May 24, 2022

Mr. Michael Conroe
ELLI Manager LLC
15 Cobblestone Court
Orchard Park, New York 14127

Re: Phase II Environmental Investigation
20 to 40 Fillmore Avenue
Tonawanda, New York

Dear Mr. Conroe:

TurnKey Environmental Restoration, LLC (TurnKey) has prepared this letter report to summarize the results of the Phase II Environmental Investigation (Phase II) activities at 20, 30, and 40 Fillmore Avenue, Tonawanda, New York (Site, see Figures 1 and 2) for ELLI Manager LLC (ELLI). The purpose of the Phase II was to evaluate potential environmental impacts at the Site associated with historic uses and an underground storage tank (UST), in addition to determine if the Site may be a candidate for the New York State Brownfield Cleanup Program (BCP).

As part of the Phase II, TurnKey reviewed Sanborn Maps (see Attachment 1), New York State Department of Environmental Conservation (NYSDEC) online records (DECinfo Locator ny.gov), and submitted Freedom of Information Act (FOIA) request to NYSDEC. The following information was identified:

- The Site was formally used as a coal and wood storage yard, boiler shop, welding operation, repair shop, and boat storage facility.
- A "G.T." indicating a gas tank was noted in the same location on both the 1951 and 1967 Sanborn Maps on the 30 Fillmore Avenue parcel (see Figure 2).
- A former NYSDEC Spill Number 9975702 associated with petroleum contamination identified along the embankment adjacent to the Site when the New York State Department of Transportation (NYSDOT) was performing upgrades to the bridge on Delaware Avenue. The spill was listed as No Further Action Required in March 2004, when soil disposal documentation was located in a different NYSDEC spill file. It is believed that NYSDOT managed soil that was necessary to complete the bridge work. It is unclear if the petroleum contamination associated with this spill was on the Site.

Phase II Environmental Investigation

The Phase II investigation activities consisted of 12 test pit (TP) locations, which are shown on Figure 3.

The TPs were completed using a mini-excavator and were completed to depths that ranged from 4 to 7.5 feet below ground surface (fbgs). Excavated soil/fill was brought to the ground surface for field characterization and to collect of soil/fill samples by TurnKey's geologist. Soil/fill generated during the test pits were placed on the ground adjacent to the test pit location and used to backfill the excavations back to ground surface, generally in the order in which it was removed.

TurnKey personnel made visual and olfactory observations, and scanned soil/fill samples retrieved from the investigation locations for total volatile organic vapors with a photoionization detector (PID) that is capable of detecting the presence of contaminants that emit volatile organic compounds (VOCs) such as petroleum products and solvents.

PID measurements above background (i.e., 0 parts per million (ppm)) were observed at TP-1 (0 to 7 fbgs), TP-6 (0 to 6 fbgs) and TP-7 (2 to 7 fbgs) which exhibited a field screening result of ranging from 2 to 1,000 parts per million (ppm) in addition to petroleum odors and staining (see Table 1). The three (3) test pit locations were completed in the vicinity of the UST noted on the 1951 and 1967 Sanborn maps shown on Figure 2. Based on the elevated PID field screening results and evidence of a petroleum release noted at TP-1, -6, and -7, NYSDEC was notified, and Spill No. 2200862 was assigned to the 30 Fillmore Avenue parcel, although evidence of petroleum impacts was also noted at TP-6 which was completed on the 40 Fillmore Avenue parcel.

Field observations, including lithology, depths, photoionization detection (PID) screening results, etc., at test pit locations are summarized in Table 1 - Summary of Subsurface Field Conditions.

Sample Analysis

Table 2 is a summary of the eight (8) soil/fill samples collected from seven (7) TP locations submitted to the laboratory along with the analysis completed. The soil/fill samples were placed in pre-cleaned laboratory provided sample jars, cooled to 4°C in the field, and transported under chain-of-custody to the laboratory for analysis by Alpha Analytical, Inc. in Westbrough, Massachusetts. Analysis included VOCs via EPA Method 8260 (two (2) samples), semi-volatile organic compounds (SVOCs) polycyclic aromatic hydrocarbon (PAH)-list via EPA Method 8270 (eight (8) samples) and RCRA 8 metals via EPA Method 6010/7471 (eight (8) samples).

Subsurface Conditions

The subsurface conditions encountered at the Site consisted of fill material overlying apparent native soil. Table 1 is a summary of the subsurface conditions encountered at the

investigation locations. The fill materials were encountered across the Site in the upper 2 to 4 fbgs consisting of black fines (cinders) with various amounts of ash, brick, slag and concrete which was overlying clays and sands. Groundwater was encountered at three (3) test pit locations at depth of 6 to 7 fbgs. A sheen was observed on the water at TP-7.

Evidence of a petroleum release was observed at TP-1, TP-6, and TP-7 completed in the vicinity of the UST identified on the Sanborn maps; however, evidence of the UST or associated piping were not observed at the test pit locations.

Soil/Fill Analytical Results

The results of the analytical samples collected and analyzed as part of the Phase II investigation are summarized on Table 3. The laboratory analytical report is included in Attachment 3.

Based on the planned mixed residential and commercial use redevelopment, the applicable soil cleanup objectives (SCOs) would be 6NYCRR Part 375 Restricted-Residential Use Soil Cleanup Objectives (RRSCOs). Exceedances of the RRSCOs, as well as Commercial SCOs (CSCOs) and Industrial SCOs (ISCOs), were noted in the eight (8) sample analyzed during this investigation and within each of the three (3) parcels that make up the Site. Additionally, because evidence of a petroleum release was observed and Spill No. 2200862 was assigned, the NYSDEC Commissioner's Policy (CP) – 51 / Soil Cleanup Guidance, Soil Cleanup Levels (SCLs) for Gasoline Contaminated Soils were also used for comparative purposes.

Volatile Organic Compounds

VOCs were detected in both of the samples analyzed for VOCs during the Phase II. Petroleum-related compounds (ethylbenzene, toluene, xylene, 1,3,5-trimethylbenzene and 1,2,4-trimethylbenzene) were detected above their respective CP-51 SCLs at TP-1, 3 to 6 feet in the area of the UST where petroleum impacts were observed.

Semi-Volatile Organic Compounds

SVOCs were detected at or above their respective Part 375 RRSCOs (i.e., the applicable SCOs for the intended Site reuse) at five (5) investigation locations, TP-1, TP-3, TP-4, TP-11, and TP-12. The exceedances were identified in the soil/fill material as shown on Figure 4.

- Benzo(a)anthracene exceeded its RRSCO at four (4) locations, TP-3, TP-4, TP-11, and TP-12.
- Benzo(a)pyrene exceeded its ISCO at four (4) locations, TP-3, TP-4, TP-11, and TP-12.
- Benzo(b)fluoranthene exceeded its RRSCO at four (4) locations, TP-3, TP-4, TP-11, and TP-12.
- Chrysene exceeded its RRSCO at two (2) location, TP-4 and TP-12.

- Indeno(1,2,3-cd)pyrene exceeded its RRSCO at five (5) locations, TP-1, TP-3, TP-4, TP-11, and TP-12.

Metal Analytes

Metal analytes were detected above their respective RRSCOs at three (3) investigation locations, TP-1, TP-6, and TP-10.

- Lead exceeded its RRSCO at three (3) locations, TP-1, TP-6, and TP-10.
- Mercury exceeded its RRSCO at one (1) location, TP-10.

Conclusions

Environmental impacts have been identified at the Site. Petroleum impacts (VOCs above CP-51 SCLs, visual and olfactory evidence of petroleum contamination) were identified in the vicinity of the gasoline UST and Spill No. 2200862 was assigned by NYSDEC. Petroleum impacts were present on both the 30 and 40 Fillmore Avenue parcels; however, it is unknown if the UST or related piping is still present at the Site.

SVOCs and metals were also detected in the fill material present across the Site (20, 30, and 40 Fillmore Avenue) at concentrations above their respective RRSCOs, which are applicable for the intended reuse of the Site. Fill material varies in depth up to 4 fbgs. The soil/fill material and any other contaminated material generated during redevelopment of the Site will require remediation as contaminated soil. Additional sampling will be required to confirm the soil/fill can be handled/disposed as non-hazardous waste.

Based on the existing data and evidence of a petroleum release, the Site is a candidate for the BCP. The Site meets the definition of a BCP site per the current BCP law which states a "brownfield site or site shall mean any real property where a contaminant is present at levels exceeding the soil cleanup objectives or other health-based or environmental standards, criteria, or guidance adopted by the department that are applicable based on the reasonably anticipated use of the property, in accordance with applicable regulations."

Remedial work will be required to address the petroleum contamination identified on the 30 and 40 Fillmore Avenue parcels. Additionally, an electromagnetic survey should be completed to determine if the UST is still present in the ground. If the Site were to be accepted in to the BCP, the additional work required to assess for the presence of the UST and remediation of the petroleum contamination could be completed under the BCP, along with remediation of other soil contamination present at the Site.

A copy of this letter report should be provided to NYSDEC regarding Spill No. 220862 for their files. If ELLI intends to pursue potential BCP eligibility, NYSDEC Spills Group should be made aware of this decision

Please contact us if you have any questions or require additional information.

Sincerely,
TurnKey Environmental Restoration, LLC

Christopher Boron
Sr. Project Manager

Michael Lesakowski
President

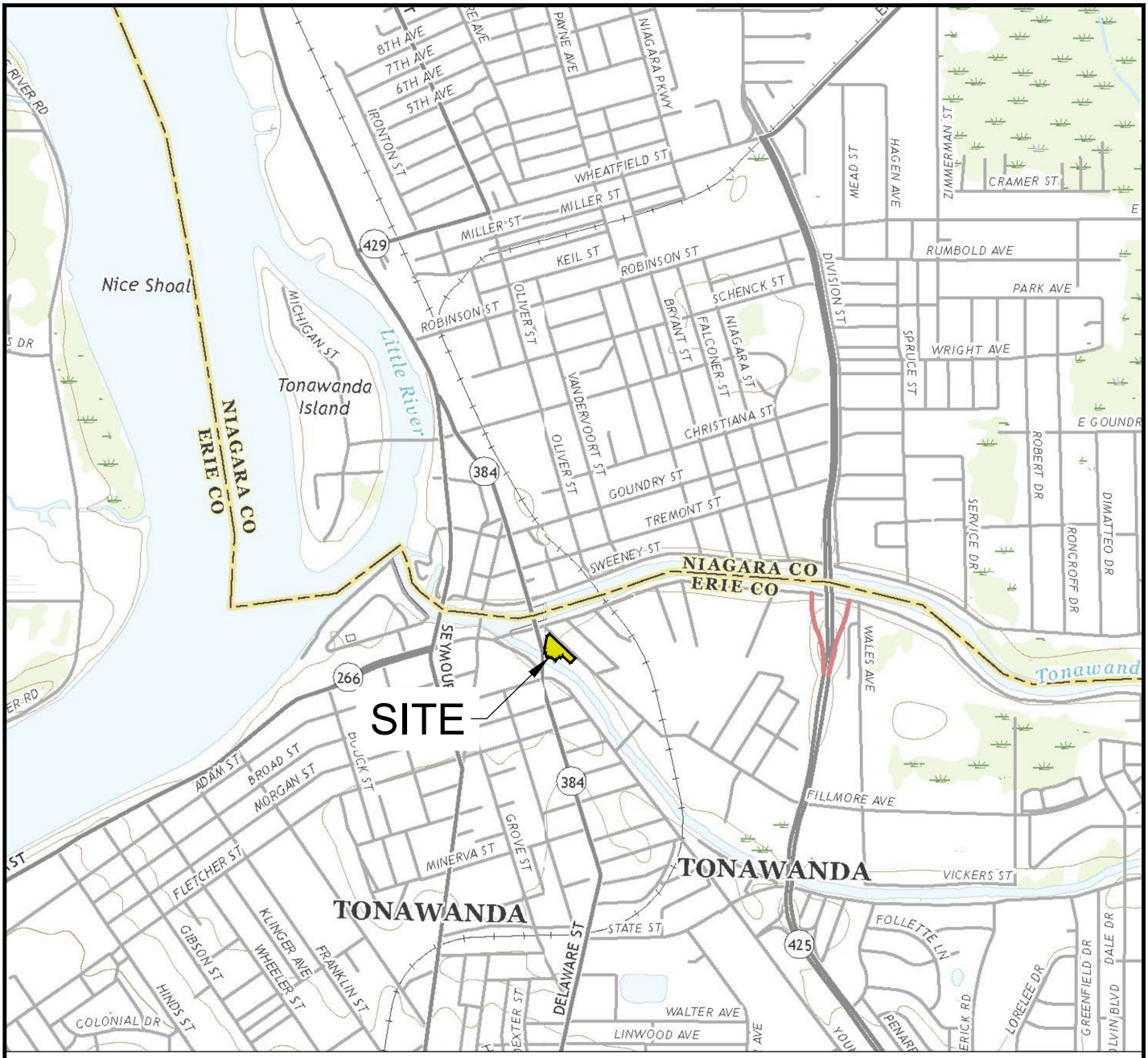
Attachments:
Figure 1 – Site Location & Vicinity Map
Figure 2 – Site Plan
Figure 3 – Investigation Locations
Figure 4 – Summary of Analytical Data
Table 1 – Summary of Subsurface Field Observations
Table 2 – Summary of Phase II Sampling and Analysis Program
Table 3 – Summary of Soil/Fill Sample Analytical Results
Attachment 1- Sanborn Maps
Attachment 2 – NYSDEC Spill File
Attachment 3 - Analytical Data Report

File: 0621-022-001

FIGURES

F:\CAD\TurnKey\ELLI Manager LLC\20-40 Fillmore Avenue\Phase II\Figure 1; Site Location and Vicinity Map.dwg, 5/19/2022 10:50:15 AM, DWG To PDF.pc3

FIGURE 1



SCALE: 1 INCH = 2,000 FEET
SCALE IN FEET
(approximate)

TurnKey Environmental Restoration, LLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: T0621-022-001

DATE: MAY 2022

DRAFTED BY: CNK

SITE LOCATION AND VICINITY MAP

PHASE II ENVIRONMENTAL INVESTIGATION REPORT

20 TO 40 FILLMORE AVENUE
TONAWANDA, NEW YORK

PREPARED FOR

ELLI MANAGER LLC

DISCLAIMER:
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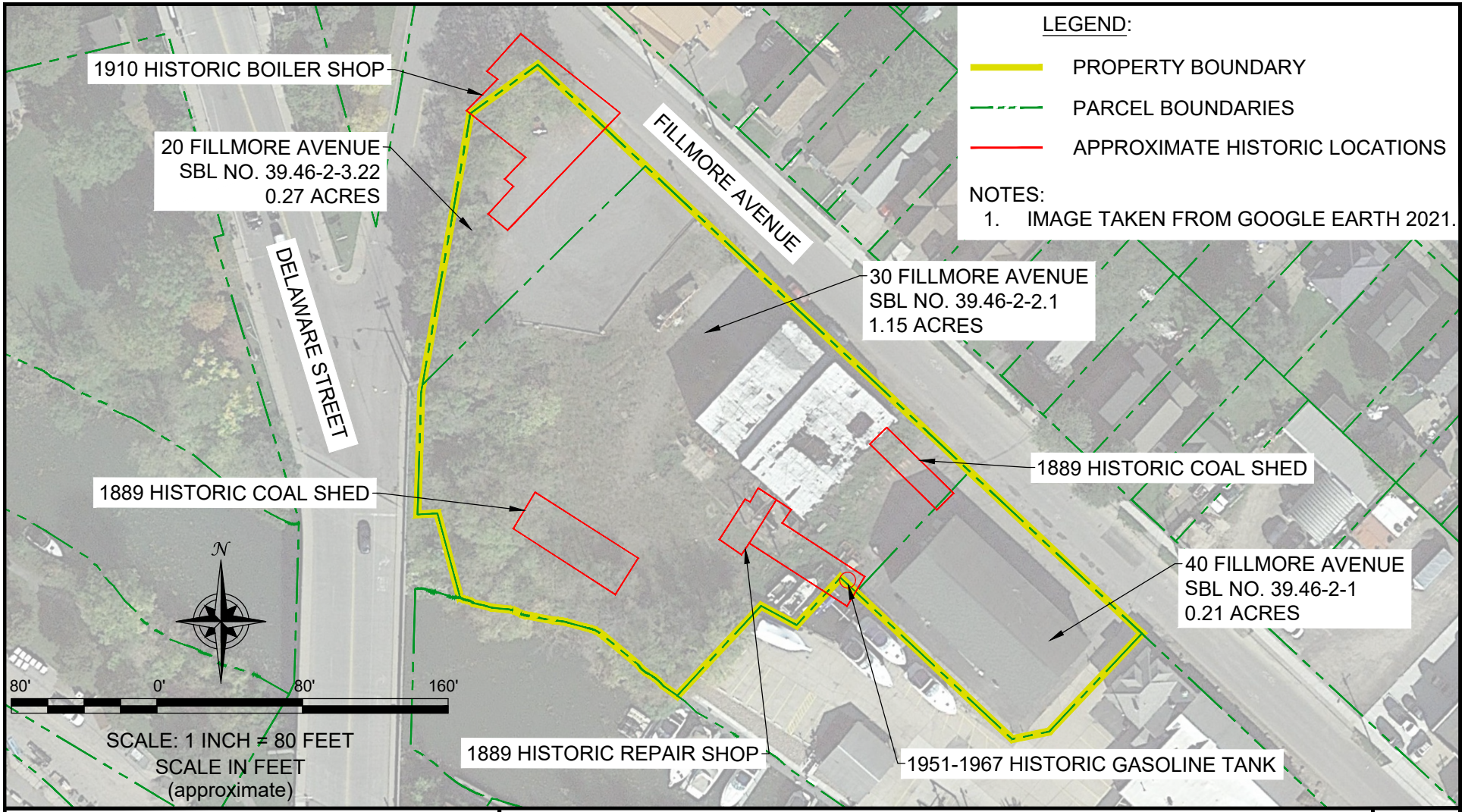
F:\CAD\TurnKey\ELLI Manager LLC\20-40 Fillmore Avenue\Phase II\Figure 2; Site Plan with Historic Sanborn Features.dwg, 5/19/2022 10:55:16 AM, DWG To PDF.pc3



