicity characteristic leaching procedure (TCLP) metals. The results of the TCLP analysis for iron and chromium can be found below:

Sample ID	TCLP Iron	Soil Component Groundwater Ingestion Class I
G-1A	<0.1 mg/L	5.0 mg/L
G-1B	0.1 mg/L	5.0 mg/L

Sample ID	TCLP Chromium	Soil Component Groundwater Ingestion Class I
G-1B	<0.005 mg/L	0.1 mg/L

Additionally, pH results for sample G-1A were outside of CCDD parameters. Because of this, the soil cannot be taken to a CCDD facility for disposal. A table with pH results is included below.

Sample ID	pH	Maximum Allowable Concentration
G-1A	9.04	6.25-9.00

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 is included as an attachment to this report.

Recommendations

Based on pH readings being outside of the approved limits, the excavated materials from the project may be considered "Clean" but **may not** be approved for the purposes of CCDD management and disposal.

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 Environmental Engineering Resources, LLC. Brownfield Environmental Engineering Resources, LLC 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 Environmental Engineering Resources, LLC 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
License No. 062.049676
Expiration Date: November 30, 2023

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PHOTO LOG

Project #:	2022 Street Maintenance- Area 1
Client:	Village of Gurnee

Photo No. 1

Date: March 1, 2022

Direction: West

Description: Sample Location G-1A along Centennial Court.

Photo No. 2

Date: March 1, 2022

Direction: East

Description: Sample Location G-1A along Centennial Court.

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Project #:	2022 Street Maintenance- Area 1
Client:	Village of Gurnee

Photo No. 3

Date: March 1, 2022

Direction: North

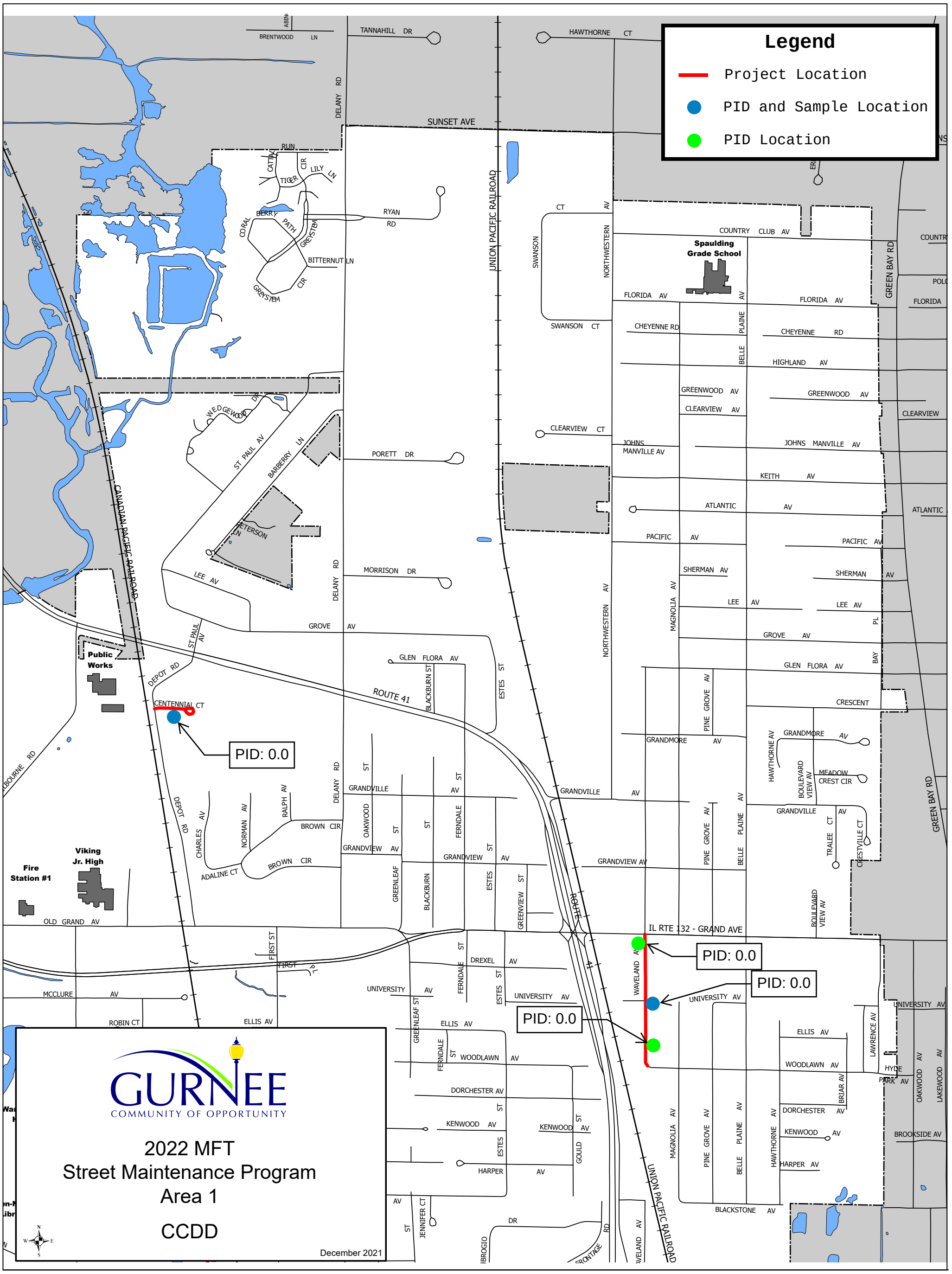
Description: Sample Location G-1B along Waveland Avenue.

Photo No. 4

Date: March 1, 2022

Direction: South

Description: Sample Location G-1B along Waveland Avenue.



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

2022 Street Maintenance Area No. 1 Sample Location Map

Location:	Centennial Court and Waveland Avenue, Gurnee, IL
Client:	Village of Gurnee
Project:	042-015
Date:	March 2, 2022

BROWNFIELD ENVIRONMENTAL ENGINEERING

042-015	G-1A	G-1B	Maximum Allowable Concentration	MAC within a MSA County	MAC within a non-MSA county	MAC within Chicago corporate limits	MAC within a populated area in a MSA excluding Chicago	MAC within a populated area in a non-MSA county	MAC outside a populated area	Soil Component Groundwater Ingestion Class I
Date of Sample Collection:	3/1/2022	3/1/2022								
Time of Sample Collection:	9:38 AM	10:10 AM								
First Environmental Lab. Numbers:	22-1331-001	22-1331-002								

Contaminants of Concern:													
Volatile Organic Compounds (5035A/8260B)													
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/9/2022**	**3/9/2022**								
Acetone	mg/kg	0.2	67-64-1	<0.2	<0.2	25							
Benzene	mg/kg	0.005	71-43-2	<0.005	<0.005	0.03							
Bromodichloromethane	mg/kg	0.005	75-27-4	<0.005	<0.005	0.6							
Bromoform	mg/kg	0.005	75-25-2	<0.005	<0.005	0.8							
Bromomethane	mg/kg	0.01	74-83-9	<0.01	<0.01	0.2							
2-Butanone (MEK)	mg/kg	0.1	78-93-3	<0.1	<0.1	17							
Carbon disulfide	mg/kg	0.005	75-15-0	<0.005	<0.005	9							
Carbon tetrachloride	mg/kg	0.005	56-23-5	<0.005	<0.005	0.07							
Chlorobenzene	mg/kg	0.005	108-90-7	<0.005	<0.005	1							
Chlorodibromomethane	mg/kg	0.005	124-48-1	<0.005	<0.005	0.4							
Chloroform	mg/kg	0.005	67-66-3	<0.005	<0.005	0.3							
1,1-Dichloroethane	mg/kg	0.005	75-34-3	<0.005	<0.005	23							
1,2-Dichloroethane	mg/kg	0.005	107-06-2	<0.005	<0.005	0.02							
1,1-Dichloroethene	mg/kg	0.005	75-35-4	<0.005	<0.005	0.06							
cis-1,2-Dichloroethene	mg/kg	0.005	156-59-2	<0.005	<0.005	0.4							
trans-1,2-Dichloroethene	mg/kg	0.005	156-60-5	<0.005	<0.005	0.7							
1,2-Dichloropropane	mg/kg	0.005	78-87-5	<0.005	<0.005	0.03							
cis-1,3-Dichloropropene	mg/kg	0.004	10061-01-5	<0.004	<0.004	0.005							
trans-1,3-Dichloropropene	mg/kg	0.004	10061-02-6	<0.004	<0.004	0.005							
Ethylbenzene	mg/kg	0.005	100-41-4	<0.005	<0.005	13							
Methyl-tert-butylether (MTBE)	mg/kg	0.005	1634-04-4	<0.005	<0.005	0.32							
Methylene chloride	mg/kg	0.02	75-09-2	<0.02	<0.02	0.02							
Styrene	mg/kg	0.005	100-42-5	<0.005	<0.005	4							
Tetrachloroethene	mg/kg	0.005	127-18-4	<0.005	<0.005	0.06							
Toluene	mg/kg	0.005	108-88-3	<0.005	<0.005	12							
1,1,1-Trichloroethane	mg/kg	0.005	71-55-6	<0.005	<0.005	2							
1,1,2-Trichloroethane	mg/kg	0.005	79-00-5	<0.005	<0.005	0.02							
Trichloroethene	mg/kg	0.005	79-01-6	<0.005	<0.005	0.06							
Vinyl acetate	mg/kg	0.01	108-05-4	<0.01	<0.01	10							
Vinyl chloride	mg/kg	0.01	75-01-4	<0.01	<0.01	0.01							
Xylene, Total	mg/kg	0.005	1330-20-7	<0.005	<0.005	5.6							
Semi-Volatile Compounds (8270C)													
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/9/2022**	**3/9/2022**								
Acenaphthene	mg/kg	0.33	83-32-9	<0.33	<0.33	570							
Acenaphthylene	mg/kg	0.33	208-96-8	<0.33	<0.33	85							
Anthracene	mg/kg	0.33	120-12-7	<0.33	<0.33	12000							
Benzo(a)anthracene	mg/kg	0.33	56-55-3	<0.33	<0.33				1.1	1.8	0.9	0.9	
Benzo(a)pyrene	mg/kg	0.09	50-32-8	<0.09	<0.09				1.3	2.1	0.98	0.09	
Benzo(b)fluoranthene	mg/kg	0.33	205-99-2	<0.33	<0.33				1.5	2.1	0.9	0.9	
Benzo(k)fluoranthene	mg/kg	0.33	207-08-9	<0.33	<0.33	9							
Benzo(ghi)perylene	mg/kg	0.33	191-24-2	<0.33	<0.33	2300							
Benzoic acid	mg/kg	0.33	65-85-0	<0.33	<0.33	400							
bis(2-Chloroethyl)ether	mg/kg	0.33	111-44-4	<0.33	<0.33	0.66							
bis(2-Ethylhexyl)phthalate	mg/kg	0.33	117-81-7	<0.33	<0.33	46							
Butyl benzyl phthalate	mg/kg	0.33	85-68-7	<0.33	<0.33	930							
Carbazole	mg/kg	0.33	86-74-8	<0.33	<0.33	0.6							
4-Chloroaniline	mg/kg	0.33	106-47-8	<0.33	<0.33	0.7							
2-Chlorophenol	mg/kg	0.33	95-57-8	<0.33	<0.33	1.5							
Chrysene	mg/kg	0.33	218-01-9	<0.33	<0.33	88							
Dibenzo(a,h)anthracene	mg/kg	0.09	53-70-3	<0.09	<0.09				0.2	0.42	0.15	0.09	
1,2-Dichlorobenzene	mg/kg	0.33	95-50-1	<0.33	<0.33	17							
1,4-Dichlorobenzene	mg/kg	0.33	106-46-7	<0.33	<0.33	2							
3,3'-Dichlorobenzidine	mg/kg	0.66	91-94-1	<0.66	<0.66	1.3							
2,4-Dichlorophenol	mg/kg	0.33	120-83-2	<0.33	<0.33	0.48							
Diethyl phthalate	mg/kg	0.33	84-66-2	<0.33	<0.33	470							
2,4-Dimethylphenol	mg/kg	0.33	105-67-9	<0.33	<0.33	9							
Di-n-butyl phthalate	mg/kg	0.33	84-74-2	<0.33	<0.33	2300							
2,4-Dinitrophenol	mg/kg	1.6	51-28-5	<1.6	<1.6	3.3							
2,4-Dinitrotoluene	mg/kg	0.25	121-14-2	<0.25	<0.25	0.25							
2,6-Dinitrotoluene	mg/kg	0.26	606-20-2	<0.26	<0.26	0.26							
Di-n-octylphthalate	mg/kg	0.33	117-84-0	<0.33	<0.33	1600							
Fluoranthene	mg/kg	0.33	206-44-0	<0.33	<0.33	3100							
Fluorene	mg/kg	0.33	86-73-7	<0.33	<0.33	560							
Hexachlorobenzene	mg/kg	0.33	118-74-1	<0.33	<0.33	0.4							
Hexachlorocyclopentadiene	mg/kg	0.33	77-47-4	<0.33	<0.33	1.1							
Hexachloroethane	mg/kg	0.33	67-72-1	<0.33	<0.33	0.5							
Indeno(1,2,3-cd)pyrene	mg/kg	0.33	193-39-5	<0.33	<0.33				0.9	1.6	0.9	0.9	
Isophorone	mg/kg	0.33	78-59-1	<0.33	<0.33	8							
2-Methylphenol	mg/kg	0.33	95-48-7	<0.33	<0.33	15							
Naphthalene	mg/kg	0.33	91-20-3	<0.33	<0.33	1.8							
Nitrobenzene	mg/kg	0.26	98-95-3	<0.26	<0.26	0.26							
n-Nitrosodi-n-propylamine	mg/kg	0.09	621-64-7	<0.09	<0.09	0.0018							
n-Nitrosodiphenylamine	mg/kg	0.33	86-30-6	<0.33	<0.33	1							
Pentachlorophenol	mg/kg	0.33	87-86-5	<0.33	<0.33	0.02							
Phenanthrene	mg/kg	0.33	85-01-8	<0.33	<0.33	210							
Phenol	mg/kg	0.33	108-95-2	<0.33	<0.33	100							
Pyrene	mg/kg	0.33	129-00-0	<0.33	<0.33	2300							
1,2,4-Trichlorobenzene	mg/kg	0.33	120-82-1	<0.33	<0.33	5							
2,4,5-Trichlorophenol	mg/kg	0.33	95-95-4	<0.33	<0.33	26							
2,4,6-Trichlorophenol	mg/kg	0.33	88-06-2	<0.33	<0.33	0.66							
Total Metals (6010C)													
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/7/2022**	**3/7/2022**								
Arsenic	mg/kg	1	7440-38-2	7	9.5		13	11.3					
Barium	mg/kg	0.5	7440-39-3	44.2	86.9	1500							
Cadmium	mg/kg	0.5	7440-43-9	<0.5	<0.5	5.2							
Chromium	mg/kg	0.5	7440-47-3	16	**25.8**	21							

BROWNFIELD ENVIRONMENTAL ENGINEERING													
042-015				G-1A	G-1B	Maximum Allowable Concentration	MAC within a MSA County	MAC within a non-MSA county	MAC within Chicago corporate limits	MAC within a populated area in a MSA excluding Chicago	MAC within a populated area in a non-MSA county	MAC outside a populated area	Soil Component Groundwater Ingestion Class I
Date of Sample Collection:				3/1/2022	3/1/2022								
Time of Sample Collection:				9:38 AM	10:10 AM								
First Environmental Lab. Numbers:				22-1331-001	22-1331-002								
Contaminants of Concern:													
Lead	mg/kg	0.5	7439-92-1	11.3	19.7	107							
Selenium	mg/kg	1	7782-49-2	<1.0	<1.0	1.3							
Silver	mg/kg	0.2	7440-22-4	<0.2	<0.2	4.4							
Iron	mg/kg	5	7439-89-6	**20000**	**31900**		15900	15000					
Total Mercury (7471B)													
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/7/2022**	**3/7/2022**								
Mercury	mg/kg	0.05	7439-97-6	<0.05	<0.05	0.89							
TCLP Metals Method 1311 (6010C)													
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/9/2022**	**3/9/2022**								
Arsenic	mg/L	0.01	7440-38-2	<0.010	<0.010								0.05
Barium	mg/L	1	7440-39-3	<1.0	<1.0								2
Cadmium	mg/L	0.005	7440-43-9	<0.005	<0.005								0.005
Chromium	mg/L	0.005	7440-47-3	<0.005	<0.005								0.1
Lead	mg/L	0.005	7439-92-1	<0.005	0.007								0.0075
Selenium	mg/L	0.01	7782-49-2	<0.010	<0.010								0.05
Silver	mg/L	0.005	7440-22-4	<0.005	<0.005								0.05
Iron	mg/L	0.1	7439-89-6	<0.1	0.1								5
TCLP Mercury Method 1311 (7470A)													
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/8/2022**	**3/8/2022**								
Mercury	mg/L	0.0005	7439-97-6	<0.0005	<0.0005								0.002
pH @ 25°C, 1:2 (9045D)													
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/10/2022**	**3/10/2022**								
pH @ 25°C, 1:2	Units		PH	9.04	7.63	6.25-9.00							

First Environmental Laboratories, Inc

IL ELAP / NELAC Certification # 100292

1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • FirstEnv.com

March 10, 2022

Mr. Cory Knudson
BROWNFIELD ENVIRONMENTAL ENGINEERING
645 Third Street
Suite 250
Beloit, WI 53511

Project ID: 042-015
First Environmental File ID: 22-1331
Date Received: March 03, 2022

Dear Mr. Cory Knudson:

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:

1002922022-8: effective 02/10/2022 through 02/28/2023.