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SITE PLAN WITH HISTORIC SANBORN FEATURES

PHASE II ENVIRONMENTAL INVESTIGATION REPORT

20 TO 40 FILLMORE AVENUE
TONAWANDA, NEW YORK

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FIGURE 2

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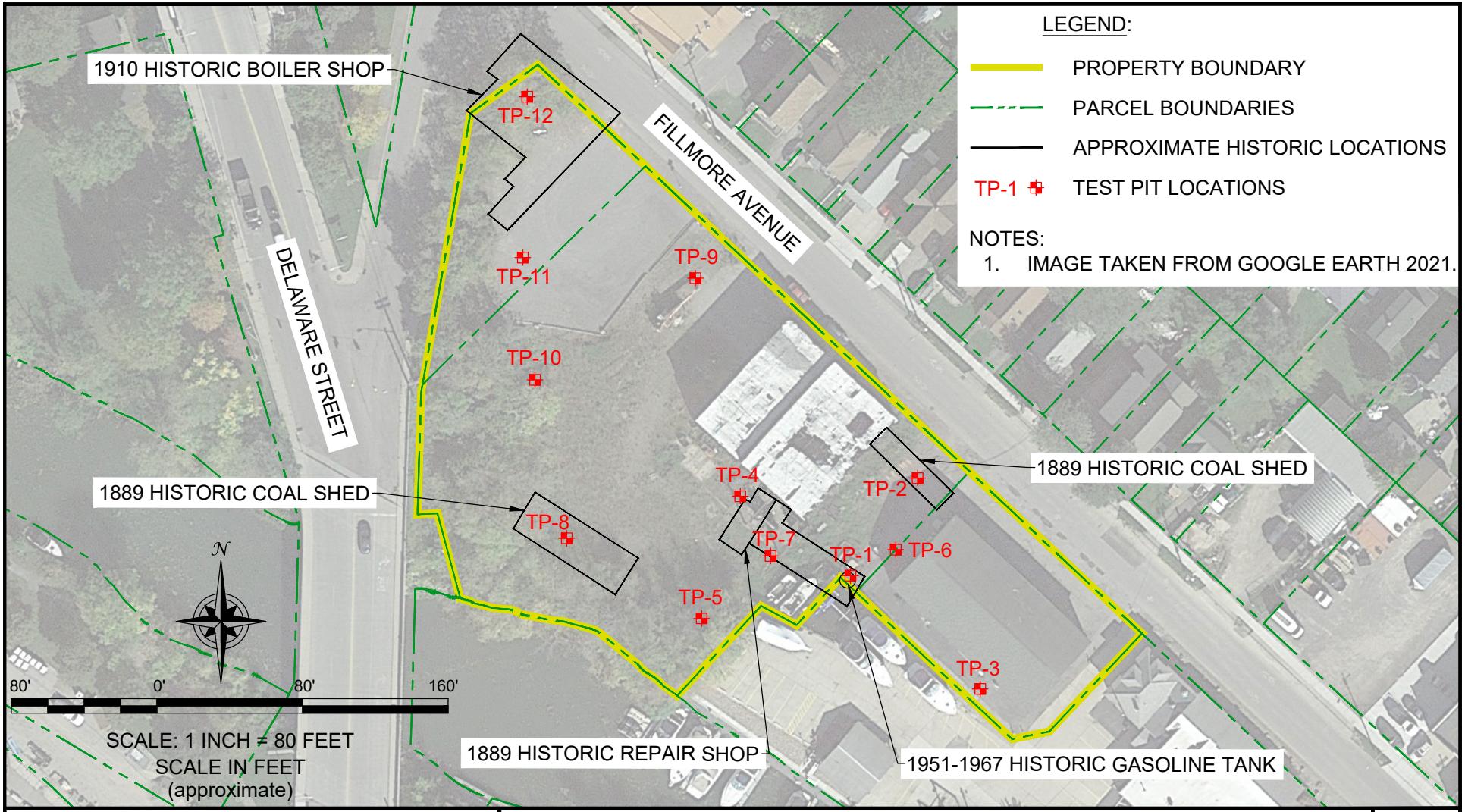
F:\CAD\TurnKey\ELLI Manager LLC\20-40 Fillmore Avenue\Phase II\Figure 3; Phase II Investigation Locations.dwg, 5/20/2022 11:09:19 AM, DWG To PDF.pc3



PHASE II INVESTIGATION LOCATIONS

PHASE II ENVIRONMENTAL INVESTIGATION REPORT

20 TO 40 FILLMORE AVENUE
TONAWANDA, NEW YORK

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FIGURE 3

TurnKey Environmental Restoration, LLC
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F:\CAD\TurnKey\ELLI Manager LLC\20-40 Fillmore Avenue\Phase II\Figure 4; Phase II Investigation Locations and Exceedances.dwg, 5/20/2022 11:44:26 AM, DWG To PDF.pc3

LEGEND:

- PROPERTY BOUNDARY
- PARCEL BOUNDARIES
- TP-1 TEST PIT LOCATIONS
- EXCEEDS UNRESTRICTED SCOs
- EXCEEDS RESTRICTED-RESIDENTIAL SCOs
- EXCEEDS COMMERCIAL SCOs
- EXCEEDS INDUSTRIAL SCOs

NOTES:
1. IMAGE TAKEN FROM GOOGLE EARTH 2021.
2. RESULTS COMPARED TO 6 NYCRR PART 375 SOIL CLEANUP OBJECTIVES (SCOs).

E NIAGARA STREET

FILLMORE AVENUE

LONGS AVENUE

DELAWARE STREET

ELLICOTT CREEK

TP-1, TP-2, TP-3, TP-4, TP-5, TP-6, TP-7, TP-8, TP-9, TP-10, TP-11, TP-12

TP-12 (0.5-4 FT)	4/26/2022
PARAMETER	MG/KG
BENZO(A)ANTHRACENE	3.9
BENZO(A)PYRENE	4
BENZO(B)FLUORANTHENE	5.1
BENZO(K)FLUORANTHENE	1.1
CHRYSENE	4
DIBENZO(A,H)ANTHRACENE	0.52
INDENO(1,2,3-CD)PYRENE	3
CHROMIUM	54.8

TP-4 (0-2 FT)	4/26/2022
PARAMETER	MG/KG
BENZO(A)ANTHRACENE	4.8
BENZO(A)PYRENE	3.2
BENZO(B)FLUORANTHENE	4
BENZO(K)FLUORANTHENE	1.2
CHRYSENE	4.1
DIBENZO(A,H)ANTHRACENE	0.45
INDENO(1,2,3-CD)PYRENE	2

TP-11 (0-2 FT)	4/26/2022
PARAMETER	MG/KG
BENZO(A)ANTHRACENE	1.2
BENZO(A)PYRENE	1.1
BENZO(B)FLUORANTHENE	1.5
CHRYSENE	1.2
INDENO(1,2,3-CD)PYRENE	0.82
LEAD	228
MERCURY	0.452

TP-6 (0.5-2 FT)	4/26/2022
PARAMETER	MG/KG
LEAD	537

TP-10 (0-2 FT)	4/26/2022
PARAMETER	MG/KG
LEAD	699
MERCURY	1.37

TP-1 (0-1.5 FT)	4/26/2022
PARAMETER	MG/KG
INDENO(1,2,3-CD)PYRENE	0.64
LEAD	158
MERCURY	0.218
TP-1 (3-6 FT)	4/26/2022
PARAMETER	MG/KG
1,3,5-TRIMETHYLBENZENE	14
1,2,4-TRIMETHYLBENZENE	33
ETHYLBENZENE	7.3
N-PROPYLBENZENE	4.9
TOTAL XYLENES	20.1
LEAD	405

TP-3 (1-3.5 FT)	4/26/2022
PARAMETER	MG/KG
BENZO(A)ANTHRACENE	1.5
BENZO(A)PYRENE	2.2
BENZO(B)FLUORANTHENE	2.2
CHRYSENE	1.3
DIBENZO(A,H)ANTHRACENE	0.34
INDENO(1,2,3-CD)PYRENE	1.8
LEAD	320
MERCURY	0.184

N

80' 0' 80' 160'

SCALE: 1 INCH = 80 FEET
SCALE IN FEET
(approximate)

DATE: MAY 2022
DRAFTED BY: CNK

TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218.
(716) 856-0599

JOB NO.: T0621-022-001

PHASE II INVESTIGATION LOCATIONS AND EXCEEDANCES

PHASE II ENVIRONMENTAL INVESTIGATION REPORT

20 TO 40 FILLMORE AVENUE
TONAWANDA, NEW YORK

PREPARED FOR
ELLI MANAGER LLC

FIGURE 4

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TABLES

TurnKey

TABLE 1
SUMMARY OF SUBSURFACE FIELD OBSERVATIONS
PHASE II ENVIRONMENTAL INVESTIGATION REPORT
20-40 FILLMORE AVENUE
TONAWANDA, NEW YORK

Location	Date	Fill Present	Odors	Water Present	Depth of Test Pit (fbgs)	Thickness of Fill (ft)	PID Measurements (ppm)	Sample Depth (ft)	Depth and Soil Description
TP-1	04/26/22	Yes	Yes	No	7	1.5	30.7	0-1.5	**0 to 1.5 ft: FILL** - Black cinder and coal fill with slag
							700-1000	3-6	**1.7 to 7 ft: CLAY** - Olive gray/Brown, clay, petroleum odor
TP-2	04/26/22	Yes	No	No	4.5	1.5	0		**0-0.5 ft: STONE** - Stone with cinders
							0.8		**0.5-2 ft: FILL** - Brown, loose, partial combusted material
							0		2-**4.5 ft: FINE SAND** - Brown, moist, mostly fine sand with some silt
TP-3	04/26/22	Yes	No	Yes	6	2.5	0		**0-4 in: ASPHALT**
							0		**4-12 in: STONE SUBBASE**
							0	1-3.5	**1-3.5 ft: FILL** - Black, mostly fines mixed with slag
							0		**3.5-6 ft: CLAY** - Olive/gray clay, mottled, with some fine sand, water at 6 ft
TP-4	4/26/2022	Yes	No	No	7.5	2.0	0	0-2	**0-2 ft: FILL** - Black, mostly fines, some sand, with cinders, brick, partial combusted material, and coal
							0		**2-3 ft: CLAY** - Olive gray clay
							0		**3-7.5: CLAY** - Brown clay with some fine sand
TP-5	4/26/2022	Yes	No	No	6	2	0		**0-2 ft: FILL** - Black, mostly fines with cinders, brick, block, little fine gravel
							0		**2-6 ft: CLAY** - Brown, moist, mostly clay with some find sand, mottling

TABLE 1
SUMMARY OF SUBSURFACE FIELD OBSERVATIONS
PHASE II ENVIRONMENTAL INVESTIGATION REPORT
20-40 FILLMORE AVENUE
TONAWANDA, NEW YORK

Location	Date	Fill Present	Odors	Water Present	Depth of Test Pit (fbgs)	Thickness of Fill (ft)	PID Measurements (ppm)	Sample Depth (ft)	Depth and Soil Description
TP-6	4/26/2022	Yes	Yes	No	6	2.5	0	0.5-2	**0-2.5 ft: FILL** - cinder and ash fill
							1.8		**2.5-4 ft: CLAY** - olive gray clay
							36.8		**4-6 ft: FINE SAND** - Brown/gray, moist, fine sand with silt and clay, petroleum odor
TP-7	4/26/2022	Yes	Yes	Yes	7	2.0	0		**0-2 ft: FILL** - Black, cinder fill
							12.5		**2-4 ft: CLAY** - Olive gray, clay with some fine sand, slight petroleum odor
							268		**4-7: FINE SAND** - Olive gray mostly fine sand with some silt and clay, petroleum odor, slight sheen on water at 7 ft
TP-8	04/26/22	Yes	No	Yes	6.5	1.5	0		**0-1.5 ft: FILL** - Dark brown/black, moist, mostly fine sand with some silt, with cinders, brick, and slag
							0		**1.5-6.5 ft CLAY** - Brown/olive gray, mostly clay with some fine sand and silt, water at 6 ft
TP-9	4/26/2022	Yes	No	Yes	7	3.0	0		**0-3 ft: FILL** - Black/reddish brown fill with cinders, brick, and ash
							0		**3-7 ft: CLAY** - Brown clay with some fine sand and silt, iron mottling, water at 6.5 ft
TP-10	4/26/2022	Yes	No	No	2	2.0	0	0-2	**0-2 ft: FILL** - Black fines with concrete block
TP-11	4/26/2022	Yes	No	No	6	4.0	0	0-2	**0-4 ft: FILL** - Black/dark brown fine sand and clay, with brick, roots, and metal debris
							0		**4-6 ft: CLAY** - Brown, clay with some fine sand and silt
TP-12	4/26/2022	Yes	No	No	4	4.0	0	0.5-4	**0-4 ft: FILL** - Ash fill with sandstone block

Definitions:
fbgs = feet below ground surface
PID = photoionization detector
ppm = parts per million

TABLE 2
SUMMARY OF SAMPLING AND ANALYSIS PROGRAM
PHASE II ENVIRONMENTAL INVESTGATION REPORT
20-40 FILLMORE AVENUE
TONAWANDA, NEW YORK

Sample Location	Sample Depth	Soil Type	Analysis		
			TCL VOCs	TCL SVOCs base-neutrals only (PAHs)	RCRA 8 Metals
Subsurface Soil/Fill Samples					
TP-1	0 - 1.5 ft	Fill	1	1	1
TP-1	3 - 6 ft	Clay	1	1	1
TP-3	1 - 3.5 ft	Fill		1	1
TP-4	0 - 2 ft	Fill		1	1
TP-6	0.5 - 2 ft	Fill		1	1
TP-10	0 - 2 ft	Fill		1	1
TP-11	0 - 2 ft	Fill		1	1
TP-12	0.5 - 4 ft	Fill		1	1

Definitions:
ft = feet
TCL VOC - Total Compound List
VOC = Volatile Organic Compound
SVOC = Semi-Volatile Organic Compound
RCRA = Resource Conservation & Recovery Act
PAHs = Polycyclic aromatic hydrocarbons

TABLE 3
SUMMARY OF SOIL/FILL SAMPLE ANALYTICAL RESULTS
PHASE II ENVIRONMENTAL INVESTIGATION REPORT
20-40 FILLMORE AVENUE
TONAWANDA, NEW YORK

Parameter [1]	CP-51 SCLs[2] & Unrestricted SCOs[3] (mg/kg)	Restricted-Residential SCOs[4] (mg/kg)	Commercial SCOs[4] (mg/kg)	Industrial SCOs[4] (mg/kg)	Sample Location (Depth)							
					TP-1 (0-1.5 FT) 30 Fillmore	TP-1 (3-6 FT) 30 Fillmore	TP-3 (1-3.5 FT) 40 Fillmore	TP-4 (0-2 FT) 30 Fillmore	TP-6 (0.5-2 FT) 40 Fillmore	TP-10 (0-2 FT) 30 Fillmore	TP-11 (0-2 FT) 20 Fillmore	TP-12 (0.5-4 FT) 20 Fillmore
					4/26/2022	4/26/2022	4/26/2022	4/26/2022	4/26/2022	4/26/2022	4/26/2022	4/26/2022
TCL Volatile Organic Compounds (VOCs) - mg/kg[4]												
1,3,5-Trimethylbenzene	**8.4**	**52**	**190**	**380**	0.02	**14**	--	--	--	--	--	--
1,2,4-Trimethylbenzene	**3.6**	**52**	**190**	**380**	0.018	**33 D**	--	--	--	--	--	--
Benzene	**0.06**	**4.8**	**44**	**89**	0.0086	0.054	--	--	--	--	--	--
Cyclohexane	--	--	--	--	0.0033 J	2.9	--	--	--	--	--	--
Ethylbenzene	**1**	**41**	**390**	**780**	0.0076	**7.3**	--	--	--	--	--	--
Isopropylbenzene (Cumene)	--	--	--	--	0.0046	3	--	--	--	--	--	--
Methylcyclohexane	--	--	--	--	0.017	32 D	--	--	--	--	--	--
m,p-Xylene	--	--	--	--	0.014	18	--	--	--	--	--	--
n-Butylbenzene	**12**	**100**	**500**	**1000**	0.00076 J	2	--	--	--	--	--	--
n-Propylbenzene	**3.9**	**100**	**500**	**1000**	0.0031	**4.9**	--	--	--	--	--	--
o-Xylene	--	--	--	--	0.0025	2.1	--	--	--	--	--	--
p-Isopropyltoluene	--	--	--	--	0.0021	11	--	--	--	--	--	--
sec-Butylbenzene	**11**	**100**	**500**	**1000**	0.0018	2.3	--	--	--	--	--	--
Toluene	**0.7**	**100**	**500**	**1000**	0.0048	0.32	--	--	--	--	--	--
Xylenes, Total	**0.26**	**100**	**500**	**1000**	0.0165	**20.1**						
TCL Semi-Volatile Organic Compounds (SVOCs) - mg/kg[4]												
Acenaphthene	**20**	**100**	**500**	**1000**	0.029 J	ND	0.13 J	1.1	ND	ND	0.046 J	0.14 J
Acenaphthylene	**100**	**100**	**500**	**1000**	ND	ND	0.54 J	ND	ND	0.072 J	0.17	0.82
Anthracene	**100**	**100**	**500**	**1000**	0.14	ND	0.32	4.1	0.044 J	0.058 J	0.26	1.4
Benzo(a)anthracene	**1**	**1**	**5.6**	**11**	0.74	ND	**1.5**	**4.8**	0.23	0.34	**1.2**	**3.9**
Benzo(a)pyrene	**1**	**1**	**1**	**1.1**	0.75	ND	**2.2**	**3.2**	0.33	0.35	**1.1**	**4**
Benzo(b)fluoranthene	**1**	**1**	**5.6**	**11**	0.9	ND	**2.2**	**4**	0.32	0.48	**1.5**	**5.1**
Benzo(g,h,i)perylene	**100**	**100**	**500**	**1000**	0.6	ND	1.5	1.7	0.26	0.29	0.7	2.7
Benzo(k)fluoranthene	**0.8**	**3.9**	**56**	**110**	0.33	ND	0.59	**1.2**	0.1 J	0.16	0.43	**1.1**
Chrysene	**1**	**3.9**	**56**	**110**	0.73	ND	**1.3**	**4.1**	0.18	0.37	**1.2**	**4**
Dibenzo(a,h)anthracene	**0.33**	**0.33**	**0.56**	**1.1**	0.11 J	ND	**0.34**	**0.45 J**	0.052 J	0.053 J	0.16	**0.52**
Fluoranthene	**100**	**100**	**500**	**1000**	1.5	ND	2.3	11	0.27	0.72	2.6	8.6 D
Fluorene	**30**	**100**	**500**	**1000**	0.032 J	ND	0.1 J	2.1	ND	0.023 J	0.062 J	0.24
Indeno(1,2,3-cd)pyrene	**0.5**	**0.5**	**5.6**	**11**	**0.64**	ND	**1.8**	**2**	0.3	0.31	**0.82**	**3**
Naphthalene	**12**	**100**	**500**	**1000**	0.25	2.1	0.29	0.63 J	ND	0.13 J	0.21	0.33
Phenanthrene	**100**	**100**	**500**	**1000**	0.57	ND	1.2	14	0.14	0.37	1.2	7.4
Pyrene	**100**	**100**	**500**	**1000**	1.2	ND	1.9	7.9	0.24	0.6	2.1	8.6
TAL Metals - mg/kg												
Arsenic	**13**	**16**	**16**	**16**	6.51	4.24	3.59	4.82	5.06	5.27	7.8	2.8
Barium	**350**	**400**	**400**	**10000**	84.9	29.5	90.1	40.3	60.2	157	127	56.6
Cadmium	**2.5**	**4.3**	**9.3**	**60**	0.482 J	0.273 J	0.254 J	0.61	0.322 J	1.06	1.82	0.252 J
Chromium	**30**	**180**	**1,500**	**6,800**	5.4	8.72	3.14	16.9	8.48	12.3	24.4	**54.8**
Lead	**63**	**400**	**1,000**	**3,900**	**158**	**405**	**320**	40.4	**537**	**699**	**228**	40.8
Mercury	**0.18**	**0.81**	**2.8**	**5.7**	**0.218**	ND	**0.184**	0.091	0.145	**1.37**	**0.452**	0.118
Selenium	**3.9**	**180**	**1,500**	**6,800**	ND	0.141 J	1.26 J	0.405 J	0.377 J	0.233 J	0.295 J	ND
Silver	**2**	**180**	**1,500**	**6,800**	ND	ND	ND	ND	ND	ND	0.423 J	ND

Notes:

1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Values per NYSDEC Commisioner's Policy (CP) 51 / Soil Cleanup Guidance Soil Cleanup Levels (SLCs).
3. Values per 6NYCRR Part 375 Unrestricted Soil Cleanup Objectives (SCOs).
4. Values per 6NYCRR Part 375 Restricted Soil Cleanup Objectives (SCOs).
5. Sample results were reported by the laboratory in micograms per kilogram (ug/kg) and converted to milligram per kilogram (mg/kg) for comparison to SCOs.

Definitions:

ND = Parameter not detected above laboratory detection limit.
-- = Sample not analyzed for parameter and/or no SCO available.
J = Estimated value; result is less than the sample quantitation limit but greater than zero.
D = Indicates a dilution, re-analysis, re-extraction, or additional initial metals/anion analysis of the sample.

Bold	= Result exceeds Unrestricted SCOs
Bold	= Result exceeds Restricted-Residential SCOs
Bold	= Result exceeds Commercial SCOs
Bold	= Result exceeds Industrial SCOs

ATTACHMENT 1

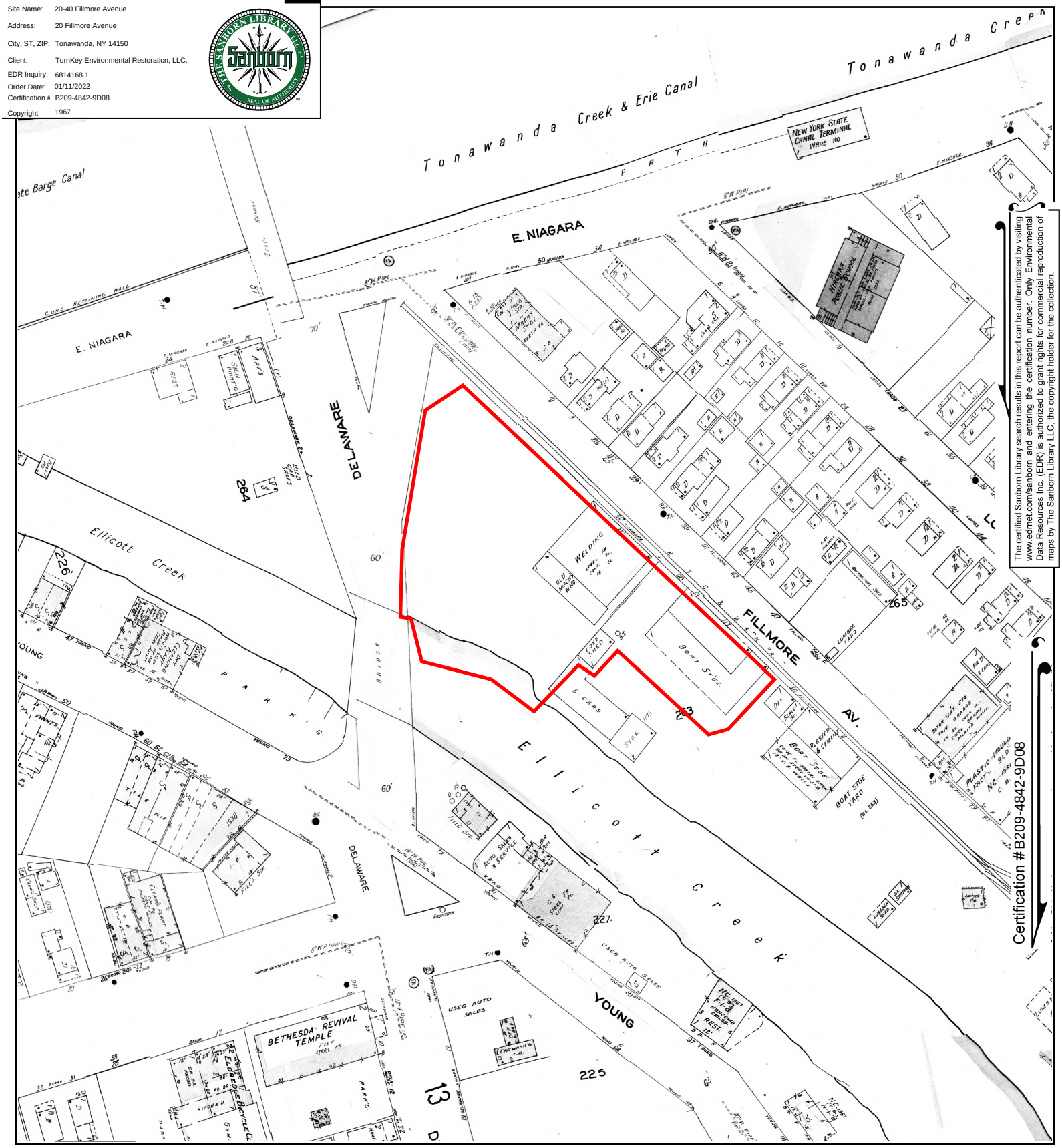
Sanborn Maps

TurnKey

Certified Sanborn® Map

1967

Site Name: 20-40 Fillmore Avenue
Address: 20 Fillmore Avenue
City, ST, ZIP: Tonawanda, NY 14150
Client: TurnKey Environmental Restoration, LLC.
EDR Inquiry: 6814168.1
Order Date: 01/11/2022
Certification #: B209-4842-9D08
Copyright 1967



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Certification #B209-4842-9D08

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Outlined areas indicate map sheets within the collection.

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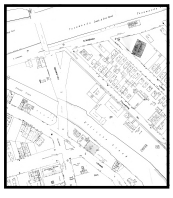
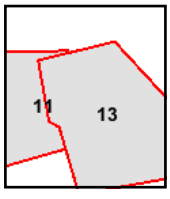




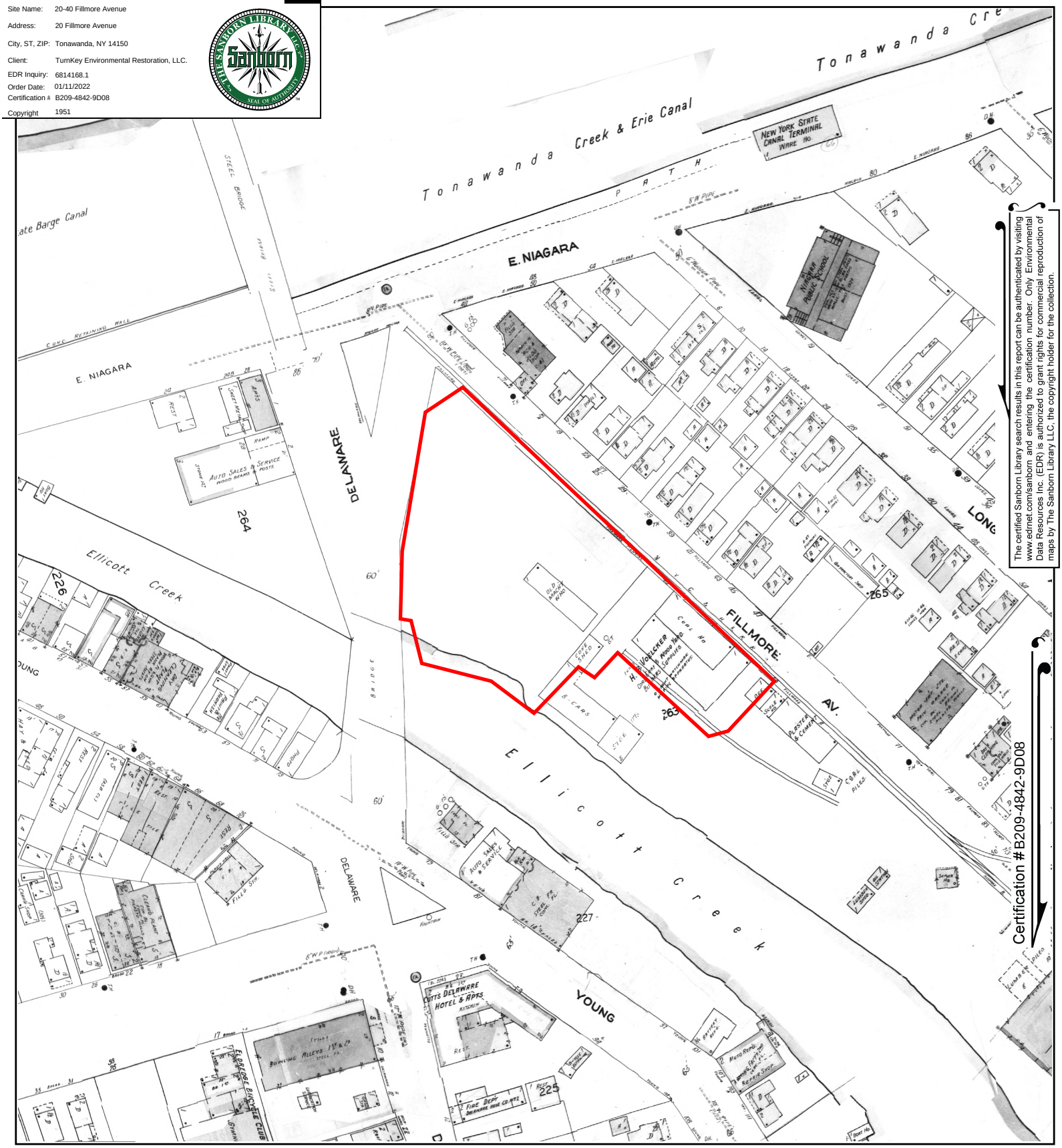
Volume 1, Sheet 13
Volume 1, Sheet 11

N

Certified Sanborn® Map

1951

Site Name: 20-40 Fillmore Avenue
Address: 20 Fillmore Avenue
City, ST, ZIP: Tonawanda, NY 14150
Client: TurnKey Environmental Restoration, LLC.
EDR Inquiry: 6814168.1
Order Date: 01/11/2022
Certification #: B209-4842-9D08
Copyright 1951



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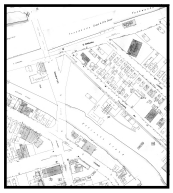
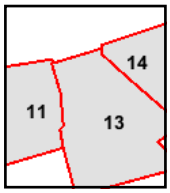




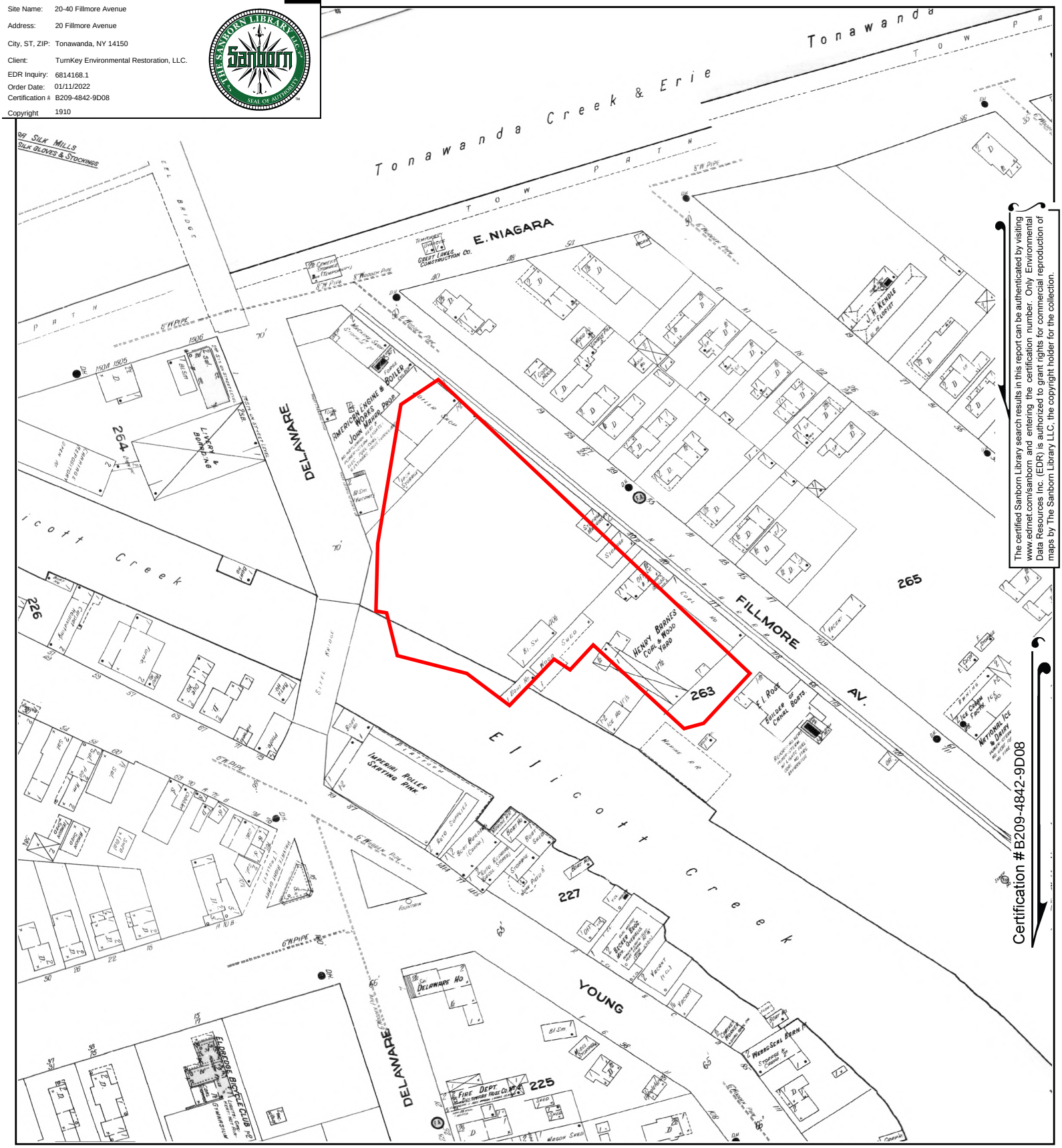
Volume 1, Sheet 14
Volume 1, Sheet 13
Volume 1, Sheet 11