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

First Environmental Laboratories, Inc
IL ELAP / NELAC Certification # 100292
1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • FirstEnv.com

Case Narrative

BROWNFIELD ENVIRONMENTAL ENGINEERING

Lab File ID: **22-1331**

Project ID: **042-015**

Date Received: **March 03, 2022**

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	
22-1331-001	G-1A	3/1/2022	9:38
22-1331-002	G-1B	3/1/2022	10:10
22-1331-003	G-3A	3/1/2022	12:49
22-1331-004	G-3B	3/1/2022	13:14
22-1331-005	G-3C	3/1/2022	14:40
22-1331-006	G-4	3/1/2022	12:20
22-1331-007	G-WMA	3/1/2022	11:45
22-1331-008	G-WMB	3/1/2022	11:19

Sample Batch Comments:

Sample acceptance criteria were met.

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Case Narrative

BROWNFIELD ENVIRONMENTAL ENGINEERING

Lab File ID: **22-1331**

Project ID: **042-015**

Date Received: **March 03, 2022**

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.

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1A
Sample No: 22-1331-001

Date Collected: 03/01/22
Time Collected: 9:38
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	84.74		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1A
Sample No: 22-1331-001

Date Collected: 03/01/22
Time Collected: 9:38
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	9:38
Sample ID:	G-1A	**Date Received:**	03/03/22
Sample No:	22-1331-001	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1A
Sample No: 22-1331-001

Date Collected: 03/01/22
Time Collected: 9:38
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22		Preparation Date: 03/04/22		
Arsenic	7.0	1.0	mg/kg	
Barium	44.2	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	16.0	0.5	mg/kg	
Lead	11.3	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Iron	20,000	5.0	mg/kg	
Total Mercury **Method: 7471B**				
Analysis Date: 03/07/22				
Mercury	< 0.05	0.05	mg/kg	
TCLP Metals Method 1311 **Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22		Preparation Date: 03/09/22		
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	
Lead	< 0.005	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
Iron	< 0.1	0.1	mg/L	
TCLP Mercury Method 1311 **Method: 7470A**				
Analysis Date: 03/08/22				
Mercury	< 0.0005	0.0005	mg/L	
TCLP Extraction **Method: 1311**				
Analysis Date: 03/07/22				
TCLP Extraction	Complete			
pH @ 25°C, 1:2 **Method: 9045D**				
Analysis Date: 03/10/22 12:54				
pH @ 25°C, 1:2	9.04		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1B
Sample No: 22-1331-002

Date Collected: 03/01/22
Time Collected: 10:10
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	78.45		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1B
Sample No: 22-1331-002

Date Collected: 03/01/22
Time Collected: 10:10
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1B
Sample No: 22-1331-002

Date Collected: 03/01/22
Time Collected: 10:10
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C** Analysis Date: 03/09/22		**Preparation Method 3540C** Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1B
Sample No: 22-1331-002

Date Collected: 03/01/22
Time Collected: 10:10
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte		Result	R.L.	Units	Flags
Semi-Volatile Compounds	**Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22			Preparation Date: 03/07/22		
2,4,6-Trichlorophenol		< 330	330	ug/kg	
Total Metals	**Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22			Preparation Date: 03/04/22		
Arsenic		9.5	1.0	mg/kg	
Barium		86.9	0.5	mg/kg	
Cadmium		< 0.5	0.5	mg/kg	
Chromium		25.8	0.5	mg/kg	
Lead		19.7	0.5	mg/kg	
Selenium		< 1.0	1.0	mg/kg	
Silver		< 0.2	0.2	mg/kg	
Iron		31,900	5.0	mg/kg	
Total Mercury	**Method: 7471B**				
Analysis Date: 03/07/22					
Mercury		< 0.05	0.05	mg/kg	
TCLP Metals Method 1311	**Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22			Preparation Date: 03/09/22		
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	
Lead		0.007	0.005	mg/L	
Selenium		< 0.010	0.010	mg/L	
Silver		< 0.005	0.005	mg/L	
Iron		0.1	0.1	mg/L	
TCLP Mercury Method 1311	**Method: 7470A**				
Analysis Date: 03/08/22					
Mercury		< 0.0005	0.0005	mg/L	
TCLP Extraction	**Method: 1311**				
Analysis Date: 03/07/22					
TCLP Extraction		Complete			
pH @ 25°C, 1:2	**Method: 9045D**				
Analysis Date: 03/10/22 12:54					
pH @ 25°C, 1:2		7.63		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3A
Sample No: 22-1331-003

Date Collected: 03/01/22
Time Collected: 12:49
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	88.18		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	12:49
Sample ID:	G-3A	**Date Received:**	03/03/22
Sample No:	22-1331-003	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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: 03/09/22 Preparation Date: 03/07/22				
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	12:49
Sample ID:	G-3A	**Date Received:**	03/03/22
Sample No:	22-1331-003	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3A
Sample No: 22-1331-003

Date Collected: 03/01/22
Time Collected: 12:49
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22		Preparation Date: 03/04/22		
Arsenic	7.1	1.0	mg/kg	
Barium	30.5	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	12.8	0.5	mg/kg	
Lead	12.3	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Iron	19,200	5.0	mg/kg	
Total Mercury **Method: 7471B**				
Analysis Date: 03/07/22				
Mercury	< 0.05	0.05	mg/kg	
TCLP Metals Method 1311 **Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22		Preparation Date: 03/09/22		
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	
Lead	< 0.005	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
Iron	< 0.1	0.1	mg/L	
TCLP Mercury Method 1311 **Method: 7470A**				
Analysis Date: 03/08/22				
Mercury	< 0.0005	0.0005	mg/L	
TCLP Extraction **Method: 1311**				
Analysis Date: 03/07/22				
TCLP Extraction	Complete			
pH @ 25°C, 1:2 **Method: 9045D**				
Analysis Date: 03/10/22 12:54				
pH @ 25°C, 1:2	8.40		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3B
Sample No: 22-1331-004
Date Collected: 03/01/22
Time Collected: 13:14
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	85.67		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3B
Sample No: 22-1331-004

Date Collected: 03/01/22
Time Collected: 13:14
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3B
Sample No: 22-1331-004

Date Collected: 03/01/22
Time Collected: 13:14
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C** Analysis Date: 03/09/22		**Preparation Method 3540C** Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3B
Sample No: 22-1331-004

Date Collected: 03/01/22
Time Collected: 13:14
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte		Result	R.L.	Units	Flags
Semi-Volatile Compounds	**Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22			Preparation Date: 03/07/22		
2,4,6-Trichlorophenol		< 330	330	ug/kg	
Total Metals	**Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22			Preparation Date: 03/04/22		
Arsenic		9.2	1.0	mg/kg	
Barium		55.6	0.5	mg/kg	
Cadmium		< 0.5	0.5	mg/kg	
Chromium		17.1	0.5	mg/kg	
Lead		17.2	0.5	mg/kg	
Selenium		< 1.0	1.0	mg/kg	
Silver		< 0.2	0.2	mg/kg	
Iron		24,200	5.0	mg/kg	
Total Mercury	**Method: 7471B**				
Analysis Date: 03/07/22					
Mercury		< 0.05	0.05	mg/kg	
TCLP Metals Method 1311	**Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22			Preparation Date: 03/09/22		
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	
Lead		< 0.005	0.005	mg/L	
Selenium		< 0.010	0.010	mg/L	
Silver		< 0.005	0.005	mg/L	
Iron		< 0.1	0.1	mg/L	
TCLP Mercury Method 1311	**Method: 7470A**				
Analysis Date: 03/08/22					
Mercury		< 0.0005	0.0005	mg/L	
TCLP Extraction	**Method: 1311**				
Analysis Date: 03/07/22					
TCLP Extraction		Complete			
pH @ 25°C, 1:2	**Method: 9045D**				
Analysis Date: 03/10/22 12:54					
pH @ 25°C, 1:2		9.03		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3C
Sample No: 22-1331-005
Date Collected: 03/01/22
Time Collected: 14:40
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	85.89		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	14:40
Sample ID:	G-3C	**Date Received:**	03/03/22
Sample No:	22-1331-005	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3C
Sample No: 22-1331-005

Date Collected: 03/01/22
Time Collected: 14:40
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C** Analysis Date: 03/09/22		**Preparation Method 3540C** Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3C
Sample No: 22-1331-005

Date Collected: 03/01/22
Time Collected: 14:40
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte		Result	R.L.	Units	Flags
Semi-Volatile Compounds	**Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22			Preparation Date: 03/07/22		
2,4,6-Trichlorophenol		< 330	330	ug/kg	
Total Metals	**Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22			Preparation Date: 03/04/22		
Arsenic		5.7	1.0	mg/kg	
Barium		58.1	0.5	mg/kg	
Cadmium		< 0.5	0.5	mg/kg	
Chromium		19.1	0.5	mg/kg	
Lead		12.2	0.5	mg/kg	
Selenium		< 1.0	1.0	mg/kg	
Silver		< 0.2	0.2	mg/kg	
Iron		20,700	5.0	mg/kg	
Total Mercury	**Method: 7471B**				
Analysis Date: 03/07/22					
Mercury		< 0.05	0.05	mg/kg	
TCLP Metals Method 1311	**Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22			Preparation Date: 03/09/22		
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	
Lead		< 0.005	0.005	mg/L	
Selenium		< 0.010	0.010	mg/L	
Silver		< 0.005	0.005	mg/L	
Iron		< 0.1	0.1	mg/L	
TCLP Mercury Method 1311	**Method: 7470A**				
Analysis Date: 03/08/22					
Mercury		< 0.0005	0.0005	mg/L	
TCLP Extraction	**Method: 1311**				
Analysis Date: 03/07/22					
TCLP Extraction		Complete			
pH @ 25°C, 1:2	**Method: 9045D**				
Analysis Date: 03/10/22 12:54					
pH @ 25°C, 1:2		8.98		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-4
Sample No: 22-1331-006

Date Collected: 03/01/22
Time Collected: 12:20
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	80.81		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-4
Sample No: 22-1331-006

Date Collected: 03/01/22
Time Collected: 12:20
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-4
Sample No: 22-1331-006

Date Collected: 03/01/22
Time Collected: 12:20
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-4
Sample No: 22-1331-006

Date Collected: 03/01/22
Time Collected: 12:20
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22		Preparation Date: 03/04/22		
Arsenic	7.9	1.0	mg/kg	
Barium	49.5	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	14.8	0.5	mg/kg	
Lead	15.5	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Iron	22,000	5.0	mg/kg	
Total Mercury **Method: 7471B**				
Analysis Date: 03/07/22				
Mercury	< 0.05	0.05	mg/kg	
TCLP Metals Method 1311 **Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22		Preparation Date: 03/09/22		
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	
Lead	< 0.005	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
Iron	< 0.1	0.1	mg/L	
TCLP Mercury Method 1311 **Method: 7470A**				
Analysis Date: 03/08/22				
Mercury	< 0.0005	0.0005	mg/L	
TCLP Extraction **Method: 1311**				
Analysis Date: 03/07/22				
TCLP Extraction	Complete			
pH @ 25°C, 1:2 **Method: 9045D**				
Analysis Date: 03/10/22 12:54				
pH @ 25°C, 1:2	8.36		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMA
Sample No: 22-1331-007
Date Collected: 03/01/22
Time Collected: 11:45
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	79.31		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	11:45
Sample ID:	G-WMA	**Date Received:**	03/03/22
Sample No:	22-1331-007	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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: 03/09/22 Preparation Date: 03/07/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMA
Sample No: 22-1331-007

Date Collected: 03/01/22
Time Collected: 11:45
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMA
Sample No: 22-1331-007

Date Collected: 03/01/22
Time Collected: 11:45
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte		Result	R.L.	Units	Flags
Semi-Volatile Compounds	**Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22			Preparation Date: 03/07/22		
2,4,6-Trichlorophenol		< 330	330	ug/kg	
Total Metals	**Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22			Preparation Date: 03/04/22		
Arsenic		9.5	1.0	mg/kg	
Barium		127	0.5	mg/kg	
Cadmium		< 0.5	0.5	mg/kg	
Chromium		25.6	0.5	mg/kg	
Lead		142	0.5	mg/kg	
Selenium		< 1.0	1.0	mg/kg	
Silver		< 0.2	0.2	mg/kg	
Iron		31,200	5.0	mg/kg	
Total Mercury	**Method: 7471B**				
Analysis Date: 03/07/22					
Mercury		0.06	0.05	mg/kg	
TCLP Metals Method 1311	**Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22			Preparation Date: 03/09/22		
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	
Lead		0.007	0.005	mg/L	
Selenium		< 0.010	0.010	mg/L	
Silver		< 0.005	0.005	mg/L	
Iron		0.5	0.1	mg/L	
TCLP Mercury Method 1311	**Method: 7470A**				
Analysis Date: 03/08/22					
Mercury		< 0.0005	0.0005	mg/L	
TCLP Extraction	**Method: 1311**				
Analysis Date: 03/07/22					
TCLP Extraction		Complete			
pH @ 25°C, 1:2	**Method: 9045D**				
Analysis Date: 03/10/22 12:54					
pH @ 25°C, 1:2		8.03		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMB
Sample No: 22-1331-008

Date Collected: 03/01/22
Time Collected: 11:19
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	82.54		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMB
Sample No: 22-1331-008

Date Collected: 03/01/22
Time Collected: 11:19
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	11:19
Sample ID:	G-WMB	**Date Received:**	03/03/22
Sample No:	22-1331-008	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMB
Sample No: 22-1331-008

Date Collected: 03/01/22
Time Collected: 11:19
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22		Preparation Date: 03/04/22		
Arsenic	9.1	1.0	mg/kg	
Barium	86.2	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	25.3	0.5	mg/kg	
Lead	17.4	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Iron	29,200	5.0	mg/kg	
Total Mercury **Method: 7471B**				
Analysis Date: 03/07/22				
Mercury	< 0.05	0.05	mg/kg	
TCLP Metals Method 1311 **Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22		Preparation Date: 03/09/22		
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	
Lead	0.007	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
Iron	1.9	0.1	mg/L	
TCLP Mercury Method 1311 **Method: 7470A**				
Analysis Date: 03/08/22				
Mercury	< 0.0005	0.0005	mg/L	
TCLP Extraction **Method: 1311**				
Analysis Date: 03/07/22				
TCLP Extraction	Complete			
pH @ 25°C, 1:2 **Method: 9045D**				
Analysis Date: 03/10/22 12:54				
pH @ 25°C, 1:2	8.45		Units	

CHAIN OF CUSTODY RECORD

Page 1 of 1 Pgs

First Environmental Laboratories, Inc.