N

Certified Sanborn® Map

1910

Site Name: 20-40 Fillmore Avenue
Address: 20 Fillmore Avenue
City, ST, ZIP: Tonawanda, NY 14150
Client: TurnKey Environmental Restoration, LLC.
EDR Inquiry: 6814168.1
Order Date: 01/11/2022
Certification #: B209-4842-9D08
Copyright 1910



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Certification #B209-4842-9D08

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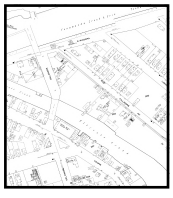
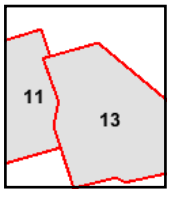




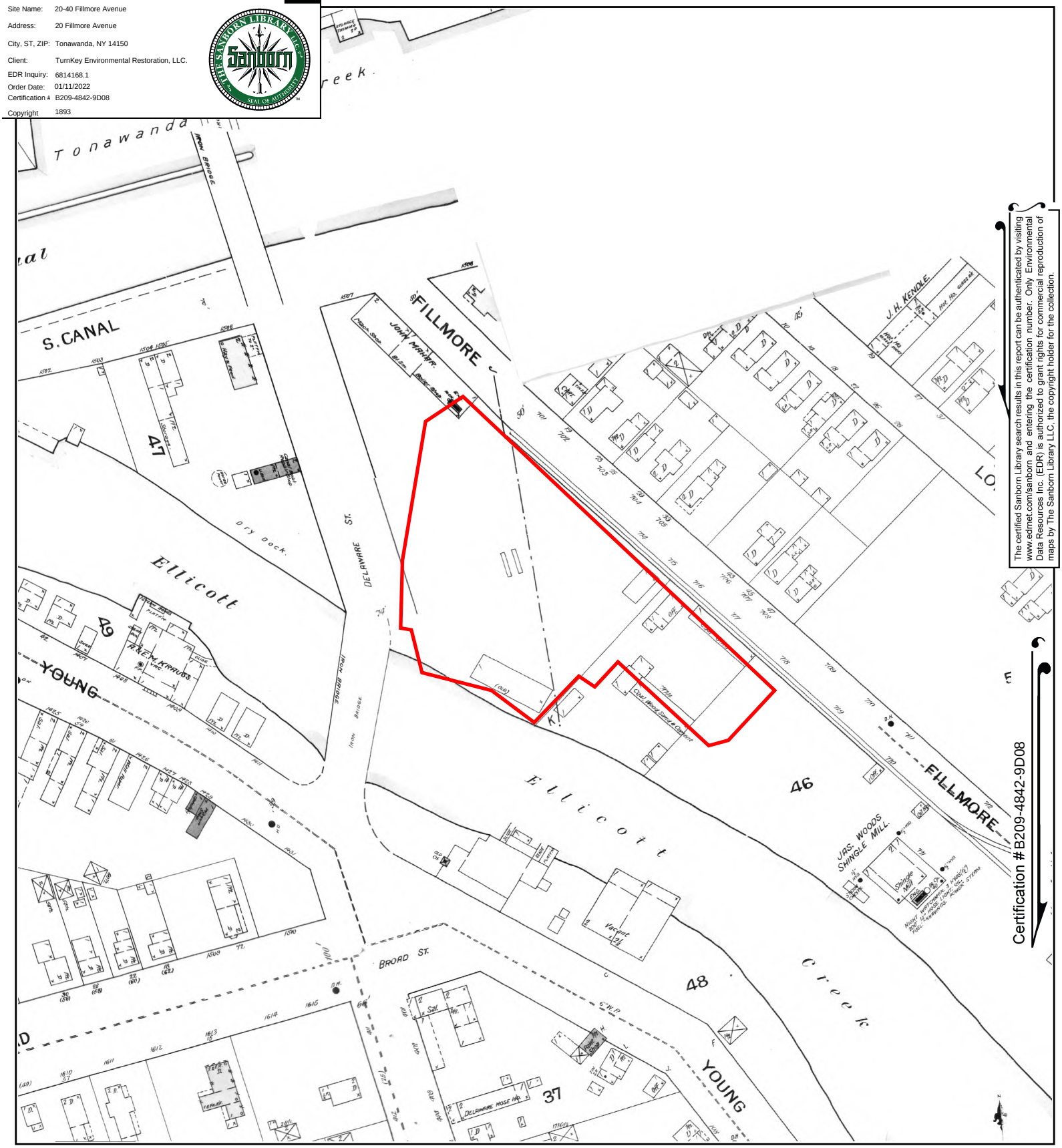
Volume 1, Sheet 13
Volume 1, Sheet 11

N

Certified Sanborn® Map

1893

Site Name: 20-40 Fillmore Avenue
Address: 20 Fillmore Avenue
City, ST, ZIP: Tonawanda, NY 14150
Client: TurnKey Environmental Restoration, LLC.
EDR Inquiry: 6814168.1
Order Date: 01/11/2022
Certification #: B209-4842-9D08
Copyright: 1893



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Certification #B209-4842-9D08

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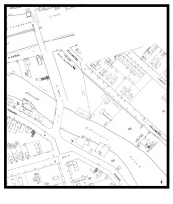
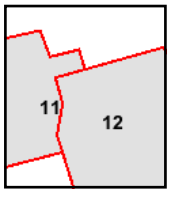




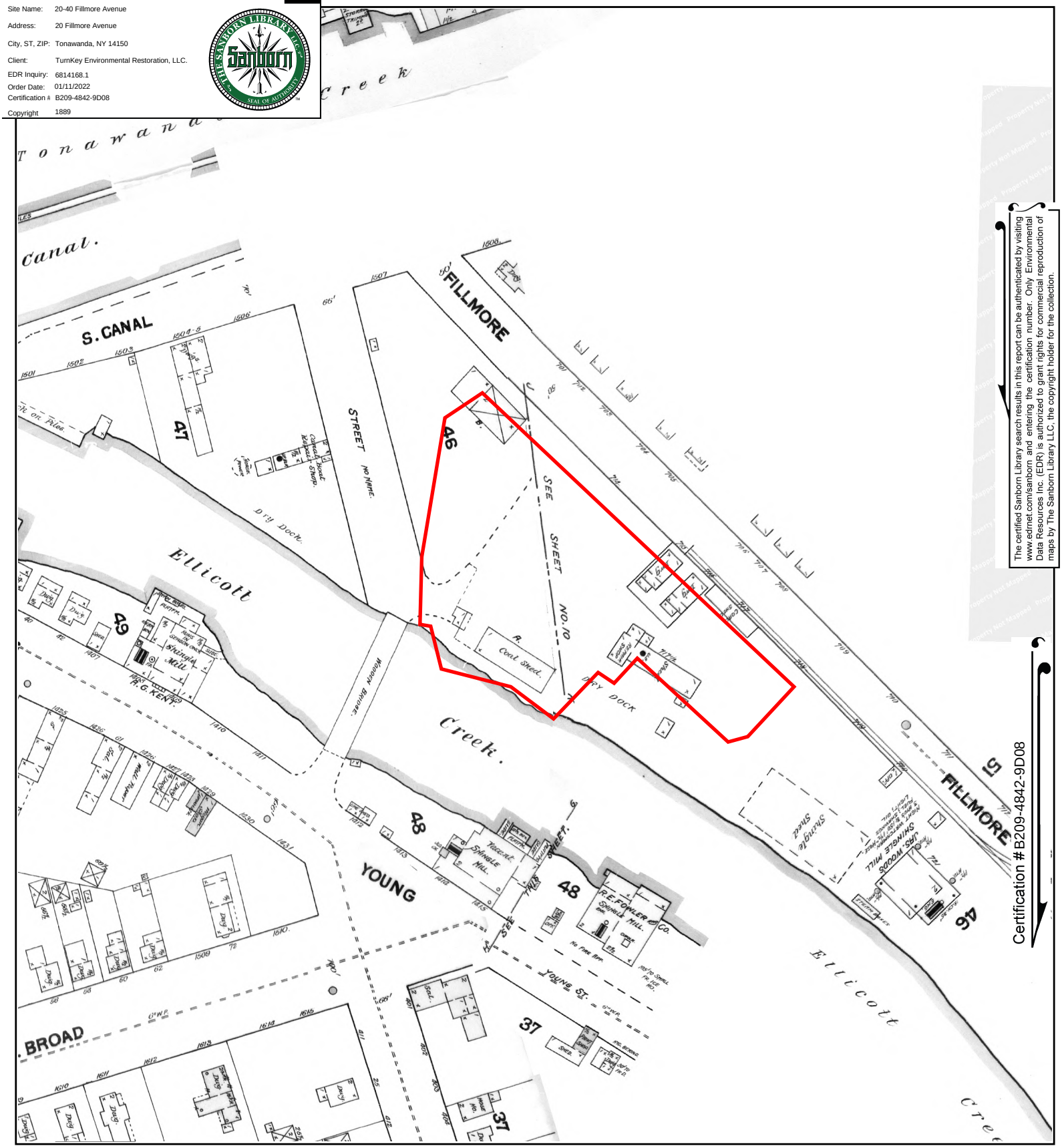
Volume 1, Sheet 12
Volume 1, Sheet 11

N

Certified Sanborn® Map

1889

Site Name: 20-40 Fillmore Avenue
Address: 20 Fillmore Avenue
City, ST, ZIP: Tonawanda, NY 14150
Client: TurnKey Environmental Restoration, LLC.
EDR Inquiry: 6814168.1
Order Date: 01/11/2022
Certification #: B209-4842-9D08
Copyright: 1889



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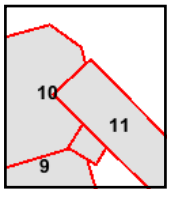
Outlined areas indicate map sheets within the collection.



Volume 1, Sheet 11
Volume 1, Sheet 10
Volume 1, Sheet 9

0 Feet 150 300 600

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6814168 - 1 page 9

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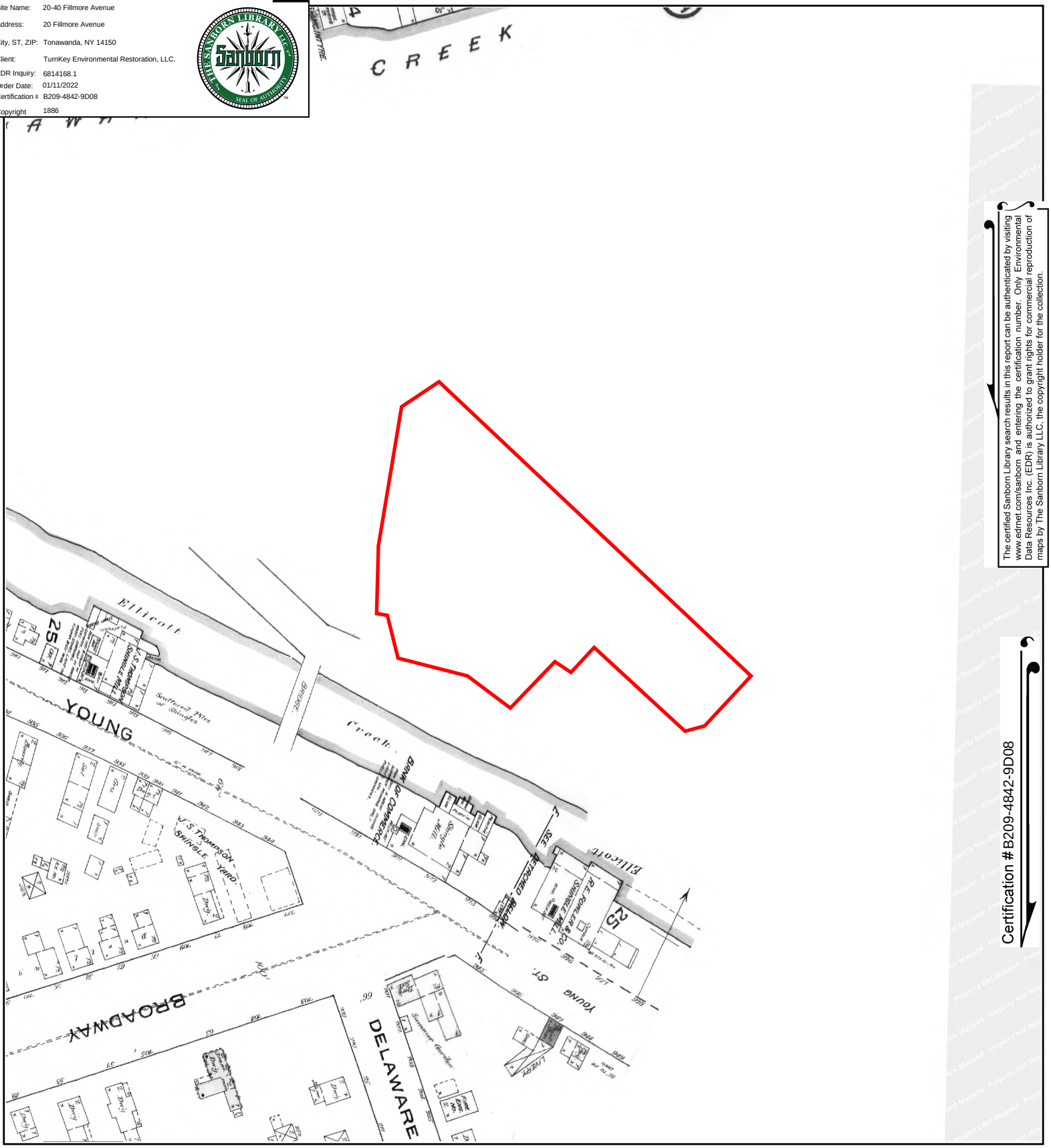
Certified Sanborn® Map

1886

Site Name: 20-40 Fillmore Avenue
Address: 20 Fillmore Avenue
City, ST, ZIP: Tonawanda, NY 14150
Client: TurnKey Environmental Restoration, LLC.
EDR Inquiry: 6814168.1
Order Date: 01/11/2022
Certification #: B209-4842-9D08
Copyright 1886



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Certification #B209-4842-9D08

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Outlined areas indicate map sheets within the collection.

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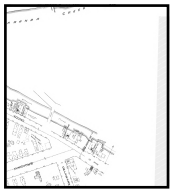
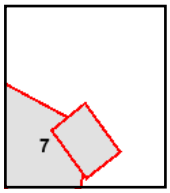




Volume 1, Sheet 7

N

ATTACHMENT 2

NYSDEC Spill File

TurnKey

NYSDEC SPILL REPORT FORM

DEC REGION: 9 **SPILL NUMBER:** 9975702

SPILL NAME: NYSDOT PROJECT - SITE F **DEC LEAD:** SACALAND

CALLER NAME: DAVID TACKLEY **NOTIFIER'S NAME:**

CLR'S AGENCY: NYSDOT **NOTIFIER'S AGENCY:**

CALLER'S PHONE: (716) 847-3036 **NOTIFIER'S PHONE:**

SPILL DATE: 03/01/2000 **SPILL TIME:** 12:00 pm **DISPATCHER:**

CALL RECEIVED DATE: 03/06/2000 **RECEIVED TIME:** 12:00 pm

SPILL LOCATION

PLACE: NYSDOT PROJECT - SITE F **COUNTY:** Erie

STREET: 22 FILLMORE AVENUE **TOWN/CITY:** Tonawanda

COMMUNITY: TONAWANDA

CONTACT: **CONTACT PHONE:**

CONT. FACTOR: Unknown **SPILL REPORTED BY:** Responsible Party

FACILITY TYPE: Institutional, Educational, Gov., Othe **WATERBODY:**

CALLER REMARKS:

NYSDOT SITE ASSESSMENT FOUND OIL CONTAMINATION AT SITE F, PEERLESS WELDING

MATERIAL	CLASS	SPILLED	RECOVERED	RESOURCES AFFECTED
unknown petroleum	Petroleum	0.00 G	0.00 G	Soil,

POTENTIAL SPILLERS

COMPANY	ADDRESS	CONTACT
NYSDOT	125 MAIN STREET BUFFALO NY	JANINE SHEPHERD (716) 847-3421

Tank No.	Tank Size	Material	Cause	Source	Test Method	Leak Rate	Gross Failure

DEC REMARKS:

Prior to Sept, 2004 data translation this spill Lead_DEC Field was "SAC"
03/06/00: RNL SENT LETTER FOR PJB SIGNATURE TO NYSDOT, DAVID TACKLEY, STATING SITE IS INACTIVE, ANY SOIL REMOVED BY NYSDOT MUST BE DISPOSED OR TREATED

HOLD FOR WORK BY NYSDOT

04/06/00: RNL SITE INSPECTION, PEERLESS WELDING IS BELOW EMBANKMENT, SITE IS LIKE A JUNKYARD, SOILS STAINED BUT AREA IS BELOW THE NYSDOT AREA AND PROBABLY NOT THE SOURCE, NYSDOT AREA IS AT INACTIVE LEVELS, ONLY PLAN WORK WITHIN NYSDOT AREA

NYSDEC SPILL REPORT FORM

DEC REGION: 9 **SPILL NUMBER:** 9975702

SPILL NAME: NYSDOT PROJECT - SITE F **DEC LEAD:** SACALAND

01/02/01: RNL SENT A LETTER TO JANINE SHEPHERD OF NYSDOT ASKING FOR AN ANTICIPATED START DATE

01/22/01: RNL RECEIVED LETTER FROM DAVID TACKLEY, CONSTRUCTION HAS STARTED

02/28/01: RNL SENT MEMO TO FG AND SAC FOR ALL RNL NYSDOT SPILLS, COMPARED TO TAGM VALUES, ASSIGNED THIS SPILL TO SAC (NORTH)

2/4/04:SAC TELECON JANINE SHEPHERD, MS. SHEPHERD WILL REVIEW FILE TO FIND DOCUMENTATION FOR THE SITE, SITE INVESTIGATION REPORT WAS FILED WITH SPILL NUMBER 9975701.

3/31/04:SAC FOUND DISPOSAL RECEIPTS IN FILE FOR 9975701, NO FURTHER ACTION REQUIRED.

PIN **T & A** **COST CENTER**

CLASS: C3 **CLOSE DATE:** 03/31/2004 **MEETS STANDARDS:** False

RNL/Jil

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, New York, 14203-2999
Phone: (716) 851-7220 • **FAX:** (716) 851-7226
Website: www.dec.state.ny.us

Environmental Conservation 30 YEARS
John P. Cahill
Commissioner

January 2, 2001

Ms. Janine Shepherd
New York State Department of Transportation
125 Main Street
Buffalo, New York 14203

Dear Ms. Shepherd:

Could you please provide the following for the mentioned spills:

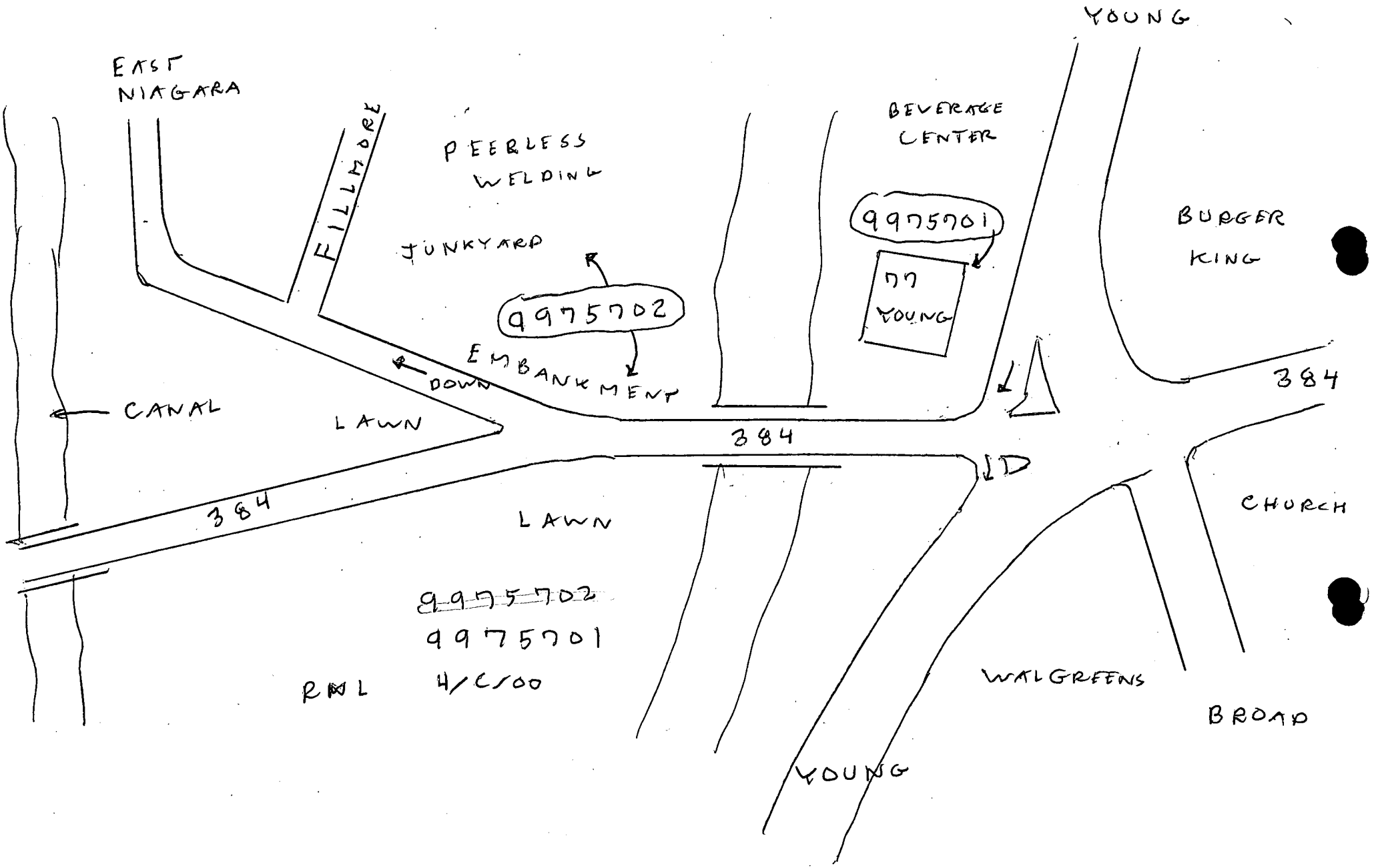
- 9875333, PIN 5131.25.121, Route 277 - Anticipated Start Date
- 9875422, PIN 5215.04.101, Route 179 - Disposal Receipt
- 9875455, Fredonia Facility - Continued Investigation
- 0075127, PIN 5045.21.101, Routes 93 & 104 - Anticipated Start Date
- 9975309, PIN 5131.25.121, Route 277 - Anticipated Start Date
- 0075479 and 0075480, PIN 5105.23.121, Route 39 - Anticipated Start Date
- 9975701 and 9975702, PIN 5460.29.121, Route 384 - Anticipated Start Date
- 9975529 to 9975532, PIN 5803.33, Williams Road - Anticipated Start Date
- 0075421, 0075423, 0075424, 0075425, 0075426, and 0075427, PIN 5019.10, Routes 265 & 384 - Anticipated Start Date
- 9975195 to 9975205, PIN 5034.86, Route 5 - Anticipated Start Date

Sincerely,

Robert N. Leary

Robert N. Leary, P.E.
Regional Spill Engineer

RNL:sz


YOUNG
EAST NIAGARA
FILLMORE
PEERLESS WELDING
JUNKYARD
BEVERAGE CENTER
9975701
77 YOUNG
BURGER KING
9975702
EMBANKMENT
DOWN
CANAL
LAWN
384
384
LD
LAWN
CHURCH
9975702
9975701
RWL
4/C/00
WALGREENS
BROAD
YOUNG

KNL 1'd

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, New York, 14203-2999
Phone: (716) 851-7220 • **FAX:** (716) 851-7226
Website: www.dec.state.ny.us

Environmental Conservation 30 YEARS
John P. Cahill
Commissioner

March 24, 2000

Mr. David R. Tackley, Jr.
New York State Department of Transportation
125 Main Street
Buffalo, New York 14203

Dear Mr. Tackley:

NYSDOT
Delaware Street
9975701 - Site C - Automobile Repair Shop
9975702 - Site F - Peerless Welding
City of Tonawanda
Erie County

We have reviewed your Detailed Site Investigation Report dated December 1999, for Delaware Street, Erie County, PIN 5460.29.121. We have the following comments:

Our Spill Number 9975701 for your Site C will be "inactive" due to low level violations of our STARS I guidance values. Any soil removed from this site must be either disposed or treated.

Our Spill Number 9975702 for your Site F will be "inactive" due to low level violations of our STARS I guidance values. Any soil removed from this site must be either disposed or treated.

Concerning the sediments at Site H, the sample results indicate that these sediments fail the hazardous waste characteristic analysis for lead. Any sediments removed from this site must therefore be appropriately managed as a hazardous waste.

NEW YORK STATE CENSUS 2000
BE PART OF THE COUNT
¡SEA PARTE DE LA CUENTA!

For the two spill locations, any removed soil must be either disposed at a sanitary landfill or treated on property owned by NYSDOT. Any successfully treated soil may be reused at an NYSDOT project. You must define the extent of contamination within your excavations for any soil removal via laboratory sampling at these locations.

If any tanks are found within NYSDOT ROW, you must remove, clean, and dispose them. For any tanks within your ROW, you must remove all contaminated soil and either treat or dispose the soil. Confirmatory sampling of each tank excavation will be necessary for 8021 and 8270 base neutrals. We recommend this sampling use the TCLP Method.

Should you have any questions, please call Mr. Robert Leary at (716)851-7220.

Sincerely,

Peter J. Buechi, P.E.
Regional Environmental Remediation
Engineer

/sz

cc: Mr. Robert Leary, Regional Spill Engineer ✓
Mr. Daniel King, Regional Hazardous Waste Remediation Engineer

RECEIVED
APR 04 2000
NYSDEC - REG. 9
FOIL
REL UNREL

Meeting Minutes

Place/Date: NYSDOT - State Office Building, Buffalo, NY
March 31, 2000 - 10:00 a.m.

Subject: **CONTRACT D008683, PIN 5460.29.121**
REPLACEMENT OF DELAWARE STREET BRIDGE
(BIN 2047300) OVER ELLICOTT CREEK
CITY OF TONAWANDA, ERIE COUNTY, NEW YORK

Attendees:

Robert Leary (RL)	NYSDEC	851-7220
Mike Roche (MR)	NYSDOT	847-3667
Tom VanSplunder (TV)	NYSDOT	847-3667
Janine Shepherd (JS)	NYSDOT	847-3375
Andrew Klimek (AK)	Watts Engineers	836-1540
Phillip M. Galbo (PMG)	Watts Engineers	836-1540

CC:

Tim Woodbury	Wendel
John Flint	FAW&R
Jim Krapf	FAW&R
Gail Smith	NYSDOT Consut. Man.

Author: Andrew Klimek
(Direct Line (716) 836-2320 ext. 120)

Minutes Date: April 3, 2000

NOTE: *Action items have been italicized for ease of identification.*

The purpose of this meeting was to review how the NYSDEC would classify each of the parcels adjacent to the Delaware Road Bridge (i.e., contaminated or not per regulation) and the material handling requirements for the soils/sediments identified during the detailed site investigation.

1) Petroleum Contaminated Soils (Sites C & F)

(RL) stated that the NYSDEC has prepared a letter that identifies Site C and Site F as containing petroleum contamination above NYSDEC Spill Technology

Distribution: File (95037.04), Attendees and CC list

H:\95037DEL.04\CORRESP\MOM033100.wpd

Transportation Engineering
Environmental Engineering
Civil/Site Development
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And Remediation Series (STARS) Memo # 1 - Petroleum-Contaminated Soil Guidance Policy guidance values. This material is classified as a solid waste and should be disposed of properly in a Part 360 landfill approved to accept petroleum contaminated soils.

(AK) asked if the material from Site F could be reclassified during construction since the soils exhibited benzene contamination only marginally above NYSDEC STARS guidance values. (RL) stated that the excavated soils could be re-analyzed at the time of construction and reclassified to allow the soil to remain on-site if it passes NYSDEC STARS guidance values.

(RL) suggested a pay item remain in place for the collection of soil samples and laboratory analysis for NYSDEC STARS compounds. The quantity in this pay item could then be used for analysis of any of the site soils.

(JS) gave Watts Engineers a copy of Engineering Bulletin 98-048 that discusses petroleum contaminated soil specifications and how they vary depending upon whether sampling is to occur during construction or not. Since confirmation sampling is called for on this project, all petroleum-contaminated soil specifications should reference the 15203.9804 M through 15203.9807 M series.

(AK) at Watts Engineers will change the PS & E material to reflect petroleum soil contamination at Sites C & F (not Sites C & E, but see the note for Site E found below), change the pay item and associated specifications to reflect sampling during construction, and verify the quantities.

2) Petroleum Storage Tanks (Site C)

(MR) asked (RL) about excavation and disposal of the underground petroleum storage tanks that appear to be present at Site C based on Ground Penetrating Radar results. One of the four tanks is within NYSDOT's temporary easement (TE).

(RL) discussed a variety of options that are available to the NYSDOT for removing the tanks and resolving the matter. (RL) mentioned that he will attempt to speak with the property owner at 77 Young Street the week of April 3, 2000, to determine if they are willing to enter into an agreement for removal of the tanks found outside the temporary easement. The tanks on this parcel must be either brought in compliance with current petroleum bulk storage (PBS) regulations or properly closed. If the current property owner is willing to remove the tanks on his property, NYSDOT would only have to address the tanks and contaminated soils found within the temporary easement.

(MR) will check about taking the tanks out outside the limit of the temporary easement.

(RL) also stated that the NYSDEC expects the NYSDOT to "chase" contamination discovered from a leaking tank as long as it is on NYSDOT property.

(All) It was agreed that the Pay Items associated with the removal of all four tanks will remain in the estimate for now.

3) RCRA Hazardous Sediments (Site H)

(RL) stated that the NYSDEC considers the sediments sampled from Ellicott Creek to be RCRA hazardous due to lead. These sediments will have to be handled as a RCRA hazardous waste and disposed of at a permitted RCRA hazardous waste landfill.

(AK) stated that since the excavated sediment is considered a RCRA hazardous waste, Watts Engineers will delete Item 12202.0001 M SAMPLING AND ANALYSIS OF POTENTIALLY HAZARDOUS SEDIMENT.

4) Miscellaneous Site Soils (Sites A, B, E, & G)

(AK) then asked about reuse options for the soils found at Sites A, B, E, and G.

(RL) replied that the remainder of the site soils may be considered "clean" and reused on-site though discretion should be used by the contractor since some soils may contain low level semi-volatile compounds and may be unsuitable for cover material. RL also mentioned that if obvious signs of contamination are encountered during construction (including odors, elevated volatile vapor readings, or discolorization of soils) that the situation will have to be reassessed. Soils would have to pass NYSDEC STARS guidance values to be considered free of petroleum contamination.

(AK) mentioned that Site E was formerly identified as having been utilized for automobile sales and service and therefore, even though the detailed field investigations did not identify contamination, caution and good judgement should be used when excavating soil on this parcel.

The meeting adjourned at approximately 12:00 p.m.

This constitutes the writer's understanding of the major items of discussion. If you have any questions or comments, please do not hesitate to call.

Prepared by:
WATTS ENGINEERS

Andrew Klimek

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STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
125 MAIN STREET
BUFFALO, NY 14203

BRIAN O. ROWBACK
REGIONAL DIRECTOR

JOSEPH H. BOARDMAN
COMMISSIONER

February 8, 2000

Mr. Peter J. Buechi
Regional Environmental Remediation Engineer
NYS Dept. Of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203-2999

RE: PIN 5460.29.121
DELAWARE AVENUE, NY RT. 384
BIN 2047300 OVER ELLICOTT CREEK
CITY OF TONAWANDA
ERIE COUNTY

Dear Mr. Buechi:

The attached "Detailed Site Investigation Report" for the above captioned project is being transmitted to your agency for your review and comment. The project proposes to replace the existing bridge with a new structure on the same alignment.

As the report indicates, both RCRA characteristic hazardous waste (hw) and non-hazardous solid waste were encountered during sampling. RCRA HW contamination for TCLP lead toxicity was encountered in the sediments under the bridge (Site H). Non-hazardous solid waste was encountered at sites A, C, E, F and G. Also, ground penetrating radar identified four anomalies with radar responses similar to UST's on the south side of the bridge. While two of these anomalies appear to be outside the temporary easement/excavation line , the other two potential UST's are partially and/or entirely within the temporary easement/excavation line.