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Phone: (630)778-1200 * Fax (630)778-1233
E-Mail: firstinfo@firstenv.com
IEPA Accreditation #100292
www.firstenv.com

Company Name: Brownfield Environmental Engineering Resources			
Street Address: 645 Third St. Suite 250			
City: Beloit	State: WI	Zip: 53511	
Phone: (608) 295-4661	e-Mail: cory@brownfieldusa.com		
Send Report To: cory@brownfieldusa.com	Hardcopy: ☐	PDF e-Mail: ■	
Sampled By: Cory Knudson			

Project I.D.: 042-015

P.O. #:

Enter analyses required on the lines to the left. Place an "X" in the box below to indicate which samples require what analysis.

Date/Time Taken	Sample Description	Matrix*	VOCs	SVOCs	PNAs	RCRA Metals	Iron	pH	TCLP Metals + Iron	HOLD-Do not analyze	Comments	Lab I.D.
3/1/22 0938	G-1A	S	✓	✓	✓	✓	✓	✓	✓		22-	1331-001
3/1/22 1010	G-1B	S	✓	✓	✓	✓	✓	✓	✓			002
3/1/22 1249	G-3A	S	✓	✓	✓	✓	✓	✓	✓			003
3/1/22 1314	G-3B	S	✓	✓	✓	✓	✓	✓	✓			004
3/1/22 1440	G-3C	S	✓	✓	✓	✓	✓	✓	✓			005
3/1/22 1220	G-4	S	✓	✓	✓	✓	✓	✓	✓			006
3/1/22 1145	G-WMA	S	✓	✓	✓	✓	✓	✓	✓		PID: 2.0	007
3/1/22 1119	G-WMB	S	✓	✓	✓	✓	✓	✓	✓		PID: 3.0	008

FOR LAB USE ONLY:
Cooler Temperature: 0.1-6°C Yes ✓ No___ 3.3 °C
Received within 6 hrs of collection:_____
Ice Present: Yes ✓ No_____

FOR LAB COURIER USE ONLY:
Sample Refrigerated: Yes_____ No_____
Refrigerator Temperature:_____ °C

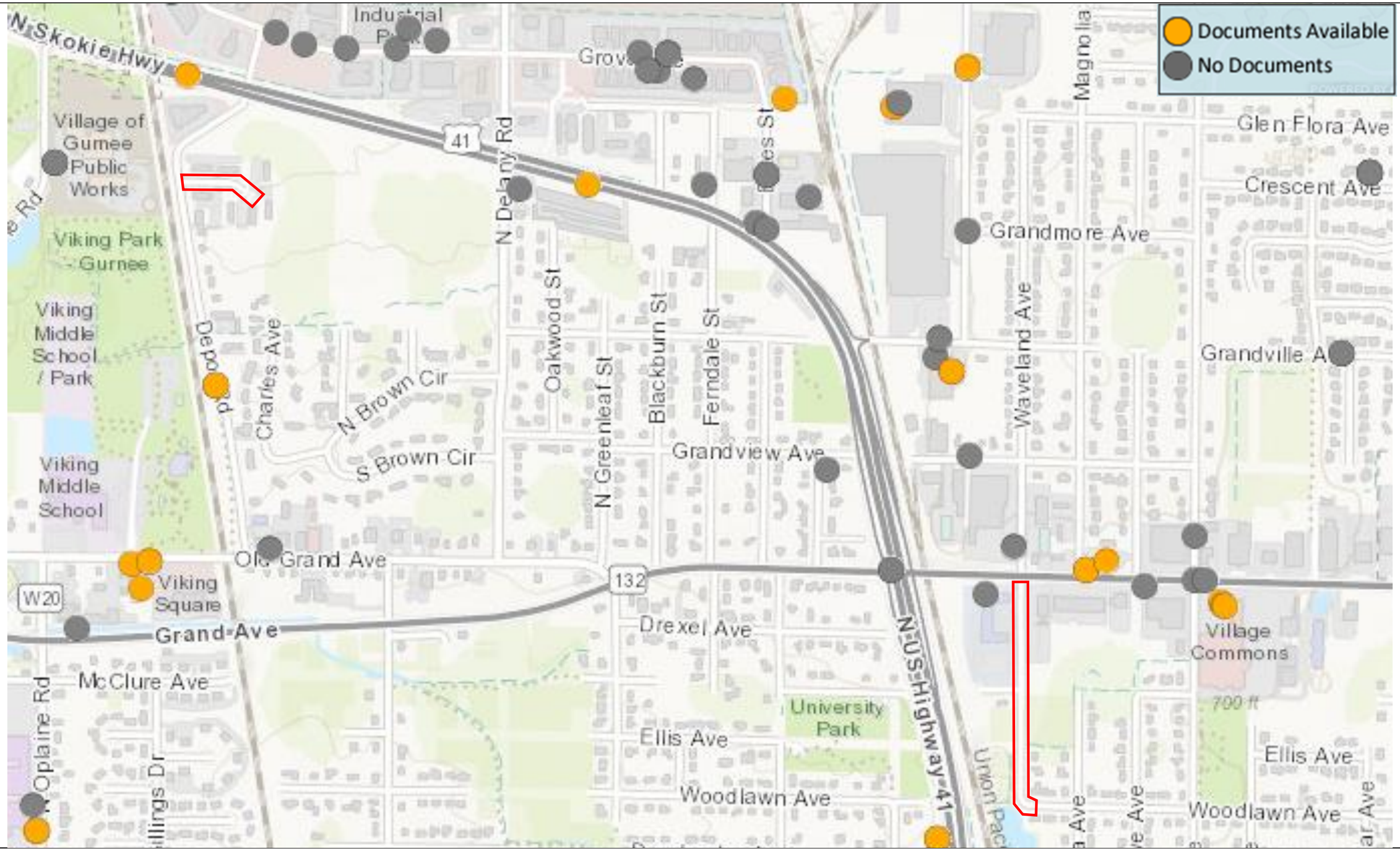
Program: ☐ TACO/SRP ■ CCDD ☐ NPDES ☐ LUST ☐ SDWA

*Matrix Code Key: **DW**-drinking water **GW**-groundwater **WW**- wastewater **S**-soil **SL**-sludge **WIPE**-wipe **O**-other

Notes and Special Instructions:

Relinquished By:	Date/Time: 3/2/22 1200	Received By:	Date/Time: 3/3/22 1130
Relinquished By:	Date/Time:	Received By:	Date/Time:

Rev 10/19



BROWNFIELD ENVIRONMENTAL ENGINEERING
645 Third Street, Suite 250, Beloit, WI 53511
(608) 856-5434 | (815) 713-9165 | www.brownfieldusa.com

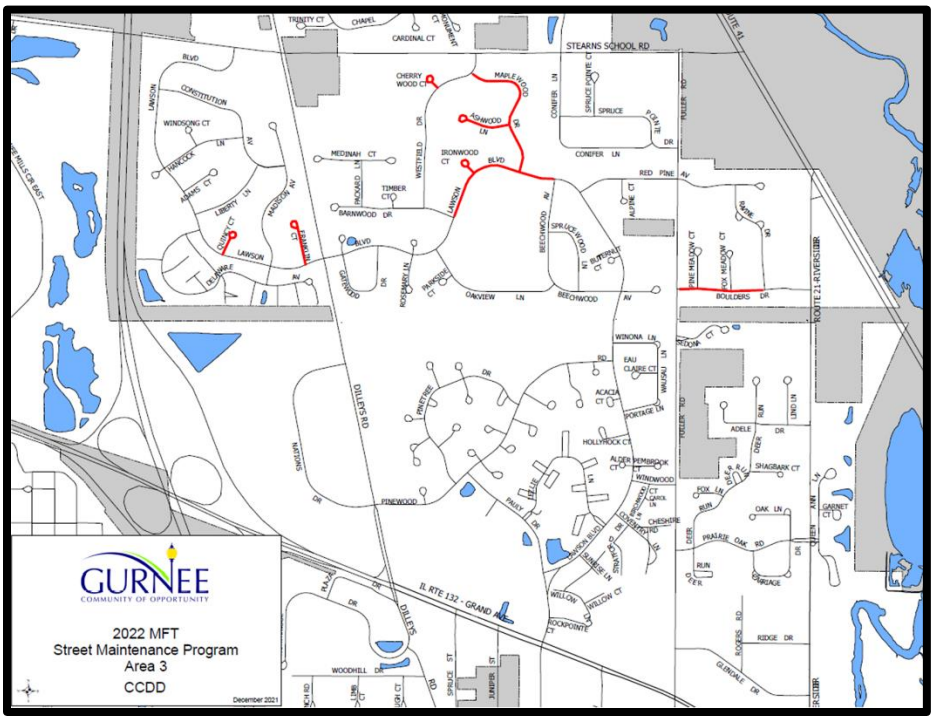
IEPA Document Explorer Map- Area 1

Location:	Centennial Court and Waveland Avenue, Gurnee, IL
Client:	Village of Gurnee
Project:	042-015
Date:	March 14, 2022

BROWNFIELD
ENVIRONMENTAL ENGINEERING

CCDD Material Certification

2022 Street Maintenance Area No. 3



Date: March 15, 2022

Brownfield Project No. 042-015

Prepared for:

Village of Gurnee

325 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:	2022 Street Maintenance Area No. 3 Quincy Ct., Franklin Ct., Lawson Blvd., Maplewood Dr., Ironwood Ct., Ashwood Ln., Cherrywood Ct., and Boulders Dr., Village of Gurnee, IL
Brownfield Project No.:	042-015
Client:	Village of Gurnee 325 N. O'Plaine Road Gurnee, IL 60031
Site Inspectors:	Cory Knudson Bradley Brown, P.E.
Inspection & Sampling:	March 1, 2022
Report Date:	March 15, 2022
Report Attachments:	Photo Log Sample Location Map IEPA Document Explorer Map Sample Summary Comparison Table First Environmental Laboratory Analytical & Accreditation Report IEPA Form LPC-663

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 to perform a Clean Construction Demolition Debris (CCDD) Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation assessment for the proposed resurfacing locations along Ashwood Ln, Ironwood Ct., Cherrywood Ct., Maplewood Dr., Lawson Blvd., Franklin Ct., Quincy Ct., and Boulders Dr. in Gurnee, IL. The project involves site development work including excavation, grading, and resurfacing along the locations listed above in Gurnee, IL

The project worksites are currently developed as residential streets. Similarly, there is no evidence of current or past underground storage tanks, waste treatment or disposal, reported releases or environmental cleanups, environmental liens or governmental environmental notifications, or the use, storage, or disposal of transformers manufactured before 1979 being present at the locations outlined within the scope of work.

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 projects may be considered “Clean” for the purposes of CCDD regulations and disposal.

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 website shows that multiple potentially impacted properties are located within the surrounding area of the proposed work locations. However, after considering the distance(s) of the Potentially Impacted Properties from the project work area and the overall topography of the surrounding area, it is unlikely that the Potentially Impacted Properties depicted on the IEPA Document Explorer Map will impact the proposed work areas being evaluated for this CCDD material certification. 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.

Site Assessment & Sampling

On March 1, 2022, Cory Knudson and Brad Brown performed a site reconnaissance assessment to confirm the absence or presence of recognized environmental concerns, soil staining, and potential sources of soil contamination. The site materials were screened with a Photo Ionization Detector (PID) and three (3) soil samples were collected. The soil samples were collected in laboratory-provided containers and shipped to First Environmental Laboratories, Inc. of Naperville, IL.

Laboratory Analysis

First Environmental Laboratories, Inc. analyzed three (3) soil samples in strict compliance with IL 5035A/8260B for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), RCRA metals, Iron, pH, and Polynuclear Aromatic Hydrocarbons (PNAs). The laboratory analysis indicated that the three (3) soil samples contained levels of iron above IEPA Maximum Allowable Concentrations (MACs) Remediation Objectives. A table depicting the iron levels of the samples compared to the IEPA MACs is found below.

Sample ID	Iron	Maximum Allowable Concentration
G-3A	19,200 mg/kg	15,900 mg/kg
G-3B	24,200 mg/kg	15,900 mg/kg
G-3C	20,700 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 three (3) samples were analyzed for toxicity characteristic leaching procedure (TCLP) metals. The results of the TCLP analysis for iron can be found below:

Sample ID	TCLP Iron	Soil Component Groundwater Ingestion Class I
G-3A	<0.1 mg/L	5.0 mg/L
G-3B	<0.1 mg/L	5.0 mg/L
G-3C	<0.1 mg/L	5.0 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 levels of n-Nitrosodi-n-propylamine and Pentachlorophenol to be consistent with other SVOC constituents and to be undetectable.

A complete listing of laboratory analytical results compared to IEPA MACs 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 may be considered "Clean" for the purposes of CCDD regulations and disposal.

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 Environmental Engineering Resources, LLC. Brownfield Environmental Engineering Resources, LLC 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 Environmental Engineering Resources, LLC 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

Bradley A. Brown, P.E.
Principal
License No. 062.049676
Expiration Date: November 30, 2023

BROWNFIELD
ENVIRONMENTAL ENGINEERING RESOURCES

PHOTO LOG

Project #:	2022 Street Maintenance- Area 3
Client:	Village of Gurnee

Photo No. 1

Date: March 1, 2022

Direction: North

Description: Sample Location G-3A along Franklin Court.

Photo No. 2

Date: March 1, 2022

Direction: South

Description: Sample Location G-3A along Franklin Court.

.

Project #:	2022 Street Maintenance- Area 3
Client:	Village of Gurnee

Photo No. 3

Date: March 1, 2022

Direction: South

Description: Sample Location G-3B along Maplewood Drive.

Photo No. 4

Date: March 1, 2022

Direction: North

Description: Sample Location G-3B along Maplewood Drive.