Any questions may be directed to Janine Shepherd of my staff at 716-847-3421. Thank you for your prompt attention to this matter.

Sincerely,

David R. Tackley, Jr.
Regional Environmental Contact

Att.
DRT/JHS
cc: K. Farry (M. Roche), Asst. Regional Design Engineer, R-5
L. Gersh; File

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DETAILED SITE INVESTIGATION REPORT

for the

HAZARDOUS WASTE/CONTAMINATED MATERIALS ASSESSMENT

of

PIN 5460.29.121
DELAWARE STREET, NY ROUTE 384
BIN 2047300 OVER ELLICOTT CREEK
CITY OF TONAWANDA
ERIE COUNTY, NEW YORK

PREPARED FOR:
WENDEL
95 JOHN MUIR DRIVE
BUFFALO, NEW YORK 14228

FOR SUBMISSION TO:
NEW YORK STATE DEPARTMENT OF TRANSPORTATION
REGION FIVE
125 MAIN STREET
BUFFALO, NEW YORK 14203

DECEMBER 1999

PREPARED BY:

WATTS ENGINEERS

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HAZARDOUS WASTE/CONTAMINATED MATERIALS ASSESSMENT

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DECEMBER 1999

PREPARED BY:
EDWARD O. WATTS, P.E., P.C.
3826 MAIN STREET
BUFFALO, NEW YORK 14226

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Appendix B Laboratory Report
Appendix C Soil Boring Logs for Site G

1.0 INTRODUCTION

Edward O. Watts, P.E., P.C. (Watts Engineers) was retained by Wendel to conduct a Hazardous Waste/Contaminated Materials (HW/CM) Assessment in technical support of the proposed bridge replacement project at the Delaware Street Bridge (BIN 2047300) on Delaware Street, NY Route 384 in the City of Tonawanda, Erie County, New York (PIN 5460.29.121). This Detailed Site Investigation Report is part of the HW/CM Assessment prepared for the New York State Department of Transportation (NYSDOT) under contract D008683. The project location is shown on **Figure 1** in **Appendix A**.

1.1 Purpose and Scope

The purpose of the HW/CM Assessment is to identify the presence of contamination, if any, located within the proposed construction zone or right-of-way (ROW) acquisitions anticipated to take place along the project corridor. Concerns addressed by the HW/CM Assessment are the protection of the environment and protection of the health and safety of construction personnel and the public. The HW/CM Assessment will assist in the determination of additional construction costs due to special handling requirements for contaminated materials. It is the NYSDOT's policy to identify potential areas of contamination to avoid unexpected costs and significant delays late in the development of a project.

The Preliminary Screening Report of the HW/CM Assessment (also known as the Phase I report) prepared by Watts Engineers in May 1998 identified eight areas on the project corridor that were considered potential environmental concerns. The Phase I recommended geophysical surveys, soil gas surveys, soil core investigations, groundwater sampling, and the collection of soil samples at these sites. See **Table 1-1** for the Summary of Recommendations from the Preliminary Screening Report, and **Figure 2** in **Appendix A** for the locations of the sites of environmental concern. A Field Sampling Plan (FSP) was completed and approved in September 1999 specifying sampling locations and methodology to address the concerns identified in the Preliminary Screening Report.

The detailed site investigation (also known as the Phase II) was performed to implement the FSP. This detailed investigation consisted of: soil sample collection for analysis along the length of the project corridor where the potential for soil contamination had been identified; groundwater sample collection, if encountered; geophysical surveys where the potential for underground storage tanks (USTs) in the ROW had been identified; and soil gas surveys (including soil sampling if warranted) where the potential for petroleum contamination had been identified. This document presents the results of the Phase II site investigation.

1.2 NYSDOT Project Description

This proposed project consists of a bridge replacement. The preferred alternative includes replacement with a new bridge on the existing alignment, and 121 m (400ft) of related approach work. The new structure will carry four 3.3 m (11ft) travel lanes and two 0.9 m (3ft) curb offsets to accommodate motorists and bicyclists. There will also be 1.5 m (5ft) sidewalks on each side of the roadway to accommodate pedestrians. Right-of-way (ROW) acquisitions are planned at the northeast and southeast quadrants of the bridge and temporary easements will be needed in all four quadrants of the bridge.

1.3 Project Corridor Description

The project is located in an area which has been used for commercial and light industrial purposes since the late 1800's. **Table 1-1** presents the Summary of Recommendations from the Preliminary Screening Report for the sites of concern. For more detailed information regarding the project corridor and past uses of the sites of environmental concern, refer to the Preliminary Screening Report (Watts Engineers, May 1998).

Table 1-1
Summary of Recommendations from the Preliminary Screening Report

Site	Address & Current Land Use	Environmental Concerns	Recommendation
A	Vacant land 73 Young Street	Former commercial photo studio	• Soil sampling to depth of excavation for photographic developing chemicals.
B	Walgreen Drug Store 10 Young Street	Former gas station, active DEC spill site	• Soil gas survey with visual core investigation and potential soil sampling.
C	Automobile repair shop 77 Young Street	Former gas station & current automobile repair shop	• Soil gas survey with visual core investigation and potential soil sampling. • Soil sampling for auto repair shop chemicals. • GPR Survey
D	Burger King 11 Delaware Street	Former gas station/car dealer	• None beyond recommendations for Site C.
E	Vacant Land 2 Delaware Street	Former automobile repair/car dealer	• Soil gas survey with visual core investigation and potential soil sampling. • Soil sampling for auto repair shop chemicals. • GPR Survey
F	Peerless Welding 22 Fillmore Avenue	Long time scrap metal yard, former coal storage area	• Soil core investigation to depth of excavation to identify best locations for soil sampling along ROW. • Soil sampling in locations identified during soil core investigation. • GW sampling if encountered.
G	Creek Bank Soils Behind Bridge Abutments	Fill materials of unknown origin	• Soil core investigation to depth of excavation at creek banks to determine best location/depth for soil sampling. Performed in conjunction with sampling at Sites A, C, E, and F.
H	Sediments under Bridge Ellicott Creek	Past spills from upstream IHWS sites	• Sediment samples under bridge in areas of excavation.

Note: IHWS = NYSDEC Inactive Hazardous Waste Site

2.0 FIELD INVESTIGATION RESULTS

The results of the field investigation are presented below. Refer to Section 3.0 for the Laboratory Analytical Results.

2.1 Ground Penetrating Radar Survey - Field Investigation

A geophysical survey using ground penetrating radar (GPR) technology was performed at two sites adjacent to the bridge on October 13,1999. The general area of investigation for each site is delineated on **Figure 3** in **Appendix A**.

The purpose of the GPR survey is to determine the presence of, and locate, unmarked USTs. This allows NYSDOT to facilitate for the proper removal of USTs prior to, or during, construction. Additionally, the GPR survey is performed prior to the soil gas survey to avoid accidental puncture of unmarked tanks by field investigation personnel.

2.1.1 Methodology

The GPR survey was conducted by Sub-Surface Informational Surveys, Inc. (SIS), a NYSDOT-approved subcontractor, and supervised by Watts Engineers. The GPR antenna was operated parallel to the roadway for the length of each site of concern to provide continuous profiles of subsurface conditions at approximately one-meter intervals along the ROW. The survey's depth of penetration was approximately 1.21 m (4.0 ft). Five anomalies with radar responses similar to that of a UST were detected on the south side of the bridge. Details of the survey are presented below.

2.1.2 Findings Presented by Site

2.1.2.1 Site C - Automobile Repair Shop, 77 Young Street

A grid pattern with one meter spacing was set up on Site C to conduct the GPR survey. The area covered included the area shown on **Figure 3** in **Appendix A**.

The survey identified four anomalies which showed responses similar to that of a UST located west of the building between the roadway and the building. The anomalies are adjacent to each other, run parallel to the west wall of the auto repair shop, and appear to be approximately 0.8-1.0 m (2.62-3.28 ft) below ground surface. The anomalies are outlined on **Figure 3**. Two of the four anomalies are located outside the proposed temporary easement/excavation line.

However, one of the four anomalies is situated entirely within the temporary easement/excavation line and another anomaly is partially within the temporary easement/excavation line. The anomaly that is situated entirely within the proposed temporary easement/excavation line has a GPR profile consistent with an approximately 11.36 cubic meter (3000 gallon) UST, and the anomaly that is situated partially within the proposed temporary easement/excavation line has a GPR profile consistent with an approximately 15.14-18.93 cubic meter (4000-5000 gallon) UST. The remaining two anomalies appear to be outside the temporary easement/excavation line.

A fifth anomaly was detected within Delaware Street parallel to the roadway. The anomaly is located 1.0 m (3.28 ft) below ground surface at a distance of approximately 7 m (23 ft) south and outside the limits of proposed excavation for the project. This anomaly had a profile of an object up to 1.23 m (4 ft) wide and approximately 4 m (13.12 ft) long. However, consultation with a representative from Bell Atlantic, on-site with locating equipment, revealed that a large telephone duct bank approximately 0.61 m (2 ft) wide and 1.68 m (5.5 ft) tall is located in the area of the anomaly. The representative from Bell Atlantic indicated that he had difficulty locating the exact path of the duct bank, however, he believes that the duct bank likely runs directly down the centerline of the anomaly. Therefore, it is possible that the anomaly is associated with the telephone duct bank and may not be a UST.

2.1.2.2 Site E - Vacant Land, 2 Delaware Street

A grid pattern with one meter spacing was set up on Site E to conduct the GPR survey. The area covered consisted of a section approximately 70 meters (230 ft) in length by up to 20 meters (65.6 ft) in width along Delaware Street.

There was no signal penetration within the roadway pavement due to the presence of unknown materials of high conductivity within the shoulder pavement. The balance of the site showed no hyperbolic features that are characteristic of underground storage tanks.

2.2 Soil Core Investigation - Field Investigation

A soil core investigation (SCI) was performed on January 19-25, 1999 and October 19-20, 1999 for Sites A, B, C, E, F, and G. The locations of the SCI points were generally spaced at approximately 5-10 m (16-33 ft) intervals within the existing and proposed ROW at each site. Water mains, gas mains and services, telephone, and electrical cables were marked prior to field work in the project corridor. Many of the SCI points were moved slightly from their proposed locations to avoid underground utilities. Approximate SCI point locations are illustrated on **Figure 4** in **Appendix A**.

2.2.1 Methodology

A drill rig or a Geoprobe™ hydraulic direct-push probe was used to obtain subsurface soil samples for examination and to identify potentially contaminated areas to represent the best locations for soil sampling. The depth of the investigation at each point was determined by the proposed depth of construction at the site of concern. Organic vapor readings (taken with a photoionization detector (PID)), visual observations (staining, sheens, etc.), and rudimentary geologic descriptions were recorded for each soil core investigation point. Soil samples were collected from the locations believed to be most contaminated and/or representative of the contamination, if present, along the ROW.

In cases where a soil sample was warranted (as governed by the above-described criterion), a soil sample was obtained using a truck-mounted Geoprobe™ hydraulic direct-push probe or drill rig. Samples were composited over the length of the interval of concern except the volatile fraction. The fraction of the soil core selected for volatile organic analysis (VOA) was the sample fraction having obvious soil staining, having the highest organic vapor reading, or from the deepest portion of the soil boring. The remaining fraction of the core was composited for all other analyses.

2.2.2 Findings Presented by Site

Table 2-1 found on the next page lists the organic vapor readings (where applicable) and the general soil description for each soil core investigation point at sites A, B, C, E, and F. Soil sample identification numbers are also included in the first column in **Table 2-1** for all SCI point locations where a soil sample was collected for laboratory analysis. See **Appendix C** for soil boring logs from Site G. The analytical results are presented in Section 3.2.

TABLE 2-1 SOIL CORE INVESTIGATION FIELD DESCRIPTIONS SITES A, B, C, E, AND F		
SCIPT / Sample ID	**PID Reading (ppm)**	***Depth*: General Soil Description**
A-1 **DEL-A-SB1**	1.1	***0-3.96 m (0-13 ft)***: Fill; light brown to grey gravelly sand grading from red to dark brown to black gravelly sand, dark grey moist sandy silty clay at 2.44-3.96 m (8-13 ft). Slight unknown odor noted. *Sample collected from 2.44-3.66 m (8-12 ft).*
B-1	0.0	***0-1.52 m (0-5 ft)***: Fill; grey brown gravelly sand grading to light brown sand with silt trace asphalt.
B-2	0.0	***0-1.52 m (0-5 ft)***: Fill; brown, red, and grey sandy gravel grading to light brown fine sand.
B-3	0.0	***0-1.52 m (0-5 ft)***: Fill; dark brown silty sand with gravel grading to grey gravelly sand.
C-1	0.0	***0-1.52 m (0-5 ft)***: Fill; brown grey gravelly sand grading to light brown fine sandy silt and grey fine sandy silt.
C-2	0.0	***0-1.52 m (0-5 ft)***: Fill; dark brown silty sand grading to light brown sand with silt (brick at 0.91 m (3 ft)).
C-3	0.3	***0-1.52 m (0-5 ft)***: Fill; brown, grey, and black gravelly course sand trace brick.
C-4	0.0	***0-1.52 m (0-5 ft)***: Fill; black sand grading to brown grey coarse sand trace gravel.
C-5 **DEL-C-SB2**	10.5	***0-1.52 m (0-5 ft)***: Fill; black sand to 1.22 m (4 ft) grading to brown sand trace slag. Petroleum odors noted. *Sample collected from 0.15-1.52 m (0.5-5 ft).*
C-6	3.1	***0-1.52 m (0-5 ft)***: Fill; black sand trace slag to 1.22 (4 ft) grading to light brown sand.
C-7 **DEL-C-SB1**	375	***0-3.96 m (0-13 ft)***: Fill; brown and black sandy fill with gravel and brick. Black silty sand at 3.35-3.96 m (11-13 ft) grading to black silty clay at 3.96 m (13 ft). Strong petroleum odors at 3.05-3.96 m (10-13 ft). *Sample collected from 3.51-3.96 m (11.5-13 ft).*
E-1	0.0	***0-1.52 m (0-5 ft)***: Fill; black sand with light brown sand seams.
E-2 **DEL-E-SB1**	16.8	***0-1.52 m (0-5 ft)***: Fill; light brown sandy silt to 0.76 (2.5 ft) grading to black sand with traces of gravel slag and coal. *Sample collected from 0.15-1.52 m (0.5-5 ft).*
E-3	2.4	***0-1.52 m (0-5 ft)***: Fill; black sand with concrete at 1.52 m (5 ft).
E-4	4.5	***0-1.52 m (0-5 ft)***: Fill; black sand trace coal, brick, and slag.
E-5	0.0	***0-1.52 m (0-5 ft)***: Fill; brown to light brown silt and clay trace coal and slag grading to black slag and sand at 1.37 m (4.5 ft).
E-6	0.0	***0-1.52 m (0-5 ft)***: Fill; brown clay trace slag.
E-7	0.0	***0-1.52 m (0-5 ft)***: Fill; light brown to red silt trace coal and brick.

TABLE 2-1
SOIL CORE INVESTIGATION FIELD DESCRIPTIONS
SITES A, B, C, E, AND F

SCI PT./ Sample ID	PID Reading (ppm)	*Depth*: General Soil Description
E-8	0.1	***0-1.52 m (0-20 ft)***: Fill; black sand with concrete and brick layers grading to light brown sand at 1.52 m (5 ft), brown sandy silty at 1.83-2.44 m (6-8 ft), brown sand at 2.44-3.66 m (8-12 ft), and soft/moist brown to black silty sand trace slag from 3.66-6.1 m (12-20 ft).
F-1 **DEL-F-SB1**	1.1	***0-3.51 m (0-11.5 ft)***: Fill; light brown reddish clay with a coal/brick concrete mix at 0.76-1.37 m (2.5-4.5 ft), black sand with light brown sand seams at 1.37-2.44 m (4.5-8 ft) grading to brown to red to dark brown clay trace gravel, coal, and brick with wood at 3.51 m (11.5 ft). *Sample collected from 1.37-2.29 m (4.5-7.5 ft).*
F-2	0.0	***0-1.52 m (0-5 ft)***: Fill; light brown-red silt grading to black sandy silt trace gravel brick and cinders to dark brown silt trace coal.
F-3	1.8	***0-1.52 m (0-5 ft)***: Fill; dark brown to light brown silt with gravel trace coal, concrete at 1.52 m (5 ft).
F-4	0.0	***0-1.52 m (0-5 ft)***: Fill; light brown clay with seams of darker brown and grey clay grading to light brown red clay.
F-5	0.0	***0-1.52 m (0-5 ft)***: Fill; light brown clay grading to light brown red clay.
F-6	0.0	***0-1.52 m (0-5 ft)***: Fill; dark brown-grey silty clay with gravel grading to light brown red clay.