PHOTO LOG

Project #:	2022 Street Maintenance- Area 3
Client:	Village of Gurnee

Photo No. 5

Date: March 1, 2022

Direction: East

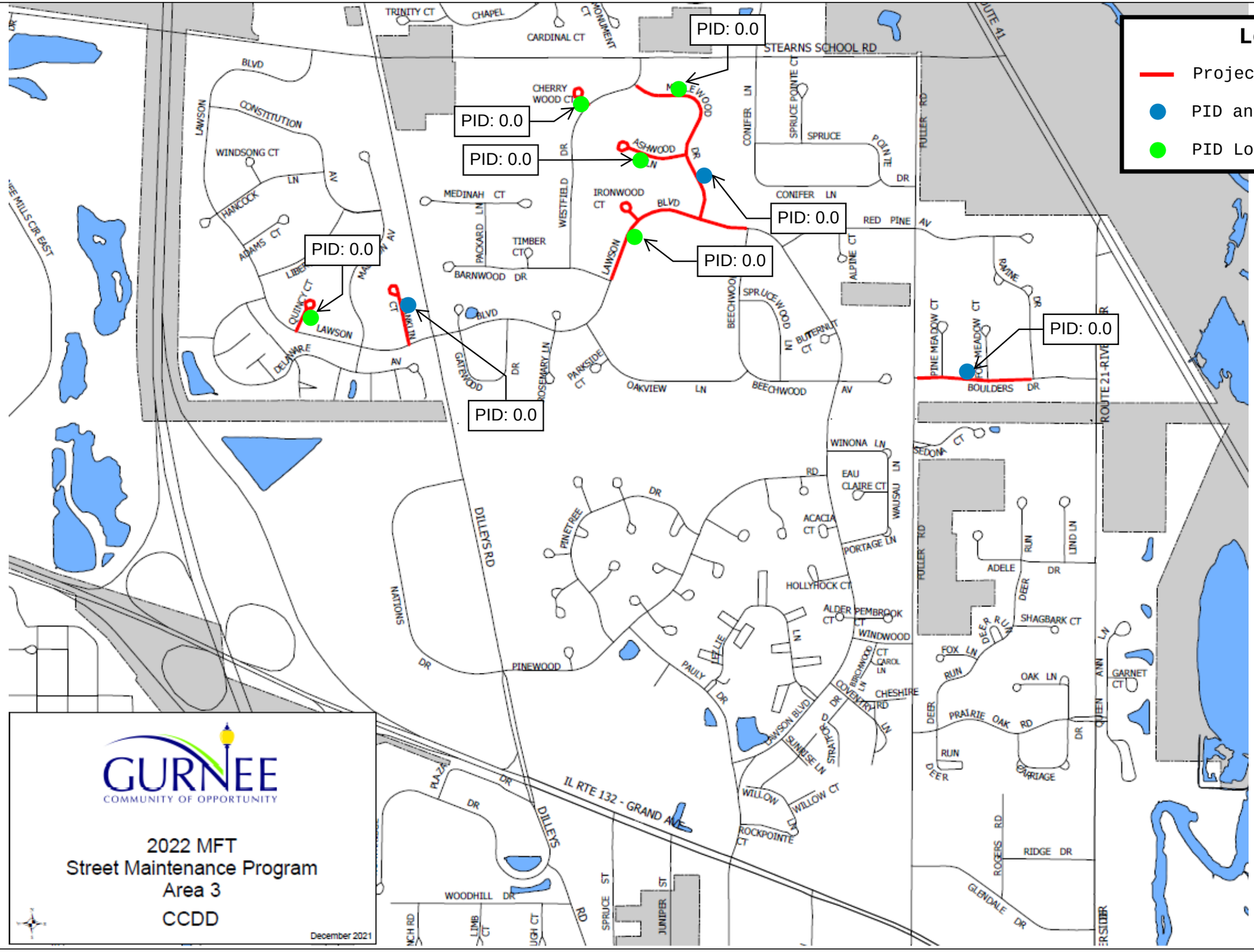
Description: Sample Location G-3C along Boulders Court.

Photo No. 6

Date: March 1, 2022

Direction: West

Description: Sample Location G-3C along Boulders Court.



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2022 Street Maintenance Area No. 3 Sample Location Map

Location:	Quincy Ct., Franklin Ct., Lawson Blvd., Maplewood Dr., Ironwood Ct., Ashwood Ln., Cherrywood Ct., and Boulders Dr., Gurnee, IL
Client:	Village of Gurnee
Project:	042-015
Date:	March 2, 2022

BROWNFIELD ENVIRONMENTAL ENGINEERING

042-015				G-3A	G-3B	G-3C	Maximum Allowable Concentration	MAC within a MSA County	MAC within a non-MSA county	MAC within Chicago corporate limits	MAC within a populated area in a MSA excluding Chicago	MAC within a populated area in a non-MSA county	MAC outside a populated area	Soil Component Groundwater Ingestion Class I
Date of Sample Collection:				3/1/2022	3/1/2022	3/1/2022								
Time of Sample Collection:				12:49 PM	1:14 PM	2:40 PM								
First Environmental Lab. Numbers:				22-1331-003	22-1331-004	22-1331-005								
Contaminants of Concern:														
Volatile Organic Compounds (5035A/8260B)														
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/9/2022**	**3/9/2022**	**3/10/2022**								
Acetone	mg/kg	0.2	67-64-1	<0.2	<0.2	<0.2	25							
Benzene	mg/kg	0.005	71-43-2	<0.005	<0.005	<0.005	0.03							
Bromodichloromethane	mg/kg	0.005	75-27-4	<0.005	<0.005	<0.005	0.6							
Bromoform	mg/kg	0.005	75-25-2	<0.005	<0.005	<0.005	0.8							
Bromomethane	mg/kg	0.01	74-83-9	<0.01	<0.01	<0.01	0.2							
2-Butanone (MEK)	mg/kg	0.1	78-93-3	<0.1	<0.1	<0.1	17							
Carbon disulfide	mg/kg	0.005	75-15-0	<0.005	<0.005	<0.005	9							
Carbon tetrachloride	mg/kg	0.005	56-23-5	<0.005	<0.005	<0.005	0.07							
Chlorobenzene	mg/kg	0.005	108-90-7	<0.005	<0.005	<0.005	1							
Chlorodibromomethane	mg/kg	0.005	124-48-1	<0.005	<0.005	<0.005	0.4							
Chloroform	mg/kg	0.005	67-66-3	<0.005	<0.005	<0.005	0.3							
1,1-Dichloroethane	mg/kg	0.005	75-34-3	<0.005	<0.005	<0.005	23							
1,2-Dichloroethane	mg/kg	0.005	107-06-2	<0.005	<0.005	<0.005	0.02							
1,1-Dichloroethene	mg/kg	0.005	75-35-4	<0.005	<0.005	<0.005	0.06							
cis-1,2-Dichloroethene	mg/kg	0.005	156-59-2	<0.005	<0.005	<0.005	0.4							
trans-1,2-Dichloroethene	mg/kg	0.005	156-60-5	<0.005	<0.005	<0.005	0.7							
1,2-Dichloropropane	mg/kg	0.005	78-87-5	<0.005	<0.005	<0.005	0.03							
cis-1,3-Dichloropropene	mg/kg	0.004	10061-01-5	<0.004	<0.004	<0.004	0.005							
trans-1,3-Dichloropropene	mg/kg	0.004	10061-02-6	<0.004	<0.004	<0.004	0.005							
Ethylbenzene	mg/kg	0.005	100-41-4	<0.005	<0.005	<0.005	13							
Methyl-tert-butylether (MTBE)	mg/kg	0.005	1634-04-4	<0.005	<0.005	<0.005	0.32							
Methylene chloride	mg/kg	0.02	75-09-2	<0.02	<0.02	<0.02	0.02							
Styrene	mg/kg	0.005	100-42-5	<0.005	<0.005	<0.005	4							
Tetrachloroethene	mg/kg	0.005	127-18-4	<0.005	<0.005	<0.005	0.06							
Toluene	mg/kg	0.005	108-88-3	<0.005	<0.005	<0.005	12							
1,1,1-Trichloroethane	mg/kg	0.005	71-55-6	<0.005	<0.005	<0.005	2							
1,1,2-Trichloroethane	mg/kg	0.005	79-00-5	<0.005	<0.005	<0.005	0.02							
Trichloroethene	mg/kg	0.005	79-01-6	<0.005	<0.005	<0.005	0.06							
Vinyl acetate	mg/kg	0.01	108-05-4	<0.01	<0.01	<0.01	10							
Vinyl chloride	mg/kg	0.01	75-01-4	<0.01	<0.01	<0.01	0.01							
Xylene, Total	mg/kg	0.005	1330-20-7	<0.005	<0.005	<0.005	5.6							
Semi-Volatile Compounds (8270C)														
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/9/2022**	**3/9/2022**	**3/9/2022**								
Acenaphthene	mg/kg	0.33	83-32-9	<0.33	<0.33	<0.33	570							
Acenaphthylene	mg/kg	0.33	208-96-8	<0.33	<0.33	<0.33	85							
Anthracene	mg/kg	0.33	120-12-7	<0.33	<0.33	<0.33	12000							
Benzo(a)anthracene	mg/kg	0.33	56-55-3	<0.33	<0.33	<0.33				1.1	1.8	0.9	0.9	
Benzo(a)pyrene	mg/kg	0.09	50-32-8	<0.09	<0.09	<0.09				1.3	2.1	0.98	0.09	
Benzo(b)fluoranthene	mg/kg	0.33	205-99-2	<0.33	<0.33	<0.33				1.5	2.1	0.9	0.9	
Benzo(k)fluoranthene	mg/kg	0.33	207-08-9	<0.33	<0.33	<0.33	9							
Benzo(ghi)perylene	mg/kg	0.33	191-24-2	<0.33	<0.33	<0.33	2300							
Benzoic acid	mg/kg	0.33	65-85-0	<0.33	<0.33	<0.33	400							
bis(2-Chloroethyl)ether	mg/kg	0.33	111-44-4	<0.33	<0.33	<0.33	0.66							
bis(2-Ethylhexyl)phthalate	mg/kg	0.33	117-81-7	<0.33	<0.33	<0.33	46							
Butyl benzyl phthalate	mg/kg	0.33	85-68-7	<0.33	<0.33	<0.33	930							
Carbazole	mg/kg	0.33	86-74-8	<0.33	<0.33	<0.33	0.6							
4-Chloroaniline	mg/kg	0.33	106-47-8	<0.33	<0.33	<0.33	0.7							
2-Chlorophenol	mg/kg	0.33	95-57-8	<0.33	<0.33	<0.33	1.5							
Chrysene	mg/kg	0.33	218-01-9	<0.33	<0.33	<0.33	88							
Dibenzo(a,h)anthracene	mg/kg	0.09	53-70-3	<0.09	<0.09	<0.09				0.2	0.42	0.15	0.09	
1,2-Dichlorobenzene	mg/kg	0.33	95-50-1	<0.33	<0.33	<0.33	17							
1,4-Dichlorobenzene	mg/kg	0.33	106-46-7	<0.33	<0.33	<0.33	2							
3,3'-Dichlorobenzidine	mg/kg	0.66	91-94-1	<0.66	<0.66	<0.66	1.3							
2,4-Dichlorophenol	mg/kg	0.33	120-83-2	<0.33	<0.33	<0.33	0.48							
Diethyl phthalate	mg/kg	0.33	84-66-2	<0.33	<0.33	<0.33	470							
2,4-Dimethylphenol	mg/kg	0.33	105-67-9	<0.33	<0.33	<0.33	9							
Di-n-butyl phthalate	mg/kg	0.33	84-74-2	<0.33	<0.33	<0.33	2300							
2,4-Dinitrophenol	mg/kg	1.6	51-28-5	<1.6	<1.6	<1.6	3.3							
2,4-Dinitrotoluene	mg/kg	0.25	121-14-2	<0.25	<0.25	<0.25	0.25							
2,6-Dinitrotoluene	mg/kg	0.26	606-20-2	<0.26	<0.26	<0.26	0.26							
Di-n-octylphthalate	mg/kg	0.33	117-84-0	<0.33	<0.33	<0.33	1600							
Fluoranthene	mg/kg	0.33	206-44-0	<0.33	<0.33	<0.33	3100							
Fluorene	mg/kg	0.33	86-73-7	<0.33	<0.33	<0.33	560							
Hexachlorobenzene	mg/kg	0.33	118-74-1	<0.33	<0.33	<0.33	0.4							
Hexachlorocyclopentadiene	mg/kg	0.33	77-47-4	<0.33	<0.33	<0.33	1.1							
Hexachloroethane	mg/kg	0.33	67-72-1	<0.33	<0.33	<0.33	0.5							
Indeno(1,2,3-cd)pyrene	mg/kg	0.33	193-39-5	<0.33	<0.33	<0.33				0.9	1.6	0.9	0.9	
Isophorone	mg/kg	0.33	78-59-1	<0.33	<0.33	<0.33	8							
2-Methylphenol	mg/kg	0.33	95-48-7	<0.33	<0.33	<0.33	15							
Naphthalene	mg/kg	0.33	91-20-3	<0.33	<0.33	<0.33	1.8							
Nitrobenzene	mg/kg	0.26	98-95-3	<0.26	<0.26	<0.26	0.26							
n-Nitrosodi-n-propylamine	mg/kg	0.09	621-64-7	<0.09	<0.09	<0.09	0.0018							
n-Nitrosodiphenylamine	mg/kg	0.33	86-30-6	<0.33	<0.33	<0.33	1							
Pentachlorophenol	mg/kg	0.33	87-86-5	<0.33	<0.33	<0.33	0.02							
Phenanthrene	mg/kg	0.33	85-01-8	<0.33	<0.33	<0.33	210							
Phenol	mg/kg	0.33	108-95-2	<0.33	<0.33	<0.33	100							
Pyrene	mg/kg	0.33	129-00-0	<0.33	<0.33	<0.33	2300							
1,2,4-Trichlorobenzene	mg/kg	0.33	120-82-1	<0.33	<0.33	<0.33	5							
2,4,5-Trichlorophenol	mg/kg	0.33	95-95-4	<0.33	<0.33	<0.33	26							
2,4,6-Trichlorophenol	mg/kg	0.33	88-06-2	<0.33	<0.33	<0.33	0.66							
Total Metals (6010C)														
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/7/2022**	**3/7/2022**	**3/7/2022**								
Arsenic	mg/kg	1	7440-38-2	7.1	9.2	5.7		13	11.3					
Barium	mg/kg	0.5	7440-39-3	30.5	55.6	58.1	1500							
Cadmium	mg/kg	0.5	7440-43-9	<0.5	<0.5	<0.5	5.2							
Chromium	mg/kg	0.5	7440-47-3	12.8	17.1	19.1	21							
Lead	mg/kg	0.5	7439-92-1	12.3	17.2	12.2	107							
Selenium	mg/kg	1	7782-49-2	<1.0	<1.0	<1.0	1.3							
Silver	mg/kg	0.2	7440-22-4	<0.2	<0.2	<0.2	4.4							
Iron	mg/kg	5	7439-89-6	**19200**	**24200**	**20700**		15900	15000					
Total Mercury (7471B)														

BROWNFIELD ENVIRONMENTAL ENGINEERING

042-015				G-3A	G-3B	G-3C	Maximum Allowable Concentration	MAC within a MSA County	MAC within a non-MSA county	MAC within Chicago corporate limits	MAC within a populated area in a MSA excluding Chicago	MAC within a populated area in a non-MSA county	MAC outside a populated area	Soil Component Groundwater Ingestion Class I
Date of Sample Collection:				3/1/2022	3/1/2022	3/1/2022								
Time of Sample Collection:				12:49 PM	1:14 PM	2:40 PM								
First Environmental Lab. Numbers:				22-1331-003	22-1331-004	22-1331-005								
Contaminants of Concern:														
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/7/2022**	**3/7/2022**	**3/7/2022**								
Mercury	mg/kg	0.05	7439-97-6	<0.05	<0.05	<0.05	0.89							
TCLP Metals Method 1311 (6010C)														
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/9/2022**	**3/9/2022**	**3/9/2022**								
Arsenic	mg/L	0.01	7440-38-2	<0.010	<0.010	<0.010								0.05
Barium	mg/L	1	7440-39-3	<1.0	<1.0	<1.0								2
Cadmium	mg/L	0.005	7440-43-9	<0.005	<0.005	<0.005								0.005
Chromium	mg/L	0.005	7440-47-3	<0.005	<0.005	<0.005								0.1
Lead	mg/L	0.005	7439-92-1	<0.005	<0.005	<0.005								0.0075
Selenium	mg/L	0.01	7782-49-2	<0.010	<0.010	<0.010								0.05
Silver	mg/L	0.005	7440-22-4	<0.005	<0.005	<0.005								0.05
Iron	mg/L	0.1	7439-89-6	<0.1	<0.1	<0.1								5
TCLP Mercury Method 1311 (7470A)														
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/8/2022**	**3/8/2022**	**3/8/2022**								
Mercury	mg/L	0.0005	7439-97-6	<0.0005	<0.0005	<0.0005								0.002
pH @ 25°C, 1:2 (9045D)														
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/10/2022**	**3/10/2022**	**3/10/2022**								
pH @ 25°C, 1:2	Units		PH	8.4	9.03	8.98	6.25-9.00							

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IL ELAP / NELAC Certification # 100292

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March 10, 2022

Mr. Cory Knudson
BROWNFIELD ENVIRONMENTAL ENGINEERING
645 Third Street
Suite 250
Beloit, WI 53511

Project ID: 042-015
First Environmental File ID: 22-1331
Date Received: March 03, 2022

Dear Mr. Cory Knudson:

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:

1002922022-8: effective 02/10/2022 through 02/28/2023.