2.2.2.1 Site A - Vacant Land, 73 Young Street

One SCI point was drilled at this site adjacent to the southwest wing wall at Site A. No elevated volatile organic vapor readings greater than 5 ppm above background were obtained from the SCI point at this site (see **Table 2-1**). However, due to the history of photographic chemical storage at this property and the inability of the PID to detect all of the compounds of concern, one soil sample was collected from the SCI point (Sample DEL-A-SB1) at a depth of 2.44-3.66 m (8-12 ft) and analyzed for Schedule B parameters (general industrial contamination). No stained soil or sheens were noted from the sample, however, a slight unknown odor was noted emanating from the soil. See **Table 2-1** for the field description of the SCI point and the soil sample from this site. Section 3.2 of this report discusses the analytical results.

2.2.2.2 Site B - Walgreens Drug Store, 10 Young Street

Three SCI points were drilled across Young Street from Site B (a petroleum spill site) at approximately 10 m (33 ft) intervals in the area of the proposed excavation. No elevated volatile organic vapor readings, odors, stained soil, or sheens were noted in the soil from this site. Therefore, no soil samples were warranted as a result of the investigation for Site B. See **Table 2-1** for the field descriptions of the SCI points.

2.2.2.3 Site C - Automobile Repair Shop, 77 Young Street

Seven SCI points were drilled in a single row along the ROW at approximately 5 m (16 ft) intervals at Site C. Two elevated volatile organic vapor readings greater than 5 ppm above background were obtained from the SCI points at this site (see **Table 2-1**). Due to the history of petroleum storage on this property, one soil sample was collected from SCI point C-7 (Sample DEL-C-SB1) at a depth of 3.35-3.96 m (11.5-13 ft) and analyzed for Schedule A parameters (petroleum contamination). Strong petroleum odors and black stains were noted in the sample.

An unknown black sand fill was also noted at Site C which was present in five of the SCI points closest to the bridge (C-3 through C-7). A sample of this black sand was collected for analysis from SCI point C-5 (Sample DEL-C-SB2) at a depth of 0.15-1.52 m (0.5-5 ft) and analyzed for Schedule B parameters (general industrial contamination). The soil from this SCI point exhibited an elevated PID reading and black staining.

See **Table 2-1** for the field description of the SCI points and soil samples from this site. Section 3.2 of this report discusses the analytical results.

2.2.2.4 Site E - Vacant Land, 2 Delaware Street

Eight SCI points were drilled in a single row along the ROW at approximately 10 m (33 ft) intervals at Site E. One elevated volatile organic vapor reading greater than 5 ppm above background was obtained from the SCI points at this site (see **Table 2-1**). Due to the history of petroleum storage on this property, one soil sample was collected from SCI point E-2 (Sample DEL-E-SB1) at a depth of 0.15-1.52 m (0.5-5 ft) and analyzed for Schedule A parameters (petroleum contamination). No odors or sheens were noted from the sample, however, the soil was black in color. See **Table 2-1** for the field description of the SCI points and the soil sample from this site. Section 3.2 of this report discusses the analytical results.

2.2.2.5 Site F - Peerless Welding, 22 Fillmore Avenue

Six SCI points were drilled in a single row along the ROW at approximately 10 m (33 ft) intervals at Site F. No elevated volatile organic vapor readings greater than 5 ppm above background were obtained from the SCI points at this site (see **Table 2-1**). However, due to the history of coal and scrap metal storage at this property and the inability of the PID to detect all of the compounds of concern, one soil sample was collected from SCI point F-1 (Sample DEL-F-SB1) at a depth of 1.37-2.29 m (4.5-7.5 ft) and analyzed for Schedule B parameters (general industrial contamination). No odors or sheens were noted from the sample, however, the soil consisted of black sand fill. See **Table 2-1** for the field description of the SCI points and the soil sample from this site. Section 3.2.1 of this report discusses the analytical results.

2.2.2.6 Site G - Creek Bank Soils, Behind Bridge Abutments

In accordance with one of the recommendations presented in the Preliminary Site Assessment for the Hazardous Waste/Contaminated Materials (HW/CM) Assessment, a representative of Watts Engineers was present to screen soils during drilling in the fill areas for two of the geotechnical soil borings.

On January 19, 20, 22, and 25, 1999, two geotechnical soil borings (SB-1 and SB-3) were drilled into the fill behind each bridge abutment, and four additional borings (SB-2, SB-4, SB-5, and SB-6) were advanced into the structure to collect core samples, by SJB Services under the supervision of a representative of Flint, Allen, White, and Radley Consulting Engineers, P.C. Borings SB-2, SB-4, SB-5, and SB-6 were augered without sampling through the fill to the foundation for core sampling, therefore, split spoon samples were not collected and these borings were unable to be screened.

Continuous split spoon sampling of the soils was performed for borings SB-1 and SB-3. The soils from borings SB-1 and SB-3 were screened visually and with the use of a Foxboro OVA 128 flame ionization detector (FID) to determine if collection of soil samples were warranted. Investigation of the soils from the two geotechnical soil borings (SB-1 and SB-3) revealed no significant FID readings, however, a layer of black cinder-like material was noted between approximately 0.3-1.52 m (1- 5 feet) in the two borings. The layer of black cinder-like material was also reportedly noted in the auger cuttings from the same interval at the four additional borings (SB-2, SB-4, SB-5, and SB-6). A composite sample of the cinder-like material was collected from between 0.30-1.22 m (1-4 ft) at boring number SB-3 (Sample B-3) and analyzed for Schedule B parameters (general industrial

contamination). See **Appendix C** for the soil boring logs for borings SB-1 and SB-3. Section 3.2 of this report discusses the analytical results.

During the investigation at SB-1 and SB-3, no significant groundwater accumulation was encountered in the borings, and therefore, no groundwater samples were collected.

2.3 Groundwater Sampling - Field Investigation

Groundwater sampling was proposed at Site F, contingent upon finding groundwater in one of the SCI boreholes drilled at the site. However, groundwater was not encountered in any of the SCI borings drilled at Site F, and therefore, a groundwater sample was not collected.

2.4 Sediment Sampling - Field Investigation

2.4.1 Site H - Sediments Under Bridge, Ellicott Creek

Two sediment samples were collected at Site H under the bridge at the locations shown on **Figure 4**. One sample was collected near each abutment using a bucket auger. See **Table 2-2** for sediment sample field descriptions. Samples were collected from a depth of 0-0.3 m (0 - 1 ft) and analyzed for potential contamination relating to upstream waste sites. The sediment samples were analyzed in accordance with Schedule D parameters (general industrial contamination in sediments) listed in **Table 3-1**.

TABLE 2-2
SEDIMENT SAMPLE FIELD DESCRIPTIONS
SITE H

SAMPLE ID/ SITE	PID Reading (ppm)	General Sediment Description
DEL-H-SED1 South Side of Bridge	0.0	Black sand with gravel.
DEL-H-SED2 North Side of Bridge	0.0	Black sand with gravel.

3.0 ANALYTICAL METHODOLOGY AND LABORATORY RESULTS

Soil samples, sediment samples, and potential groundwater samples that were to be collected from the existing or proposed highway ROW and temporary easements were subjected to chemical analysis under four different analytical schedules. These schedules are described in Section 3.1. Sample locations are shown on **Figure 4** in **Appendix A.** The analytical results are presented in Section 3.2.

3.1 Analytical Methodology

The samples were sent to Waste Stream Technology, Inc. (NYS Department of Health ELAP-certified laboratory) in Buffalo, New York for analysis according to the following analytical schedules presented below. The full laboratory report is included as **Appendix B**. **Table 3-1** presents a summary of the analytical schedules, their corresponding USEPA method numbers, and references.

3.1.1 Schedule A - Petroleum Contamination in Soils

Schedule A is a group of analytical methods designed to detect petroleum contamination. The methods are specified in accordance with the NYSDEC STARS Memo #1: Petroleum-Contaminated Soil Guidance Policy. The analysis included the following: Toxicity Characteristic Leaching Procedure (TCLP) followed by USEPA Standard Method 8021 for volatile organic compounds including methyl t-butyl ether (MTBE); TCLP followed by USEPA Standard Method 8270 (base/neutrals only) for semivolatile organic compounds; and TCLP followed by USEPA Standard Method 6010 for lead.

3.1.2 Schedule B - General Industrial Contamination in Soils

Schedule B is a group of methods designed to detect general industrial contamination. Samples were analyzed for the full Target Compound List (TCL) of volatiles (Method 8260), semivolatiles (Method 8270), pesticides/PCBs (Method 8081), eight RCRA metals (totals - Methods 6010 and 7470), RCRA Ignitability, and TCLP followed by analysis for benzene.

3.1.3 Schedule C - General Industrial Contamination in Groundwater

Schedule C is a group of methods designed to detect general industrial contamination in groundwater. In accordance with FSP criterion, a groundwater sample was not warranted as a result of the field investigation. However, if a groundwater sample was collected during this investigation, it would have been analyzed for TCL volatile organic compounds (Method 8260), semivolatile organic compounds (Method 8270), and pesticides/PCBs

(Method 8080). In addition, the groundwater sample would have been analyzed for the eight RCRA metals (Method 6010/7000).

3.1.4 Schedule D - General Industrial Contamination in Sediments

Schedule D is a group of methods designed to detect general industrial contamination in sediments. Sediments were analyzed for TCL volatile organic compounds (Method 8260), semivolatile organic compounds (Method 8270), pesticides/PCBs (Method 8080), total organic carbon (TOC) (Lloyd Khan Method) and for the eight RCRA metals (Method 6010/7000). Also, for purposes of characterizing the sediments for disposal, the samples were be subjected to TCLP (Method 1311) followed by analysis for benzene (Method 8021).

Table 3-1
Project Specific Analytical Schedules

SCHEDULE	PARAMETER	MATRIX	METHOD NO.	NUMBER OF SAMPLES COLLECTED	Sites
A	TCLP • STARS VOAs • STARS SVOAs • TCLP Lead Ignitability	Soil	1311 8021 8270 6010 1010	2 Plus 1 matrix spike	C & E
B	TCL VOAs TCL SVOAs TCL Pesticides/PCBs RCRA Metals TCLP: • Benzene Ignitability	Soil	8260 8270 8080 6010/7000 series 1311 8021 Closed Cup	2 Plus 1 matrix spike/ matrix spike duplicate	A, C, F, & G
C	TCL VOAs TCL SVOAs TCL Pesticides/PCBs RCRA Metals	Groundwater	8260 8270 8080 6010/7000 series	0	N/A (Sample not warranted per FSP/field investigation)
D[1]	TCL VOAs TCL SVOAs TCL Pesticides/PCBs RCRA Metals TCLP • Benzene TOC	Sediment	8260 8270 8080 6010/7000 series 1311 8021 Lloyd Khan	2	H

NOTE:

1. One of the sediment samples from Site H was also analyzed for TCLP lead as a result of the high total lead level determined during the initial analysis. TCLP lead analysis was added to determine whether the sediment sample could be considered a RCRA hazardous waste based on lead toxicity.

REFERENCES:

NYSDEC STARS guidance memorandum #1: Petroleum - Contaminated Soil Guidance Policy

Test Methods for Evaluating Solid Waste - Physical/Chemical Methods, SW-846, 3rd Edition, November 1986 and Revision, November 1990.

3.2 Laboratory Results

Laboratory analytical results are presented in the sub-sections below for each of the samples collected in the field. These results are compared to the appropriate New York State Department of Environmental Conservation (NYSDEC) and United States Environmental Protection Agency (USEPA) guidance values for illustrative purposes. The guidance values are not intended for use as action levels on the project corridor since the NYSDEC generally makes decisions on a site-by-site basis. However, the guidance values are useful as an indication of what determinations are likely to be made by the NYSDEC.

The laboratory report is included in **Appendix B**. See **Table 3-2** for information on the sampling sites, proposed construction activities, the type of investigations performed, sample identifications, and the analytical schedules performed per sample.

TABLE 3-2
SAMPLING SITES, INVESTIGATIONS, AND SAMPLES

Site	Land Use & Address *Reason for concern*	Proposed Construction Activities	Investigations Performed[1]	Analytical Schedule and Sample ID
A	Vacant Land 72 Young Street *Former commercial photo studio*	Bridge replacement, approach pavement reconstruction, & drainage improvements.	• Soil Core Investigation	*Analytical Schedule B:* **(DEL-A-SB1)**
B	Walgreens Drug Store 10 Young Street *Former gas station & current DEC spill site*	*No excavations are scheduled to take place directly adjacent to Site B. The closest excavations are proposed across Young Street from Site B.*	• Soil Core Investigation (Due to the proximity of the proposed excavations, the investigation was performed across Young Street from Site B on the southern edge of Site A).	*Analytical Schedule A:* **Sample not warranted per FSP criterion/field investigation**
C	Automobile Repair Shop 77 Young Street *Former gas station & current auto repair shop*	Bridge replacement, approach pavement reconstruction, & drainage improvements.	• GPR Survey • Soil Core Investigation	*Analytical Schedule A:* **(DEL-C-SB1)** *Analytical Schedule B:* **(DEL-C-SB2)**
D	Burger King 11 Delaware Street *Former gas station/car dealer*	*No excavations are scheduled to take place directly adjacent to Site D. The closest excavations are proposed across Young Street from Site D.*	• None beyond Site C due to the proximity of the proposed excavations. The Site C investigation is comprehensive enough to identify any concerns due to Site D.	N/A
E	Vacant Land 2 Delaware Street *Former auto repair/car dealer (petroleum storage)*	Bridge replacement, approach pavement reconstruction, & drainage improvements.	• GPR Survey • Soil Core Investigation	*Analytical Schedule A:* **(DEL-E-SB1)**
F	Peerless Welding 22 Fillmore Avenue *Long time scrap metal yard, former coal storage area*	Bridge replacement, approach pavement reconstruction, & drainage improvements.	• Soil Core Investigation	*Analytical Schedule B:* **(DEL-F-SB1)** *Analytical Schedule C:* **No GW sample collected per FSP criterion/field investigation**
G	Creek Bank Soils Behind Bridge Abutments *Fill material of unknown origin*	Bridge replacement	• Soil Core Investigation	*Analytical Schedule B:* **(B-3 (SITE G))**
H	Sediments under Bridge Ellicott Creek *Past spills from upstream IHWS sites*	Bridge replacement	• Sediment Sampling	*Analytical Schedule D:* **(DEL-H-SED1)[2]** **(DEL-H-SED2)**

Notes:
1. Soil core investigation includes organic vapor readings of soil gas and visual inspection of soil borings.
2. DEL-H-SED1 was also analyzed for TCLP lead due to a high total lead result.

3.2.1 Soil Samples for Petroleum Contamination

Two individual soil samples were collected as a result of petroleum concerns encountered during the soil core investigation conducted at Sites C and E. Samples were collected from the locations shown on **Figure 4** in **Appendix A** and analyzed for Schedule A parameters. Soil sampling was performed as described in Section 2.2.1. See **Table 2-1** for field observations recorded from the soil samples as a result of the soil core investigation. The analytical results for each sample are listed in **Table 3-3**.

TABLE 3-3
DELAWARE STREET BRIDGE
SCHEDULE A LABORATORY DETECTED ANALYTES - SOIL SAMPLES AT SITES C AND E

Compound	Concentration in TCLP Extract (µg/l - [ppb])		NYSDEC Guidance Values
	Sample DEL-C-SB1	Sample DEL-E-SB1	TCLP Extraction Guidance Value[1] (ppb)
Sample Date	10/19/99	10/20/99	
Sample Depth (ft)	11.5 - 13	0.5 - 5	
TCLP Volatiles			
Benzene	4.9	ND	0.7
Toluene	5.0	2.2	5
Ethylbenzene	10.7	ND	5
o-Xylene	4.4	ND	5
m/p-Xylene	10.2	ND	5
Isopropylbenzene	7.2	ND	5
n-Butylbenzene	7.4	ND	5
n-Propylbenzene	3.8	ND	5
p-Isopropyltoluene	10.9	ND	5
Naphthalene	4.8	ND	10
1,2,4-Trimethylbenzene	24.6	ND	5
1,3,5-Trimethylbenzene	9.2	ND	5
TCLP Semi-Volatiles			
Naphthalene	8	ND	10
TCLP Metals			
TCLP Lead	173	92	5,000
Ignitability			
Ignitability	<200°F	<200°F	<200°F[2]

NOTES

ND = Not Detected
J = Value is estimated.
B = Compound is found in associated blank as well as the sample (indicating laboratory contamination)

(1) Information taken from NYSDEC Division of Construction Management, Bureau of Spill Prevention and Response, STARS Memo #1 - Petroleum Contaminated Soil Guidance Policy, August 1992.

(2) RCRA ignitability guidance level - also taken from NYSDEC STARS Memo #1.

3.2.2 Soil Samples for General Industrial Contamination

Four individual soil samples were collected for general industrial contamination concerns as a result of the soil core investigation conducted at Sites A, C, F, and G. Samples were collected from the locations shown on **Figure 4** in **Appendix A** and analyzed for Schedule B parameters. Soil sampling was performed as described in Section 2.2.1. See **Table 2-1** for field observations recorded from each soil sample location. The analytical results for each sample are listed in **Table 3-4**.