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

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Case Narrative

BROWNFIELD ENVIRONMENTAL ENGINEERING

Lab File ID: **22-1331**

Project ID: **042-015**

Date Received: **March 03, 2022**

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	
22-1331-001	G-1A	3/1/2022	9:38
22-1331-002	G-1B	3/1/2022	10:10
22-1331-003	G-3A	3/1/2022	12:49
22-1331-004	G-3B	3/1/2022	13:14
22-1331-005	G-3C	3/1/2022	14:40
22-1331-006	G-4	3/1/2022	12:20
22-1331-007	G-WMA	3/1/2022	11:45
22-1331-008	G-WMB	3/1/2022	11:19

Sample Batch Comments:

Sample acceptance criteria were met.

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Case Narrative

BROWNFIELD ENVIRONMENTAL ENGINEERING

Lab File ID: **22-1331**

Project ID: **042-015**

Date Received: **March 03, 2022**

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.

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1A
Sample No: 22-1331-001

Date Collected: 03/01/22
Time Collected: 9:38
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	84.74		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1A
Sample No: 22-1331-001

Date Collected: 03/01/22
Time Collected: 9:38
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	9:38
Sample ID:	G-1A	**Date Received:**	03/03/22
Sample No:	22-1331-001	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1A
Sample No: 22-1331-001

Date Collected: 03/01/22
Time Collected: 9:38
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22		Preparation Date: 03/04/22		
Arsenic	7.0	1.0	mg/kg	
Barium	44.2	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	16.0	0.5	mg/kg	
Lead	11.3	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Iron	20,000	5.0	mg/kg	
Total Mercury **Method: 7471B**				
Analysis Date: 03/07/22				
Mercury	< 0.05	0.05	mg/kg	
TCLP Metals Method 1311 **Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22		Preparation Date: 03/09/22		
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	
Lead	< 0.005	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
Iron	< 0.1	0.1	mg/L	
TCLP Mercury Method 1311 **Method: 7470A**				
Analysis Date: 03/08/22				
Mercury	< 0.0005	0.0005	mg/L	
TCLP Extraction **Method: 1311**				
Analysis Date: 03/07/22				
TCLP Extraction	Complete			
pH @ 25°C, 1:2 **Method: 9045D**				
Analysis Date: 03/10/22 12:54				
pH @ 25°C, 1:2	9.04		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1B
Sample No: 22-1331-002

Date Collected: 03/01/22
Time Collected: 10:10
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	78.45		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1B
Sample No: 22-1331-002

Date Collected: 03/01/22
Time Collected: 10:10
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1B
Sample No: 22-1331-002

Date Collected: 03/01/22
Time Collected: 10:10
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C** Analysis Date: 03/09/22		**Preparation Method 3540C** Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1B
Sample No: 22-1331-002

Date Collected: 03/01/22
Time Collected: 10:10
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte		Result	R.L.	Units	Flags
Semi-Volatile Compounds	**Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22			Preparation Date: 03/07/22		
2,4,6-Trichlorophenol		< 330	330	ug/kg	
Total Metals	**Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22			Preparation Date: 03/04/22		
Arsenic		9.5	1.0	mg/kg	
Barium		86.9	0.5	mg/kg	
Cadmium		< 0.5	0.5	mg/kg	
Chromium		25.8	0.5	mg/kg	
Lead		19.7	0.5	mg/kg	
Selenium		< 1.0	1.0	mg/kg	
Silver		< 0.2	0.2	mg/kg	
Iron		31,900	5.0	mg/kg	
Total Mercury	**Method: 7471B**				
Analysis Date: 03/07/22					
Mercury		< 0.05	0.05	mg/kg	
TCLP Metals Method 1311	**Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22			Preparation Date: 03/09/22		
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	
Lead		0.007	0.005	mg/L	
Selenium		< 0.010	0.010	mg/L	
Silver		< 0.005	0.005	mg/L	
Iron		0.1	0.1	mg/L	
TCLP Mercury Method 1311	**Method: 7470A**				
Analysis Date: 03/08/22					
Mercury		< 0.0005	0.0005	mg/L	
TCLP Extraction	**Method: 1311**				
Analysis Date: 03/07/22					
TCLP Extraction		Complete			
pH @ 25°C, 1:2	**Method: 9045D**				
Analysis Date: 03/10/22 12:54					
pH @ 25°C, 1:2		7.63		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3A
Sample No: 22-1331-003

Date Collected: 03/01/22
Time Collected: 12:49
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	88.18		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	12:49
Sample ID:	G-3A	**Date Received:**	03/03/22
Sample No:	22-1331-003	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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: 03/09/22 Preparation Date: 03/07/22				
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	12:49
Sample ID:	G-3A	**Date Received:**	03/03/22
Sample No:	22-1331-003	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3A
Sample No: 22-1331-003

Date Collected: 03/01/22
Time Collected: 12:49
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22		Preparation Date: 03/04/22		
Arsenic	7.1	1.0	mg/kg	
Barium	30.5	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	12.8	0.5	mg/kg	
Lead	12.3	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Iron	19,200	5.0	mg/kg	
Total Mercury **Method: 7471B**				
Analysis Date: 03/07/22				
Mercury	< 0.05	0.05	mg/kg	
TCLP Metals Method 1311 **Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22		Preparation Date: 03/09/22		
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	
Lead	< 0.005	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
Iron	< 0.1	0.1	mg/L	
TCLP Mercury Method 1311 **Method: 7470A**				
Analysis Date: 03/08/22				
Mercury	< 0.0005	0.0005	mg/L	
TCLP Extraction **Method: 1311**				
Analysis Date: 03/07/22				
TCLP Extraction	Complete			
pH @ 25°C, 1:2 **Method: 9045D**				
Analysis Date: 03/10/22 12:54				
pH @ 25°C, 1:2	8.40		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3B
Sample No: 22-1331-004
Date Collected: 03/01/22
Time Collected: 13:14
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	85.67		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3B
Sample No: 22-1331-004

Date Collected: 03/01/22
Time Collected: 13:14
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3B
Sample No: 22-1331-004

Date Collected: 03/01/22
Time Collected: 13:14
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C** Analysis Date: 03/09/22		**Preparation Method 3540C** Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3B
Sample No: 22-1331-004

Date Collected: 03/01/22
Time Collected: 13:14
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte		Result	R.L.	Units	Flags
Semi-Volatile Compounds	**Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22			Preparation Date: 03/07/22		
2,4,6-Trichlorophenol		< 330	330	ug/kg	
Total Metals	**Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22			Preparation Date: 03/04/22		
Arsenic		9.2	1.0	mg/kg	
Barium		55.6	0.5	mg/kg	
Cadmium		< 0.5	0.5	mg/kg	
Chromium		17.1	0.5	mg/kg	
Lead		17.2	0.5	mg/kg	
Selenium		< 1.0	1.0	mg/kg	
Silver		< 0.2	0.2	mg/kg	
Iron		24,200	5.0	mg/kg	
Total Mercury	**Method: 7471B**				
Analysis Date: 03/07/22					
Mercury		< 0.05	0.05	mg/kg	
TCLP Metals Method 1311	**Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22			Preparation Date: 03/09/22		
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	
Lead		< 0.005	0.005	mg/L	
Selenium		< 0.010	0.010	mg/L	
Silver		< 0.005	0.005	mg/L	
Iron		< 0.1	0.1	mg/L	
TCLP Mercury Method 1311	**Method: 7470A**				
Analysis Date: 03/08/22					
Mercury		< 0.0005	0.0005	mg/L	
TCLP Extraction	**Method: 1311**				
Analysis Date: 03/07/22					
TCLP Extraction		Complete			
pH @ 25°C, 1:2	**Method: 9045D**				
Analysis Date: 03/10/22 12:54					
pH @ 25°C, 1:2		9.03		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3C
Sample No: 22-1331-005
Date Collected: 03/01/22
Time Collected: 14:40
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	85.89		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	14:40
Sample ID:	G-3C	**Date Received:**	03/03/22
Sample No:	22-1331-005	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3C
Sample No: 22-1331-005

Date Collected: 03/01/22
Time Collected: 14:40
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C** Analysis Date: 03/09/22		**Preparation Method 3540C** Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3C
Sample No: 22-1331-005

Date Collected: 03/01/22
Time Collected: 14:40
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte		Result	R.L.	Units	Flags
Semi-Volatile Compounds	**Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22			Preparation Date: 03/07/22		
2,4,6-Trichlorophenol		< 330	330	ug/kg	
Total Metals	**Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22			Preparation Date: 03/04/22		
Arsenic		5.7	1.0	mg/kg	
Barium		58.1	0.5	mg/kg	
Cadmium		< 0.5	0.5	mg/kg	
Chromium		19.1	0.5	mg/kg	
Lead		12.2	0.5	mg/kg	
Selenium		< 1.0	1.0	mg/kg	
Silver		< 0.2	0.2	mg/kg	
Iron		20,700	5.0	mg/kg	
Total Mercury	**Method: 7471B**				
Analysis Date: 03/07/22					
Mercury		< 0.05	0.05	mg/kg	
TCLP Metals Method 1311	**Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22			Preparation Date: 03/09/22		
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	
Lead		< 0.005	0.005	mg/L	
Selenium		< 0.010	0.010	mg/L	
Silver		< 0.005	0.005	mg/L	
Iron		< 0.1	0.1	mg/L	
TCLP Mercury Method 1311	**Method: 7470A**				
Analysis Date: 03/08/22					
Mercury		< 0.0005	0.0005	mg/L	
TCLP Extraction	**Method: 1311**				
Analysis Date: 03/07/22					
TCLP Extraction		Complete			
pH @ 25°C, 1:2	**Method: 9045D**				
Analysis Date: 03/10/22 12:54					
pH @ 25°C, 1:2		8.98		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-4
Sample No: 22-1331-006

Date Collected: 03/01/22
Time Collected: 12:20
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	80.81		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-4
Sample No: 22-1331-006

Date Collected: 03/01/22
Time Collected: 12:20
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-4
Sample No: 22-1331-006

Date Collected: 03/01/22
Time Collected: 12:20
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-4
Sample No: 22-1331-006

Date Collected: 03/01/22
Time Collected: 12:20
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22		Preparation Date: 03/04/22		
Arsenic	7.9	1.0	mg/kg	
Barium	49.5	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	14.8	0.5	mg/kg	
Lead	15.5	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Iron	22,000	5.0	mg/kg	
Total Mercury **Method: 7471B**				
Analysis Date: 03/07/22				
Mercury	< 0.05	0.05	mg/kg	
TCLP Metals Method 1311 **Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22		Preparation Date: 03/09/22		
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	
Lead	< 0.005	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
Iron	< 0.1	0.1	mg/L	
TCLP Mercury Method 1311 **Method: 7470A**				
Analysis Date: 03/08/22				
Mercury	< 0.0005	0.0005	mg/L	
TCLP Extraction **Method: 1311**				
Analysis Date: 03/07/22				
TCLP Extraction	Complete			
pH @ 25°C, 1:2 **Method: 9045D**				
Analysis Date: 03/10/22 12:54				
pH @ 25°C, 1:2	8.36		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMA
Sample No: 22-1331-007
Date Collected: 03/01/22
Time Collected: 11:45
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	79.31		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	11:45
Sample ID:	G-WMA	**Date Received:**	03/03/22
Sample No:	22-1331-007	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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: 03/09/22 Preparation Date: 03/07/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMA
Sample No: 22-1331-007

Date Collected: 03/01/22
Time Collected: 11:45
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMA
Sample No: 22-1331-007

Date Collected: 03/01/22
Time Collected: 11:45
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte		Result	R.L.	Units	Flags
Semi-Volatile Compounds	**Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22			Preparation Date: 03/07/22		
2,4,6-Trichlorophenol		< 330	330	ug/kg	
Total Metals	**Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22			Preparation Date: 03/04/22		
Arsenic		9.5	1.0	mg/kg	
Barium		127	0.5	mg/kg	
Cadmium		< 0.5	0.5	mg/kg	
Chromium		25.6	0.5	mg/kg	
Lead		142	0.5	mg/kg	
Selenium		< 1.0	1.0	mg/kg	
Silver		< 0.2	0.2	mg/kg	
Iron		31,200	5.0	mg/kg	
Total Mercury	**Method: 7471B**				
Analysis Date: 03/07/22					
Mercury		0.06	0.05	mg/kg	
TCLP Metals Method 1311	**Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22			Preparation Date: 03/09/22		
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	
Lead		0.007	0.005	mg/L	
Selenium		< 0.010	0.010	mg/L	
Silver		< 0.005	0.005	mg/L	
Iron		0.5	0.1	mg/L	
TCLP Mercury Method 1311	**Method: 7470A**				
Analysis Date: 03/08/22					
Mercury		< 0.0005	0.0005	mg/L	
TCLP Extraction	**Method: 1311**				
Analysis Date: 03/07/22					
TCLP Extraction		Complete			
pH @ 25°C, 1:2	**Method: 9045D**				
Analysis Date: 03/10/22 12:54					
pH @ 25°C, 1:2		8.03		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMB
Sample No: 22-1331-008

Date Collected: 03/01/22
Time Collected: 11:19
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	82.54		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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	

First Environmental Laboratories, Inc

IL ELAP / NELAC Certification # 100292

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMB
Sample No: 22-1331-008

Date Collected: 03/01/22
Time Collected: 11:19
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	11:19
Sample ID:	G-WMB	**Date Received:**	03/03/22
Sample No:	22-1331-008	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMB
Sample No: 22-1331-008

Date Collected: 03/01/22
Time Collected: 11:19
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22		Preparation Date: 03/04/22		
Arsenic	9.1	1.0	mg/kg	
Barium	86.2	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	25.3	0.5	mg/kg	
Lead	17.4	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Iron	29,200	5.0	mg/kg	
Total Mercury **Method: 7471B**				
Analysis Date: 03/07/22				
Mercury	< 0.05	0.05	mg/kg	
TCLP Metals Method 1311 **Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22		Preparation Date: 03/09/22		
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	
Lead	0.007	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
Iron	1.9	0.1	mg/L	
TCLP Mercury Method 1311 **Method: 7470A**				
Analysis Date: 03/08/22				
Mercury	< 0.0005	0.0005	mg/L	
TCLP Extraction **Method: 1311**				
Analysis Date: 03/07/22				
TCLP Extraction	Complete			
pH @ 25°C, 1:2 **Method: 9045D**				
Analysis Date: 03/10/22 12:54				
pH @ 25°C, 1:2	8.45		Units	

CHAIN OF CUSTODY RECORD

Page 1 of 1 Pgs

First Environmental Laboratories, Inc.

1600 Shore Road, Suite D
Naperville, IL 60563
Phone: (630)778-1200 * Fax (630)778-1233
E-Mail: firstinfo@firstenv.com
IEPA Accreditation #100292
www.firstenv.com

Company Name: Brownfield Environmental Engineering Resources			
Street Address: 645 Third St. Suite 250			
City: Beloit	State: WI	Zip: 53511	
Phone: (608) 295-4661	e-Mail: cory@brownfieldusa.com		
Send Report To: cory@brownfieldusa.com	Hardcopy: ☐	PDF e-Mail: ■	
Sampled By: Cory Knudson			

Project I.D.: 042-015

P.O. #:

Enter analyses required on the lines to the left. Place an "X" in the box below to indicate which samples require what analysis.

Date/Time Taken	Sample Description	Matrix*	VOCs	SVOCs	PNAs	RCRA Metals	Iron	pH	TCLP Metals + Iron	HOLD-Do not analyze	Comments	Lab I.D.
3/1/22 0938	G-1A	S	✓	✓	✓	✓	✓	✓	✓		22-	1331-001
3/1/22 1010	G-1B	S	✓	✓	✓	✓	✓	✓	✓			002
3/1/22 1249	G-3A	S	✓	✓	✓	✓	✓	✓	✓			003
3/1/22 1314	G-3B	S	✓	✓	✓	✓	✓	✓	✓			004
3/1/22 1440	G-3C	S	✓	✓	✓	✓	✓	✓	✓			005
3/1/22 1220	G-4	S	✓	✓	✓	✓	✓	✓	✓			006
3/1/22 1145	G-WMA	S	✓	✓	✓	✓	✓	✓	✓		PID: 2.0	007
3/1/22 1119	G-WMB	S	✓	✓	✓	✓	✓	✓	✓		PID: 3.0	008

FOR LAB USE ONLY:
Cooler Temperature: 0.1-6°C Yes ✓ No___ 3.3 °C
Received within 6 hrs of collection:_____
Ice Present: Yes ✓ No_____

FOR LAB COURIER USE ONLY:
Sample Refrigerated: Yes_____ No_____
Refrigerator Temperature:_____ °C

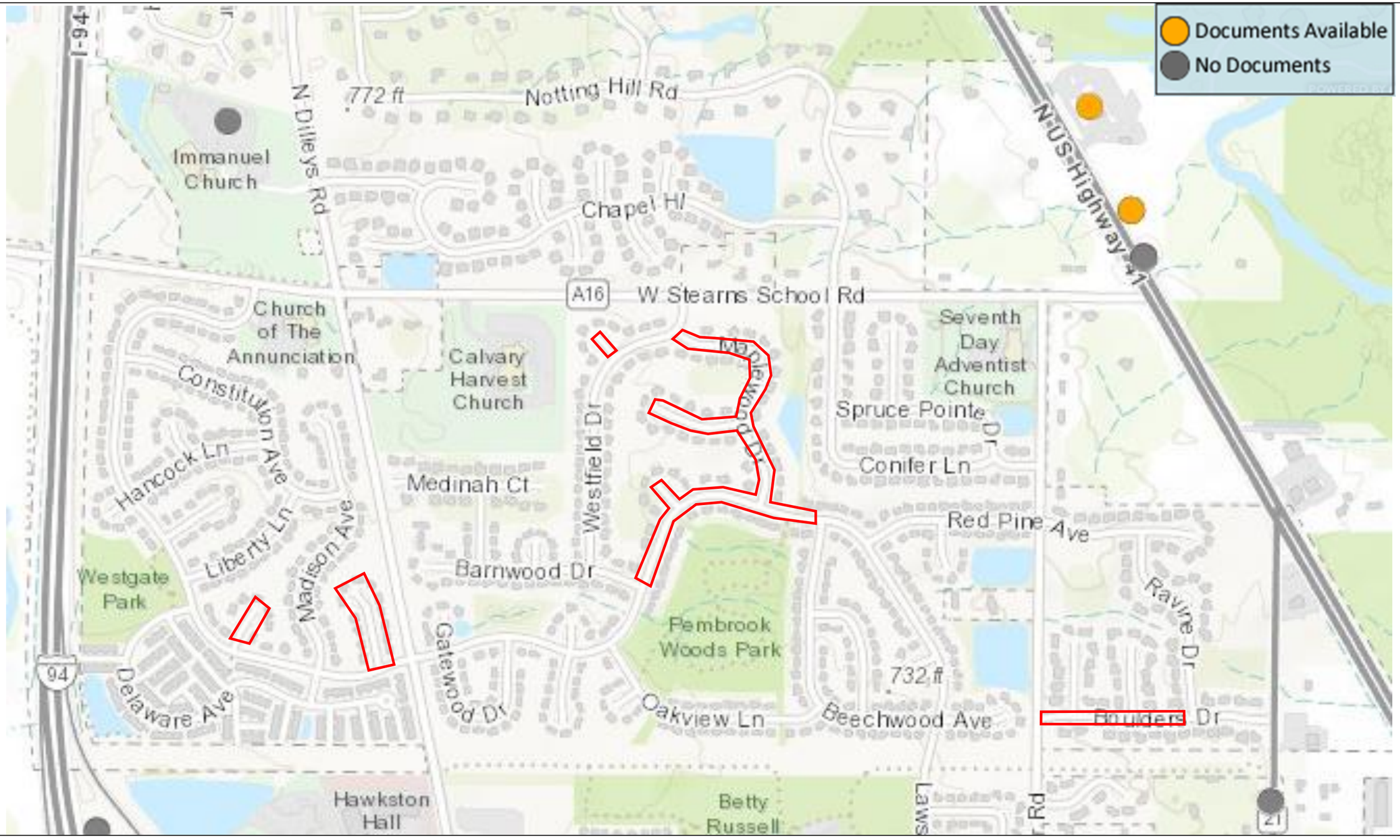
Program: ☐ TACO/SRP ■ CCDD ☐ NPDES ☐ LUST ☐ SDWA

*Matrix Code Key: **DW**-drinking water **GW**-groundwater **WW**- wastewater **S**-soil **SL**-sludge **WIPE**-wipe **O**-other

Notes and Special Instructions:

Relinquished By:	Date/Time: 3/2/22 1200	Received By:	Date/Time: 3/3/22 1130
Relinquished By:	Date/Time:	Received By:	Date/Time:

Rev 10/19



BROWNFIELD ENVIRONMENTAL ENGINEERING
645 Third Street, Suite 250, Beloit, WI 53511
(608) 856-5434 | (815) 713-9165 | www.brownfieldusa.com

IEPA Document Explorer Map- Area 3

Location:	Quincy Ct., Franklin Ct., Lawson Blvd., Maplewood Dr., Ironwood Ct., Ashwood Ln., Cherrywood Ct., and Boulders Dr., Gurnee, IL
Client:	Village of Gurnee
Project:	042-015
Date:	March 14, 2022

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: 2022 Street Maintenance Area No. 3 Office Phone Number, if available:

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

Ashwood Ln., Ironwood Ct., Cherrywood Ct., Maplewood Dr., Lawson Blvd., Franklin Ct., Quincy Ct., Boulders Dr.

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: 42.38988 Longitude: -87.9366

(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: N/A BOW: N/A BOA: N/A

Approximate Start Date (mm/dd/yyyy): May 1, 2022 Approximate End Date (mm/dd/yyyy): Aug 31, 2022

Estimated Volume of debris (cu. Yd.): 2,000

II. Owner/Operator Information for Source Site

Site Owner

Name: Village of Gurnee
Street Address: 325 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 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.

Project Name: 2022 Street Maintenance Area No. 3 Latitude: 42.38988 Longitude: - 87.93660

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]:

The samples obtained from test locations within the right-of-way (ROW) at the site were collected from approximately 3' below ground surface, and they were analyzed for VOCs, SVOCs, RCRA Metals, pH, PNAs, Iron, and TCLP Metals. Field screening was performed with a photoionization detector (PID), pH meter, and visual and olfactory sensory observations.

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

I, Bradley A. Brown, P.E. (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 Street - Suite 250
City:	Beloit State: WI Zip Code: 53511
Phone:	815-713-9165

Bradley A. Brown, P.E.
Printed Name:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

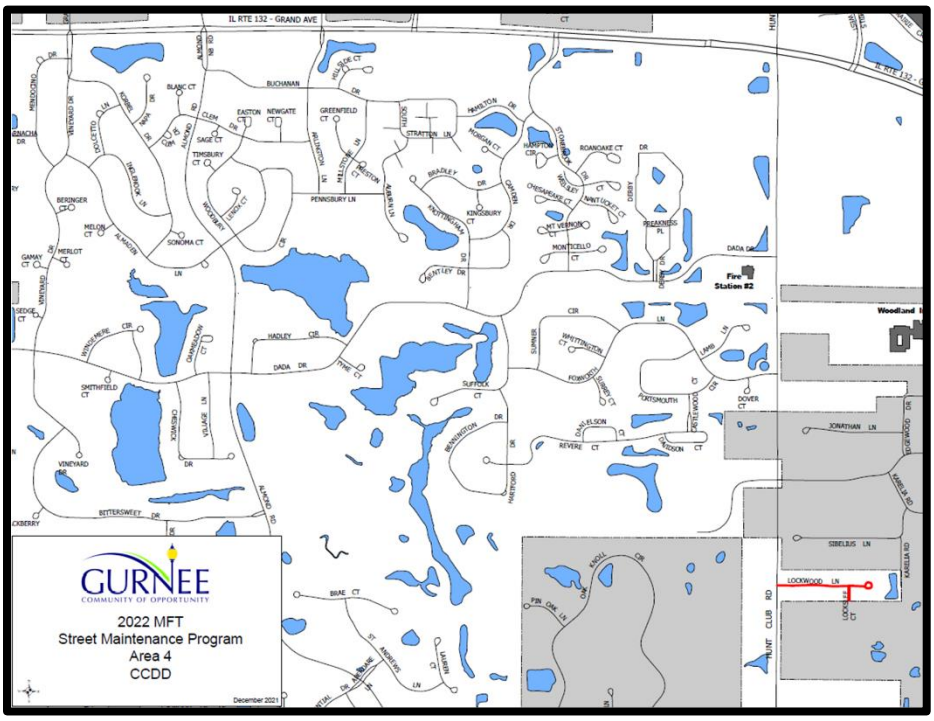
Mar 15, 2022
Date:

Exp. 11/30/23
P.E or L.P.G. Seal:

BROWNFIELD
ENVIRONMENTAL ENGINEERING

CCDD Material Certification

2022 Street Maintenance Area No. 4



Date: March 15, 2022

Brownfield Project No. 042-015

Prepared for:

Village of Gurnee

325 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:	2022 Street Maintenance Area No. 4 Lockwood Lane and Locksee Court, Village of Gurnee, IL
Brownfield Project No.:	042-015
Client:	Village of Gurnee 325 N. O'Plaine Road Gurnee, IL 60031
Site Inspectors:	Cory Knudson Brad Brown, P.E.
Inspection & Sampling:	March 1, 2022
Report Date:	March 15, 2022
Report Attachments:	Photo Log Sample Location Map IEPA Document Explorer Map Sample Summary Comparison Table First Environmental Laboratory Analytical & Accreditation Report IEPA Form LPC-663

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 to perform a Clean Construction Demolition Debris (CCDD) Uncontaminated Soil as Fill in a CCDD or Uncontaminated Soil Fill Operation assessment for the proposed resurfacing locations along Lockwood Ln. and Locksee Ct. in Gurnee, IL. The project involves site development work including excavation, grading, and resurfacing along the locations listed above in Gurnee, IL

The project worksite is currently developed as residential streets. Similarly, there is no evidence of current or past underground storage tanks, waste treatment or disposal, reported releases or environmental cleanups, environmental liens or governmental environmental notifications, or the use, storage, or disposal of transformers manufactured before 1979 being present at the site outlined within the scope of work.

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 projects may be considered “Clean” for the purposes of CCDD regulations and disposal.

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’s Document Explorer website showed no records for sites that could have an environmental impact, on or adjacent to the proposed CCDD work area evaluated for this certification. 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.

Site Assessment & Sampling

On March 1, 2022, Cory Knudson and Brad Brown performed a site reconnaissance assessment to confirm the absence or presence of recognized environmental concerns, soil staining, and potential sources of soil contamination. The site materials were screened with a Photo Ionization Detector (PID) and one (1) soil sample was collected. The soil sample was collected in laboratory-provided containers and shipped to First Environmental Laboratories, Inc. of Naperville, IL.

Laboratory Analysis

First Environmental Laboratories, Inc. analyzed one (1) soil sample in strict compliance with IL 5035A/8260B for Volatile Organic Compounds (VOCs), Semi-Volatile Organic Compounds (SVOCs), RCRA metals, Iron, pH, and Polynuclear Aromatic Hydrocarbons (PNAs). The laboratory analysis indicated that the soil sample contained a level of iron above the IEPA Maximum Allowable Concentrations (MACs) Remediation Objectives. A table depicting the iron level of the sample compared to the IEPA MACs is found below.

Sample ID	Iron	Maximum Allowable Concentration
G-4	22,000 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. Brownfield Environmental Engineering Resources, LLC contracted First Environmental Laboratories, Inc. to run the one (1) sample for toxicity characteristic leaching procedure (TCLP) iron. The results of the TCLP analysis can be found below:

Sample ID	TCLP Iron	Soil Component Groundwater Ingestion Class I
G-4	<0.1 mg/L	5.0 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 levels of n-Nitrosodi-n-propylamine and Pentachlorophenol to be consistent with other SVOC constituents and to be undetectable.

A complete listing of laboratory analytical results compared to IEPA MACs 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 may be considered "Clean" for the purposes of CCDD regulations and disposal.

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 Environmental Engineering Resources, LLC. Brownfield Environmental Engineering Resources, LLC 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 Environmental Engineering Resources, LLC 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
License No. 062.049676
Expiration Date: November 30, 2023

BROWNFIELD
ENVIRONMENTAL ENGINEERING RESOURCES

PHOTO LOG

Project #:	2022 Street Maintenance- Area 4
Client:	Village of Gurnee

Photo No. 1

Date: March 1, 2022

Direction: East

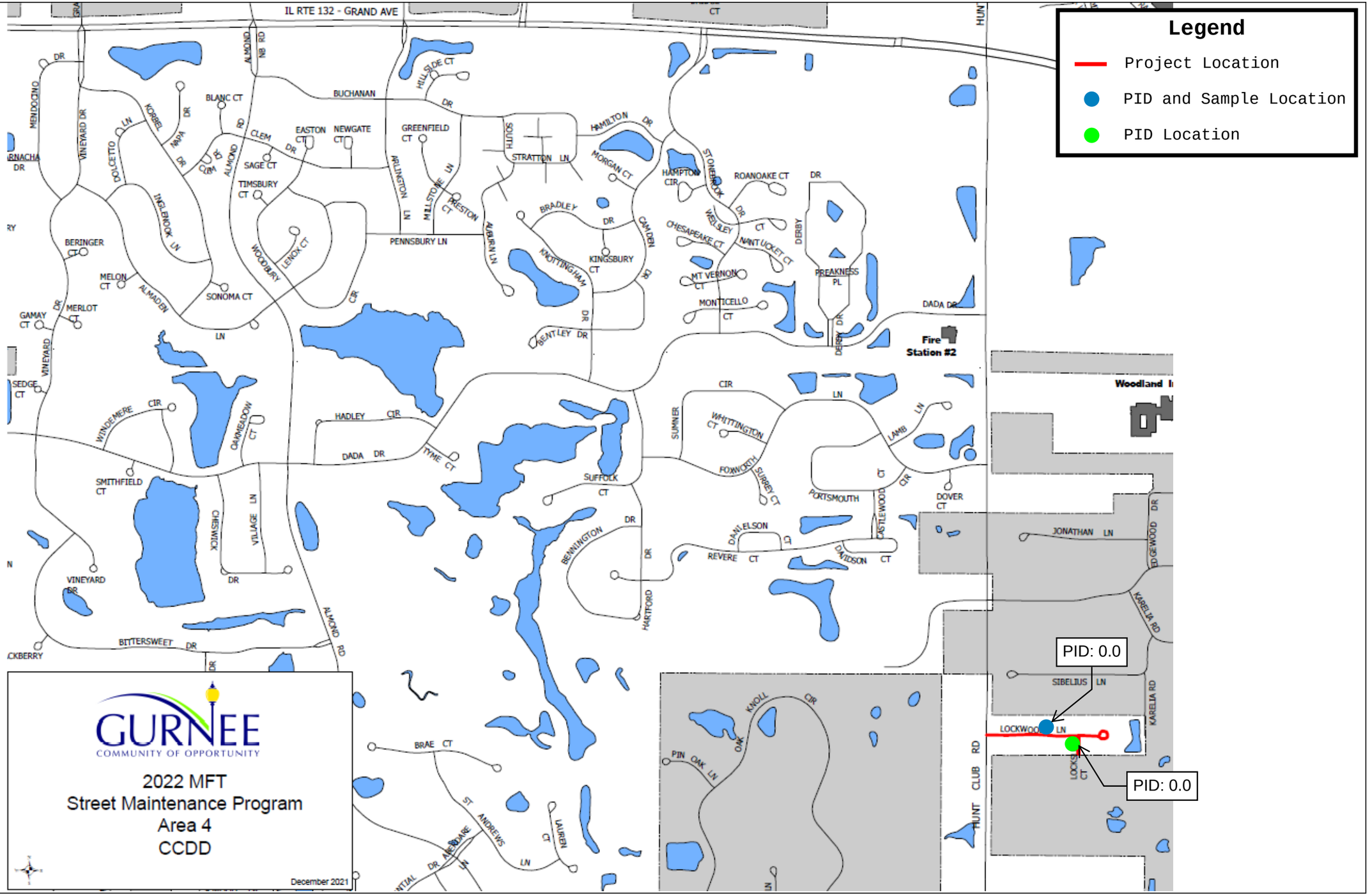
Description: Sample Location G-4 along Lockwood Lane.

Photo No. 2

Date: March 1, 2022

Direction: West

Description: Sample Location G-4 along Lockwood Lane.



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2022 Street Maintenance Area No. 4 Sample Location Map

Location:	Lockwood Ln and Locksee Ct., Gurnee, IL
Client:	Village of Gurnee
Project:	042-015
Date:	March 2, 2022

BROWNFIELD ENVIRONMENTAL ENGINEERING

042-015	G-4	Maximum Allowable Concentration	MAC within a MSA County	MAC within a non-MSA county	MAC within Chicago corporate limits	MAC within a populated area in a MSA excluding Chicago	MAC within a populated area in a non-MSA county	MAC outside a populated area	Soil Component Groundwater Ingestion Class I
Date of Sample Collection:	3/1/2022								
Time of Sample Collection:	12:20 PM								
First Environmental Lab. Numbers:	22-1331-006								
Contaminants of Concern:									
Volatile Organic Compounds (5035A/8260B)									
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/10/2022**					
Acetone	mg/kg	0.2	67-64-1	<0.2	25				
Benzene	mg/kg	0.005	71-43-2	<0.005	0.03				
Bromodichloromethane	mg/kg	0.005	75-27-4	<0.005	0.6				
Bromoform	mg/kg	0.005	75-25-2	<0.005	0.8				
Bromomethane	mg/kg	0.01	74-83-9	<0.01	0.2				
2-Butanone (MEK)	mg/kg	0.1	78-93-3	<0.1	17				
Carbon disulfide	mg/kg	0.005	75-15-0	<0.005	9				
Carbon tetrachloride	mg/kg	0.005	56-23-5	<0.005	0.07				
Chlorobenzene	mg/kg	0.005	108-90-7	<0.005	1				
Chlorodibromomethane	mg/kg	0.005	124-48-1	<0.005	0.4				
Chloroform	mg/kg	0.005	67-66-3	<0.005	0.3				
1,1-Dichloroethane	mg/kg	0.005	75-34-3	<0.005	23				
1,2-Dichloroethane	mg/kg	0.005	107-06-2	<0.005	0.02				
1,1-Dichloroethene	mg/kg	0.005	75-35-4	<0.005	0.06				
cis-1,2-Dichloroethene	mg/kg	0.005	156-59-2	<0.005	0.4				
trans-1,2-Dichloroethene	mg/kg	0.005	156-60-5	<0.005	0.7				
1,2-Dichloropropane	mg/kg	0.005	78-87-5	<0.005	0.03				
cis-1,3-Dichloropropene	mg/kg	0.004	10061-01-5	<0.004	0.005				
trans-1,3-Dichloropropene	mg/kg	0.004	10061-02-6	<0.004	0.005				
Ethylbenzene	mg/kg	0.005	100-41-4	<0.005	13				
Methyl-tert-butylether (MTBE)	mg/kg	0.005	1634-04-4	<0.005	0.32				
Methylene chloride	mg/kg	0.02	75-09-2	<0.02	0.02				
Styrene	mg/kg	0.005	100-42-5	<0.005	4				
Tetrachloroethene	mg/kg	0.005	127-18-4	<0.005	0.06				
Toluene	mg/kg	0.005	108-88-3	<0.005	12				
1,1,1-Trichloroethane	mg/kg	0.005	71-55-6	<0.005	2				
1,1,2-Trichloroethane	mg/kg	0.005	79-00-5	<0.005	0.02				
Trichloroethene	mg/kg	0.005	79-01-6	<0.005	0.06				
Vinyl acetate	mg/kg	0.01	108-05-4	<0.01	10				
Vinyl chloride	mg/kg	0.01	75-01-4	<0.01	0.01				
Xylene, Total	mg/kg	0.005	1330-20-7	<0.005	5.6				
Semi-Volatile Compounds (8270C)									
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/9/2022**					
Acenaphthene	mg/kg	0.33	83-32-9	<0.33	570				
Acenaphthylene	mg/kg	0.33	208-96-8	<0.33	85				
Anthracene	mg/kg	0.33	120-12-7	<0.33	12000				
Benzo(a)anthracene	mg/kg	0.33	56-55-3	<0.33				1.1	1.8	0.9	0.9	
Benzo(a)pyrene	mg/kg	0.09	50-32-8	<0.09				1.3	2.1	0.98	0.09	
Benzo(b)fluoranthene	mg/kg	0.33	205-99-2	<0.33				1.5	2.1	0.9	0.9	
Benzo(k)fluoranthene	mg/kg	0.33	207-08-9	<0.33	9							
Benzo(ghi)perylene	mg/kg	0.33	191-24-2	<0.33	2300							
Benzoic acid	mg/kg	0.33	65-85-0	<0.33	400							
bis(2-Chloroethyl)ether	mg/kg	0.33	111-44-4	<0.33	0.66							
bis(2-Ethylhexyl)phthalate	mg/kg	0.33	117-81-7	<0.33	46							
Butyl benzyl phthalate	mg/kg	0.33	85-68-7	<0.33	930							
Carbazole	mg/kg	0.33	86-74-8	<0.33	0.6							
4-Chloroaniline	mg/kg	0.33	106-47-8	<0.33	0.7							
2-Chlorophenol	mg/kg	0.33	95-57-8	<0.33	1.5							
Chrysene	mg/kg	0.33	218-01-9	<0.33	88							
Dibenzo(a,h)anthracene	mg/kg	0.09	53-70-3	<0.09				0.2	0.42	0.15	0.09	
1,2-Dichlorobenzene	mg/kg	0.33	95-50-1	<0.33	17							
1,4-Dichlorobenzene	mg/kg	0.33	106-46-7	<0.33	2							
3,3'-Dichlorobenzidine	mg/kg	0.66	91-94-1	<0.66	1.3							
2,4-Dichlorophenol	mg/kg	0.33	120-83-2	<0.33	0.48							
Diethyl phthalate	mg/kg	0.33	84-66-2	<0.33	470							
2,4-Dimethylphenol	mg/kg	0.33	105-67-9	<0.33	9							
Di-n-butyl phthalate	mg/kg	0.33	84-74-2	<0.33	2300							
2,4-Dinitrophenol	mg/kg	1.6	51-28-5	<1.6	3.3							
2,4-Dinitrotoluene	mg/kg	0.25	121-14-2	<0.25	0.25							
2,6-Dinitrotoluene	mg/kg	0.26	606-20-2	<0.26	0.26							
Di-n-octylphthalate	mg/kg	0.33	117-84-0	<0.33	1600							
Fluoranthene	mg/kg	0.33	206-44-0	<0.33	3100							
Fluorene	mg/kg	0.33	86-73-7	<0.33	560							
Hexachlorobenzene	mg/kg	0.33	118-74-1	<0.33	0.4							
Hexachlorocyclopentadiene	mg/kg	0.33	77-47-4	<0.33	1.1							
Hexachloroethane	mg/kg	0.33	67-72-1	<0.33	0.5							
Indeno(1,2,3-cd)pyrene	mg/kg	0.33	193-39-5	<0.33				0.9	1.6	0.9	0.9	
Isophorone	mg/kg	0.33	78-59-1	<0.33	8							
2-Methylphenol	mg/kg	0.33	95-48-7	<0.33	15							
Naphthalene	mg/kg	0.33	91-20-3	<0.33	1.8							
Nitrobenzene	mg/kg	0.26	98-95-3	<0.26	0.26							
n-Nitrosodi-n-propylamine	mg/kg	0.09	621-64-7	<0.09	0.0018							
n-Nitrosodiphenylamine	mg/kg	0.33	86-30-6	<0.33	1							
Pentachlorophenol	mg/kg	0.33	87-86-5	<0.33	0.02							
Phenanthrene	mg/kg	0.33	85-01-8	<0.33	210							
Phenol	mg/kg	0.33	108-95-2	<0.33	100							
Pyrene	mg/kg	0.33	129-00-0	<0.33	2300							
1,2,4-Trichlorobenzene	mg/kg	0.33	120-82-1	<0.33	5							
2,4,5-Trichlorophenol	mg/kg	0.33	95-95-4	<0.33	26							
2,4,6-Trichlorophenol	mg/kg	0.33	88-06-2	<0.33	0.66							

BROWNFIELD ENVIRONMENTAL ENGINEERING												
042-015				G-4	Maximum Allowable Concentration	MAC within a MSA County	MAC within a non-MSA county	MAC within Chicago corporate limits	MAC within a populated area in a MSA excluding Chicago	MAC within a populated area in a non-MSA county	MAC outside a populated area	Soil Component Groundwater Ingestion Class I
Date of Sample Collection:				3/1/2022								
Time of Sample Collection:				12:20 PM								
First Environmental Lab. Numbers:				22-1331-006								
Contaminants of Concern:												
Total Metals (6010C)												
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/7/2022**								
Arsenic	mg/kg	1	7440-38-2	7.9		13	11.3					
Barium	mg/kg	0.5	7440-39-3	49.5	1500							
Cadmium	mg/kg	0.5	7440-43-9	<0.5	5.2							
Chromium	mg/kg	0.5	7440-47-3	14.8	21							
Lead	mg/kg	0.5	7439-92-1	15.5	107							
Selenium	mg/kg	1	7782-49-2	<1.0	1.3							
Silver	mg/kg	0.2	7440-22-4	<0.2	4.4							
Iron	mg/kg	5	7439-89-6	**22000**		15900	15000					
Total Mercury (7471B)												
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/7/2022**								
Mercury	mg/kg	0.05	7439-97-6	<0.05	0.89							
TCLP Metals Method 1311 (6010C)												
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/9/2022**								
Arsenic	mg/L	0.01	7440-38-2	<0.010								0.05
Barium	mg/L	1	7440-39-3	<1.0								2
Cadmium	mg/L	0.005	7440-43-9	<0.005								0.005
Chromium	mg/L	0.005	7440-47-3	<0.005								0.1
Lead	mg/L	0.005	7439-92-1	<0.005								0.0075
Selenium	mg/L	0.01	7782-49-2	<0.010								0.05
Silver	mg/L	0.005	7440-22-4	<0.005								0.05
Iron	mg/L	0.1	7439-89-6	<0.1								5
TCLP Mercury Method 1311 (7470A)												
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/8/2022**								
Mercury	mg/L	0.0005	7439-97-6	<0.0005								0.002
pH @ 25°C, 1:2 (9045D)												
Date Analyzed:	**Units**	**RDL**	**CAS**	**3/10/2022**								
pH @ 25°C, 1:2	Units		PH	8.36	6.25-9.00							

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March 10, 2022

Mr. Cory Knudson
BROWNFIELD ENVIRONMENTAL ENGINEERING
645 Third Street
Suite 250
Beloit, WI 53511

Project ID: 042-015
First Environmental File ID: 22-1331
Date Received: March 03, 2022

Dear Mr. Cory Knudson:

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:

1002922022-8: effective 02/10/2022 through 02/28/2023.

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

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Case Narrative

BROWNFIELD ENVIRONMENTAL ENGINEERING

Lab File ID: **22-1331**

Project ID: **042-015**

Date Received: **March 03, 2022**

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	
22-1331-001	G-1A	3/1/2022	9:38
22-1331-002	G-1B	3/1/2022	10:10
22-1331-003	G-3A	3/1/2022	12:49
22-1331-004	G-3B	3/1/2022	13:14
22-1331-005	G-3C	3/1/2022	14:40
22-1331-006	G-4	3/1/2022	12:20
22-1331-007	G-WMA	3/1/2022	11:45
22-1331-008	G-WMB	3/1/2022	11:19

Sample Batch Comments:

Sample acceptance criteria were met.

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Case Narrative

BROWNFIELD ENVIRONMENTAL ENGINEERING

Lab File ID: **22-1331**

Project ID: **042-015**

Date Received: **March 03, 2022**

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.

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1A
Sample No: 22-1331-001

Date Collected: 03/01/22
Time Collected: 9:38
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	84.74		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1A
Sample No: 22-1331-001

Date Collected: 03/01/22
Time Collected: 9:38
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	9:38
Sample ID:	G-1A	**Date Received:**	03/03/22
Sample No:	22-1331-001	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1A
Sample No: 22-1331-001

Date Collected: 03/01/22
Time Collected: 9:38
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22		Preparation Date: 03/04/22		
Arsenic	7.0	1.0	mg/kg	
Barium	44.2	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	16.0	0.5	mg/kg	
Lead	11.3	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Iron	20,000	5.0	mg/kg	
Total Mercury **Method: 7471B**				
Analysis Date: 03/07/22				
Mercury	< 0.05	0.05	mg/kg	
TCLP Metals Method 1311 **Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22		Preparation Date: 03/09/22		
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	
Lead	< 0.005	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
Iron	< 0.1	0.1	mg/L	
TCLP Mercury Method 1311 **Method: 7470A**				
Analysis Date: 03/08/22				
Mercury	< 0.0005	0.0005	mg/L	
TCLP Extraction **Method: 1311**				
Analysis Date: 03/07/22				
TCLP Extraction	Complete			
pH @ 25°C, 1:2 **Method: 9045D**				
Analysis Date: 03/10/22 12:54				
pH @ 25°C, 1:2	9.04		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1B
Sample No: 22-1331-002

Date Collected: 03/01/22
Time Collected: 10:10
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	78.45		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1B
Sample No: 22-1331-002

Date Collected: 03/01/22
Time Collected: 10:10
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1B
Sample No: 22-1331-002

Date Collected: 03/01/22
Time Collected: 10:10
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C** Analysis Date: 03/09/22		**Preparation Method 3540C** Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-1B
Sample No: 22-1331-002

Date Collected: 03/01/22
Time Collected: 10:10
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte		Result	R.L.	Units	Flags
Semi-Volatile Compounds	**Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22			Preparation Date: 03/07/22		
2,4,6-Trichlorophenol		< 330	330	ug/kg	
Total Metals	**Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22			Preparation Date: 03/04/22		
Arsenic		9.5	1.0	mg/kg	
Barium		86.9	0.5	mg/kg	
Cadmium		< 0.5	0.5	mg/kg	
Chromium		25.8	0.5	mg/kg	
Lead		19.7	0.5	mg/kg	
Selenium		< 1.0	1.0	mg/kg	
Silver		< 0.2	0.2	mg/kg	
Iron		31,900	5.0	mg/kg	
Total Mercury	**Method: 7471B**				
Analysis Date: 03/07/22					
Mercury		< 0.05	0.05	mg/kg	
TCLP Metals Method 1311	**Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22			Preparation Date: 03/09/22		
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	
Lead		0.007	0.005	mg/L	
Selenium		< 0.010	0.010	mg/L	
Silver		< 0.005	0.005	mg/L	
Iron		0.1	0.1	mg/L	
TCLP Mercury Method 1311	**Method: 7470A**				
Analysis Date: 03/08/22					
Mercury		< 0.0005	0.0005	mg/L	
TCLP Extraction	**Method: 1311**				
Analysis Date: 03/07/22					
TCLP Extraction		Complete			
pH @ 25°C, 1:2	**Method: 9045D**				
Analysis Date: 03/10/22 12:54					
pH @ 25°C, 1:2		7.63		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3A
Sample No: 22-1331-003

Date Collected: 03/01/22
Time Collected: 12:49
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	88.18		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	12:49
Sample ID:	G-3A	**Date Received:**	03/03/22
Sample No:	22-1331-003	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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: 03/09/22 Preparation Date: 03/07/22				
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	12:49
Sample ID:	G-3A	**Date Received:**	03/03/22
Sample No:	22-1331-003	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3A
Sample No: 22-1331-003

Date Collected: 03/01/22
Time Collected: 12:49
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22		Preparation Date: 03/04/22		
Arsenic	7.1	1.0	mg/kg	
Barium	30.5	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	12.8	0.5	mg/kg	
Lead	12.3	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Iron	19,200	5.0	mg/kg	
Total Mercury **Method: 7471B**				
Analysis Date: 03/07/22				
Mercury	< 0.05	0.05	mg/kg	
TCLP Metals Method 1311 **Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22		Preparation Date: 03/09/22		
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	
Lead	< 0.005	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
Iron	< 0.1	0.1	mg/L	
TCLP Mercury Method 1311 **Method: 7470A**				
Analysis Date: 03/08/22				
Mercury	< 0.0005	0.0005	mg/L	
TCLP Extraction **Method: 1311**				
Analysis Date: 03/07/22				
TCLP Extraction	Complete			
pH @ 25°C, 1:2 **Method: 9045D**				
Analysis Date: 03/10/22 12:54				
pH @ 25°C, 1:2	8.40		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3B
Sample No: 22-1331-004
Date Collected: 03/01/22
Time Collected: 13:14
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	85.67		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3B
Sample No: 22-1331-004

Date Collected: 03/01/22
Time Collected: 13:14
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/09/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3B
Sample No: 22-1331-004

Date Collected: 03/01/22
Time Collected: 13:14
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C** Analysis Date: 03/09/22		**Preparation Method 3540C** Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3B
Sample No: 22-1331-004

Date Collected: 03/01/22
Time Collected: 13:14
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte		Result	R.L.	Units	Flags
Semi-Volatile Compounds	**Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22			Preparation Date: 03/07/22		
2,4,6-Trichlorophenol		< 330	330	ug/kg	
Total Metals	**Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22			Preparation Date: 03/04/22		
Arsenic		9.2	1.0	mg/kg	
Barium		55.6	0.5	mg/kg	
Cadmium		< 0.5	0.5	mg/kg	
Chromium		17.1	0.5	mg/kg	
Lead		17.2	0.5	mg/kg	
Selenium		< 1.0	1.0	mg/kg	
Silver		< 0.2	0.2	mg/kg	
Iron		24,200	5.0	mg/kg	
Total Mercury	**Method: 7471B**				
Analysis Date: 03/07/22					
Mercury		< 0.05	0.05	mg/kg	
TCLP Metals Method 1311	**Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22			Preparation Date: 03/09/22		
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	
Lead		< 0.005	0.005	mg/L	
Selenium		< 0.010	0.010	mg/L	
Silver		< 0.005	0.005	mg/L	
Iron		< 0.1	0.1	mg/L	
TCLP Mercury Method 1311	**Method: 7470A**				
Analysis Date: 03/08/22					
Mercury		< 0.0005	0.0005	mg/L	
TCLP Extraction	**Method: 1311**				
Analysis Date: 03/07/22					
TCLP Extraction		Complete			
pH @ 25°C, 1:2	**Method: 9045D**				
Analysis Date: 03/10/22 12:54					
pH @ 25°C, 1:2		9.03		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3C
Sample No: 22-1331-005
Date Collected: 03/01/22
Time Collected: 14:40
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	85.89		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	14:40
Sample ID:	G-3C	**Date Received:**	03/03/22
Sample No:	22-1331-005	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3C
Sample No: 22-1331-005

Date Collected: 03/01/22
Time Collected: 14:40
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C** Analysis Date: 03/09/22		**Preparation Method 3540C** Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-3C
Sample No: 22-1331-005

Date Collected: 03/01/22
Time Collected: 14:40
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte		Result	R.L.	Units	Flags
Semi-Volatile Compounds	**Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22			Preparation Date: 03/07/22		
2,4,6-Trichlorophenol		< 330	330	ug/kg	
Total Metals	**Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22			Preparation Date: 03/04/22		
Arsenic		5.7	1.0	mg/kg	
Barium		58.1	0.5	mg/kg	
Cadmium		< 0.5	0.5	mg/kg	
Chromium		19.1	0.5	mg/kg	
Lead		12.2	0.5	mg/kg	
Selenium		< 1.0	1.0	mg/kg	
Silver		< 0.2	0.2	mg/kg	
Iron		20,700	5.0	mg/kg	
Total Mercury	**Method: 7471B**				
Analysis Date: 03/07/22					
Mercury		< 0.05	0.05	mg/kg	
TCLP Metals Method 1311	**Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22			Preparation Date: 03/09/22		
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	
Lead		< 0.005	0.005	mg/L	
Selenium		< 0.010	0.010	mg/L	
Silver		< 0.005	0.005	mg/L	
Iron		< 0.1	0.1	mg/L	
TCLP Mercury Method 1311	**Method: 7470A**				
Analysis Date: 03/08/22					
Mercury		< 0.0005	0.0005	mg/L	
TCLP Extraction	**Method: 1311**				
Analysis Date: 03/07/22					
TCLP Extraction		Complete			
pH @ 25°C, 1:2	**Method: 9045D**				
Analysis Date: 03/10/22 12:54					
pH @ 25°C, 1:2		8.98		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-4
Sample No: 22-1331-006

Date Collected: 03/01/22
Time Collected: 12:20
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	80.81		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-4
Sample No: 22-1331-006

Date Collected: 03/01/22
Time Collected: 12:20
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-4
Sample No: 22-1331-006

Date Collected: 03/01/22
Time Collected: 12:20
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-4
Sample No: 22-1331-006

Date Collected: 03/01/22
Time Collected: 12:20
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22		Preparation Date: 03/04/22		
Arsenic	7.9	1.0	mg/kg	
Barium	49.5	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	14.8	0.5	mg/kg	
Lead	15.5	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Iron	22,000	5.0	mg/kg	
Total Mercury **Method: 7471B**				
Analysis Date: 03/07/22				
Mercury	< 0.05	0.05	mg/kg	
TCLP Metals Method 1311 **Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22		Preparation Date: 03/09/22		
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	
Lead	< 0.005	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
Iron	< 0.1	0.1	mg/L	
TCLP Mercury Method 1311 **Method: 7470A**				
Analysis Date: 03/08/22				
Mercury	< 0.0005	0.0005	mg/L	
TCLP Extraction **Method: 1311**				
Analysis Date: 03/07/22				
TCLP Extraction	Complete			
pH @ 25°C, 1:2 **Method: 9045D**				
Analysis Date: 03/10/22 12:54				
pH @ 25°C, 1:2	8.36		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMA
Sample No: 22-1331-007
Date Collected: 03/01/22
Time Collected: 11:45
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	79.31		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	11:45
Sample ID:	G-WMA	**Date Received:**	03/03/22
Sample No:	22-1331-007	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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: 03/09/22 Preparation Date: 03/07/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMA
Sample No: 22-1331-007

Date Collected: 03/01/22
Time Collected: 11:45
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMA
Sample No: 22-1331-007

Date Collected: 03/01/22
Time Collected: 11:45
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte		Result	R.L.	Units	Flags
Semi-Volatile Compounds	**Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22			Preparation Date: 03/07/22		
2,4,6-Trichlorophenol		< 330	330	ug/kg	
Total Metals	**Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22			Preparation Date: 03/04/22		
Arsenic		9.5	1.0	mg/kg	
Barium		127	0.5	mg/kg	
Cadmium		< 0.5	0.5	mg/kg	
Chromium		25.6	0.5	mg/kg	
Lead		142	0.5	mg/kg	
Selenium		< 1.0	1.0	mg/kg	
Silver		< 0.2	0.2	mg/kg	
Iron		31,200	5.0	mg/kg	
Total Mercury	**Method: 7471B**				
Analysis Date: 03/07/22					
Mercury		0.06	0.05	mg/kg	
TCLP Metals Method 1311	**Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22			Preparation Date: 03/09/22		
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	
Lead		0.007	0.005	mg/L	
Selenium		< 0.010	0.010	mg/L	
Silver		< 0.005	0.005	mg/L	
Iron		0.5	0.1	mg/L	
TCLP Mercury Method 1311	**Method: 7470A**				
Analysis Date: 03/08/22					
Mercury		< 0.0005	0.0005	mg/L	
TCLP Extraction	**Method: 1311**				
Analysis Date: 03/07/22					
TCLP Extraction		Complete			
pH @ 25°C, 1:2	**Method: 9045D**				
Analysis Date: 03/10/22 12:54					
pH @ 25°C, 1:2		8.03		Units	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMB
Sample No: 22-1331-008

Date Collected: 03/01/22
Time Collected: 11:19
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Solids, Total **Method: 2540G 2011**				
Analysis Date: 03/03/22				
Total Solids	82.54		%	
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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	

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Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMB
Sample No: 22-1331-008

Date Collected: 03/01/22
Time Collected: 11:19
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Volatile Organic Compounds **Method: 5035A/8260B**				
Analysis Date: 03/10/22				
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: 03/09/22		Preparation Date: 03/07/22		
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	

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Analytical Report

Client:	BROWNFIELD ENVIRONMENTAL ENGINEERING	**Date Collected:**	03/01/22
Project ID:	042-015	**Time Collected:**	11:19
Sample ID:	G-WMB	**Date Received:**	03/03/22
Sample No:	22-1331-008	**Date Reported:**	03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
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	< 330	330	ug/kg	

First Environmental Laboratories, Inc

IL ELAP / NELAC Certification # 100292

1600 Shore Road • Naperville, Illinois 60563 • Phone (630) 778-1200 • FirstEnv.com

Analytical Report

Client: BROWNFIELD ENVIRONMENTAL ENGINEERING
Project ID: 042-015
Sample ID: G-WMB
Sample No: 22-1331-008

Date Collected: 03/01/22
Time Collected: 11:19
Date Received: 03/03/22
Date Reported: 03/10/22

Results are reported on a dry weight basis.

Analyte	Result	R.L.	Units	Flags
Semi-Volatile Compounds **Method: 8270C**		**Preparation Method 3540C**		
Analysis Date: 03/09/22		Preparation Date: 03/07/22		
2,4,6-Trichlorophenol	< 330	330	ug/kg	
Total Metals **Method: 6010C**		**Preparation Method 3050B**		
Analysis Date: 03/07/22		Preparation Date: 03/04/22		
Arsenic	9.1	1.0	mg/kg	
Barium	86.2	0.5	mg/kg	
Cadmium	< 0.5	0.5	mg/kg	
Chromium	25.3	0.5	mg/kg	
Lead	17.4	0.5	mg/kg	
Selenium	< 1.0	1.0	mg/kg	
Silver	< 0.2	0.2	mg/kg	
Iron	29,200	5.0	mg/kg	
Total Mercury **Method: 7471B**				
Analysis Date: 03/07/22				
Mercury	< 0.05	0.05	mg/kg	
TCLP Metals Method 1311 **Method: 6010C**		**Preparation Method 3010A**		
Analysis Date: 03/09/22		Preparation Date: 03/09/22		
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	
Lead	0.007	0.005	mg/L	
Selenium	< 0.010	0.010	mg/L	
Silver	< 0.005	0.005	mg/L	
Iron	1.9	0.1	mg/L	
TCLP Mercury Method 1311 **Method: 7470A**				
Analysis Date: 03/08/22				
Mercury	< 0.0005	0.0005	mg/L	
TCLP Extraction **Method: 1311**				
Analysis Date: 03/07/22				
TCLP Extraction	Complete			
pH @ 25°C, 1:2 **Method: 9045D**				
Analysis Date: 03/10/22 12:54				
pH @ 25°C, 1:2	8.45		Units	

CHAIN OF CUSTODY RECORD

Page 1 of 1 Pgs

First Environmental Laboratories, Inc.

1600 Shore Road, Suite D
Naperville, IL 60563
Phone: (630)778-1200 * Fax (630)778-1233
E-Mail: firstinfo@firstenv.com
IEPA Accreditation #100292
www.firstenv.com

Company Name: Brownfield Environmental Engineering Resources			
Street Address: 645 Third St. Suite 250			
City: Beloit	State: WI	Zip: 53511	
Phone: (608) 295-4661	e-Mail: cory@brownfieldusa.com		
Send Report To: cory@brownfieldusa.com	Hardcopy: ☐	PDF e-Mail: ■	
Sampled By: Cory Knudson			

Project I.D.: 042-015

P.O. #:

Enter analyses required on the lines to the left. Place an "X" in the box below to indicate which samples require what analysis.

Date/Time Taken	Sample Description	Matrix*	VOCs	SVOCs	PNAs	RCRA Metals	Iron	pH	TCLP Metals + Iron	HOLD-Do not analyze	Comments	Lab I.D.
3/1/22 0938	G-1A	S	✓	✓	✓	✓	✓	✓	✓		22-	1331-001
3/1/22 1010	G-1B	S	✓	✓	✓	✓	✓	✓	✓			002
3/1/22 1249	G-3A	S	✓	✓	✓	✓	✓	✓	✓			003
3/1/22 1314	G-3B	S	✓	✓	✓	✓	✓	✓	✓			004
3/1/22 1440	G-3C	S	✓	✓	✓	✓	✓	✓	✓			005
3/1/22 1220	G-4	S	✓	✓	✓	✓	✓	✓	✓			006
3/1/22 1145	G-WMA	S	✓	✓	✓	✓	✓	✓	✓		PID: 2.0	007
3/1/22 1119	G-WMB	S	✓	✓	✓	✓	✓	✓	✓		PID: 3.0	008

FOR LAB USE ONLY:
Cooler Temperature: 0.1-6°C Yes ✓ No___ 3.3 °C
Received within 6 hrs of collection:_____
Ice Present: Yes ✓ No_____

FOR LAB COURIER USE ONLY:
Sample Refrigerated: Yes_____ No_____
Refrigerator Temperature:_____ °C

Program: ☐ TACO/SRP ■ CCDD ☐ NPDES ☐ LUST ☐ SDWA

*Matrix Code Key: **DW**-drinking water **GW**-groundwater **WW**- wastewater **S**-soil **SL**-sludge **WIPE**-wipe **O**-other

Notes and Special Instructions:

Relinquished By:	Date/Time: 3/2/22 1200	Received By:	Date/Time: 3/3/22 1130
Relinquished By:	Date/Time:	Received By:	Date/Time:

Rev 10/19

BROWNFIELD
ENVIRONMENTAL ENGINEERING

645 Third Street, Suite 250, Beloit, WI 53511
(608) 856-5434 | (815) 713-9165 | www.brownfieldusa.com

IEPA Document Explorer Map- Area 4

Location:	Lockwood Ln. and Locksee Ct., Gurnee, IL
Client:	Village of Gurnee
Project:	042-015
Date:	March 14, 2022

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: 2022 Street Maintenance Area No. 4 Office Phone Number, if available:

Physical Site Location (address, including number and street):
Lockwood Ln, and Locksee Ct.

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: 42.38984 Longitude: - 87.96174
(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: N/A BOW: N/A BOA: N/A

Approximate Start Date (mm/dd/yyyy): May 1, 2022 Approximate End Date (mm/dd/yyyy): Aug 31, 2022

Estimated Volume of debris (cu. Yd.): 310

II. Owner/Operator Information for Source Site

Site Owner

Name: Village of Gurnee
Street Address: 325 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 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.

Project Name: 2022 Street Maintenance Area No. 4 Latitude: 42.38984 Longitude: - 87.96174

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]:

The sample obtained from test locations within the right-of-way (ROW) at the site was collected from approximately 3' below ground surface, and was analyzed for VOCs, SVOCs, RCRA Metals, pH, PNAs, Iron, and TCLP Metals. Field screening was performed with a photoionization detector (PID), pH meter, and visual and olfactory sensory observations.

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

I, Bradley A. Brown, P.E. (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 Street - Suite 250
City:	Beloit State: WI Zip Code: 53511
Phone:	815-713-9165

Bradley A. Brown, P.E.
Printed Name:

Licensed Professional Engineer or
Licensed Professional Geologist Signature:

Mar 15, 2022
Date:

STATE OF ILLINOIS
BRADLEY A. BROWN
062-049676
REGISTERED
PROFESSIONAL ENGINEER

EXP. 11/30/23

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