TABLE 3-4
DELAWARE STREET BRIDGE
SCHEDULE B LABORATORY DETECTED ANALYTES - SOIL SAMPLES AT SITES A, C, F, & G

	Soil Concentration (µg/kg - ppb)				Guidance Values (ppb)	
Compound	**Sample DEL-A-SB1**	**Sample DEL-C-SB2**	**Sample DEL-F-SB1**	**Sample B-3 (Site G)**	**NYSDEC Action Levels Based on USEPA Health Risk Data[1,2,3]**	**NYSDEC Recommended Soil Cleanup Objectives[2]**
Sample Date	10/19/99	10/19/99	10/20/99	1/20/99		
Sample Depths (ft)	8 - 12	0.5 - 5	4.5 - 7.5	1 - 4		
TCL Volatiles						
Acetone	ND	ND	ND	26 J	8,000,000	200
Benzene	ND	ND	ND	1 J	24,000	60
Ethylbenzene	ND	1 J	1 J	ND	8,000,000	5500
Methylene Chloride	ND	5	8	ND	93,000	100
Styrene	ND	4 J	ND	ND	23,000	N/A
Toluene	2 J	3 J	4 J	3 J	20,000,000	1500
Trichloroethene	17	25	30	ND	64,000	700
Xylenes	2 J	ND	3 J	1 J	200,000,000	1200
TCL Semi-Volatiles STARS						
Naphthalene	ND	74 J	113 J	118 J	300,000	13,000
2-Methylnaphthalene	ND	92 J	96 J	121 J	N/A	36,400
Phenanthrene	ND	165 J	331	195 J	N/A	50,000
Anthracene	ND	ND	78 J	ND	20,000,000	50,000
Di-n-butyl phthalate	ND	ND	201 J	ND	8,000,000	8,100
Fluoranthene 1000	158 J	139 J	418	154J	3,000,000	50,000
Pyrene 1000	154 J	166 J	447	157 J	2,000,000	50,000
Benzo(a)Anthracene	113 J	79 J	274 J	85 J	220	224 or MDL
Chrysene	109 J	94 J	302 J	96 J	N/A	400
bis (2-Ethylhexyl) phthalate	404	423	166 J	205 J	N/A	50,000
Benzo(b) fluoranthene	ND	82 J	286 J	ND	220	1,100 or MDL
Benzo(k) fluoranthene	102 J	90 J	279 J	90 J	220	1,100 or MDL
Benzo(a) pyrene	110 J	74 J	266 J	75 J	61	61 or MDL
Indeno(1,2,3-cd) pyrene	ND	ND	94 J	ND	N/A	3,200
Benzo(g,h,i) perylene	ND	ND	93 J	ND	N/A	50,000
TCL Pesticides						

TABLE 3-4
DELAWARE STREET BRIDGE
SCHEDULE B LABORATORY DETECTED ANALYTES - SOIL SAMPLES AT SITES A, C, F, & G

	Soil Concentration (µg/kg - ppb)				Guidance Values (ppb)	
Compound	**Sample DEL-A-SB1**	**Sample DEL-C-SB2**	**Sample DEL-F-SB1**	**Sample B-3 (Site G)**	**NYSDEC Action Levels Based on USEPA Health Risk Data[1,2,3]**	**NYSDEC Recommended Soil Cleanup Objectives[2]**
None Detected	---	---	---	---	---	---
TCL PCBs						
None Detected	---	---	---	---	---	---
RCRA Metals (Totals)						
Arsenic	3030	3,890	3,630	7610	3000-12,000	7500 or SB
Barium	12,400	34,100	39,500	114,000	15,000-600,000	300,000 or SB
Cadmium	2,850	2,830	ND	1590	100-1000	1000 or SB
Chromium	7,950	5,200	5,770	16,400	1500-40,000	10,000 or SB
Lead	7,450	19,400	33,200	16,200	200,000-500,000[5]	SB
TCLP						
TCLP Benzene 0.7	ND	ND	1.6	ND	500[4]	0.7[6]
Ignitability						
Ignitability	<200°F	<200°F	<200°F	<200°F	<200°F[4]	N/A

NOTES

ND = Not Detected
N/A = Not Available
MDL = Method detection Limit
J = Estimated Value (below Laboratory Quantitation Limit)
B = Compound detected in associated blank as well as sample (indicating laboratory contamination)

1 Taken from NYSDEC Technical and Administrative Guidance Memorandum HWR-92-3028, November 30, 1992 Based on USEPA Health Effects Assessment Summary Tables or NYSDEC Technical and Administrative Guidance Memorandum HWR-94-4046 - USEPA Health Based Values if not available in HWR-92-3028.

2 NYSDEC Technical and Administrative Guidance Memorandum HWR-94-4046, revised January 24, 1994. As per TAGM 4046; Total volatiles <10,000 ppb, total semi-volatiles <500,000 ppb, and individual semi-volatiles <50,000 ppb.

3 Action levels for RCRA metals are Eastern USA background levels based on NYSDEC Technical and Administrative Guidance Memorandum HWR-94-4046, Revised April, 1995.

4 RCRA Hazardous waste level information taken from NYSDEC Division of Construction Management, Bureau of Spill Prevention and Response, STARS Memo #1 - Petroleum Contaminated Soil Guidance Policy, August 1992.

5 Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm. Source is NYSDEC TAGM HWR 94-4046.

6 Information taken from NYSDEC Division of Construction Management, Bureau of Spill Prevention and Response, STARS Memo #1 - Petroleum Contaminated Soil Guidance Policy, August 1992.

Exceeds guidance value.

3.2.3 Sediment Samples for General Industrial Contamination

Two sediment samples (Samples DEL-H-SED1 and DEL-H-SED2) were collected for general industrial contamination concerns from Site H under the bridge at the locations shown on **Figure 4** in **Appendix A**.

Both samples were analyzed for Schedule D parameters. Among other detected analytes, the Schedule D results identified a high total lead level in the sediments. Therefore, subsequent to the Schedule D analysis, Sample DEL-H-SED1 was also analyzed for TCLP lead to determine the proper method of disposal.

Soil sampling was performed as described in Section 2.4. See **Table 2-2** for field sediment sample descriptions. The analytical results for each sample are listed in **Table 3-5**.

TABLE 3-5
DELAWARE STREET BRIDGE
SCHEDULE D LABORATORY DETECTED ANALYTES - SEDIMENT SAMPLES AT SITE H

	Sediment Concentration (µg/kg - ppb)		Guidance Values (ppb)	
Compound	**Sample DEL-H-SED1**	**Sample DEL-H-SED2**	**NYSDEC Action Levels Based on USEPA Health Risk Data[1,2,3]**	**NYSDEC Recommended Soil Cleanup Objectives[2]**
Sample Date	10/19/99	10/19/99		
Sample Depths (ft)	0 - 1	0 - 1		
TCL Volatiles				
Toluene	2 J	ND	20,000,000	1500
Trichloroethene	7	ND	64,000	700
Xylenes	2 J	ND	200,000,000	1200
TCL Semi-Volatiles				
Acenaphthene	135 J	ND	5,000,000	50,000
Phenanthrene 1000	2600	3770	N/A	50,000
Anthracene 1000	729	ND	20,000,000	50,000
Carbazole	488	ND	32,000	N/A
Fluoranthene 1000	5060	5890	3,000,000	50,000
Pyrene 1000	5490	8420	2,000,000	50,000
Benzo(a)Anthracene .04	2200	2340 J	220	224 or MDL
Chrysene .04	2480	2740 J	N/A	400
bis (2-Ethylhexyl) phthalate	618	3010 J	N/A	50,000
Benzo(b) fluoranthene .04	2800	1820 J	220	1,100 or MDL
Benzo(k) fluoranthene .04	2370	2760 J	220	1,100 or MDL
Benzo(a) pyrene .04	2180	2380 J	61	61 or MDL
Indeno(1,2,3-cd) pyrene .04	788	ND	N/A	3,200
Dibenzo(a,h) anthracene .04	332	ND	14	14 or MDL
Benzo(g,h,i) perylene .04	651	1230 J	N/A	50,000
TCL Pesticides				
None Detected	---	---	---	---
TCL PCBs				

TABLE 3-5
DELAWARE STREET BRIDGE
SCHEDULE D LABORATORY DETECTED ANALYTES - SEDIMENT SAMPLES AT SITE H

	Sediment Concentration (µg/kg - ppb)		Guidance Values (ppb)	
Compound	**Sample DEL-H-SED1**	**Sample DEL-H-SED2**	**NYSDEC Action Levels Based on USEPA Health Risk Data[1,2,3]**	**NYSDEC Recommended Soil Cleanup Objectives[2]**
Aroclor 1260	170	140	1000	1000 (surface) 10,000 (subsurface)
RCRA Metals				
Arsenic	2,240	3,030	3000-12,000	7500 or SB
Barium	21,200	77,700	15,000-600,000	300,000 or SB
Cadmium	8,860	7,910	100-1000	1000 or SB
Chromium	26,400	55,800	1500-40,000	10,000 or SB
Lead	2,480,000	712,000	200,000-500,000[5]	SB
Mercury	30	159	1-200	100
TCLP				
TCLP Benzene	ND	1.5	500[4]	0.7[6]
TCLP Lead	7,140	N/A	5,000[4]	N/A
Total Organic Carbon				
Total Organic Carbon	0.7722 %	1.75 %	1%[7]	N/A

NOTES:

ND = Not Detected
N/A = Not Available
MDL = Method detection Limit
J = Estimated Value (below Laboratory Quantitation Limit)
B = Compound detected in associated blank as well as sample (indicating laboratory contamination)

1 Taken from NYSDEC Technical and Administrative Guidance Memorandum HWR-92-3028, November 30, 1992 Based on USEPA Health Effects Assessment Summary Tables or NYSDEC Technical and Administrative Guidance Memorandum HWR-94-4046 - USEPA Health Based Values if not available in HWR-92-3028.

2 NYSDEC Technical and Administrative Guidance Memorandum HWR-94-4046, revised January 24, 1994. As per TAGM 4046; Total volatiles <10,000 ppb, total semi-volatiles <500,000 ppb, and individual semi-volatiles <50,000 ppb.

3 Action levels are Eastern USA background levels based on NYSDEC Technical and Administrative Guidance Memorandum HWR-94-4046, Revised April, 1995.

4 RCRA Hazardous waste level information taken from NYSDEC Division of Construction Management, Bureau of Spill Prevention and Response, STARS Memo #1 - Petroleum Contaminated Soil Guidance Policy, August 1992.

5 Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4-61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200-500 ppm. Source is NYSDEC TAGM HWR 94-4046.

6 Information taken from NYSDEC Division of Construction Management, Bureau of Spill Prevention and Response, STARS Memo #1 - Petroleum Contaminated Soil Guidance Policy, August 1992.

7 Lowest Effect Level from NYSDEC Technical Guidance for Screening Contaminated Sediments , November 1993.

Exceeds guidance value.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The Hazardous Waste/Contaminated Materials Detailed Site Investigation for this project has been completed. Several sites may require special handling of excavated materials or preparation prior to the construction phase. The NYSDEC should be made aware of the findings from the soil and sediment sampling conducted for this investigation. Prior to construction, the Engineer-In-Charge (EIC) should be made aware of the history of each site and advised to contact the NYSDOT Regional Environmental staff if any evidence of contamination or underground storage tanks is encountered.

4.1 Ground Penetrating Radar Survey (for USTs)

A geophysical survey using ground penetrating radar (GPR) technology was performed at two sites adjacent to the bridge to determine the presence of, and locate, unmarked USTs. Five anomalies with radar responses similar to that of a UST were detected on the south side of the bridge.

Four of the five anomalies are adjacent to each other and parallel to the west wall of the building at Site C (77 Young Street) between the roadway and the building. The anomalies are at a depth of at approximately 0.8-1.0 m (2.62-3.28 ft) below ground surface. One of these four anomalies (potentially an approximately 11.36 cubic meter (3000 gallon) UST) is situated entirely within the temporary easement/excavation line and one other of the four anomalies (potentially an approximately 15.14-18.93 cubic meter (4000-5000 gallon) UST) is partially within the temporary easement/excavation line. The remaining two anomalies appear to be outside the temporary easement/excavation line.

The fifth anomaly was detected within Delaware Street parallel to the roadway. The anomaly is located 1.0 m (3.28 ft) below ground surface at a distance of approximately 7 m (23 ft) south and outside the limits of proposed excavation for the project. This anomaly had a profile of an object up to 1.23 m (4 ft) wide and approximately 4 m (13.12 ft) long. However, consultation with a representative from Bell Atlantic, on-site with locating equipment, revealed that a large telephone duct bank approximately 2 ft wide and 5.5 feet tall is located in the area of the anomaly. The representative from Bell Atlantic indicated that he had difficulty locating the exact path of the duct bank, however, he believes that the duct bank likely runs directly down the centerline of the anomaly. The anomaly is located outside the proposed limits of excavation, and it is possible that the anomaly is associated with the telephone duct bank and may not be a UST. Therefore, this anomaly is not expected to be of concern to the proposed bridge project.

If additional USTs or evidence of residual petroleum contamination are encountered at any location during construction, the EIC should contact the NYSDOT Regional Environmental staff for assistance in determining what special handling provisions may be required for petroleum-contaminated media.

4.2 Sites Not Considered to be of Environmental Concern

Site B - Walgreens Drug Store, 10 Young Street

A soil core investigation was performed for contamination concerns from this site which indicated that a soil sample was not warranted for the contamination concerns from Site B. Since no stained soil, odors or elevated organic vapor readings were observed during the field investigation for this site, this site is not expected to have contaminated the proposed bridge corridor.

4.3 Sites Considered to be of Potential Environmental Concern

Both RCRA characteristic hazardous waste and non-hazardous solid waste were encountered during sampling. Specific conclusions and recommendations are presented below.

Site A - Vacant Land, 72 Young Street

A soil core investigation was performed at this site which resulted in the collection of one soil sample (Sample DEL-A-SB1) for general industrial contamination concerns. A slight unknown odor and an organic vapor reading of 1.1 were observed during the field investigation at this site. Three VOCs and seven SVOCs, were detected in the soil sample collected from this site. One of the seven SVOCs (benzo(a)pyrene) was detected at a level above the NYSDEC guidance values. One inorganic (cadmium) was also detected at a level above its NYSDEC guidance value. All other detected contaminants were at levels below the NYSDEC guidance levels. Since two of the contaminants detected were above the NYSDEC guidance values, soil from this site should not be reused as clean fill. See Section 4.4.2 for recommendations.

Site C - Automobile Repair Shop, 77 Young Street

A soil core investigation was performed at this site which resulted in the collection of two soil samples: one sample for petroleum contamination concerns (Sample DEL-C-SB1) and one for general industrial contamination concerns (Sample DEL-C-SB2).

Sample DEL-C-SB1:

This soil sample was collected for petroleum contamination concerns and had heavy stains, petroleum odors, and an elevated organic vapor readings of 375 ppm. Twelve petroleum VOCs were detected in the TCLP analysis of the soil sample collected from this site. Nine of the twelve VOCs were detected at levels above the NYSDEC guidance values. Therefore, petroleum contaminated soil from this site should not be reused as clean fill. See Section 4.4.3 for recommendations.

Sample DEL-C-SB2:

This soil sample was collected for general industrial contamination concerns and had a black sandy material with petroleum odors and elevated organic vapor readings of 10.5 ppm. Similar black sandy material was present in five of the seven soil core investigation points at this site. Four VOCs and eleven SVOCs, were detected in the soil sample of the black sand collected from this site. One of the eleven SVOCs (benzo(a)pyrene) was detected at levels above the NYSDEC guidance values. One inorganic (cadmium) was also detected at a level above its NYSDEC guidance value. All other detected contaminants were at levels below the NYSDEC guidance levels. Since two of the contaminants detected were above the NYSDEC guidance values, soil from this site should not be reused as clean fill. See Section 4.4.2 for recommendations.

Site E - Vacant Land, 2 Delaware Street

A soil core investigation was performed at this site which resulted in the collection of one soil sample (Sample DEL-E-SB1) for petroleum contamination concerns. No petroleum odors were noted from the soil, however, elevated organic vapor readings of 16.8 ppm were observed during the field investigation at this site. One VOC was detected in the TCLP analysis of the soil sample collected from this site at a level below the NYSDEC guidance values. Since elevated organic vapor readings were noted at this site, there is a potential that excavations will encounter contaminated soil. See Section 4.4.3 for recommendations.

In addition, black sandy material similar to that found at other sites was encountered in five of the boreholes at this site. The black sandy material at this site was not analyzed for Schedule B parameters, since it is likely that the analytical results would be similar to the analytical results from the black sandy material sampled at Sites A, C, F, and G. See Section 4.4.2 for recommendations.

Site F - Peerless Welding, 22 Fillmore Avenue

A soil core investigation was performed at this site which resulted in the collection of one soil sample (Sample DEL-F-SB1) for general industrial contamination concerns. No stained soil, odors, or elevated organic vapor readings were observed during the field investigation at this site. However, five VOCs and fifteen SVOCs were detected in the soil sample collected from this site. Four of the fifteen SVOCs were detected at levels above the NYSDEC guidance values and the TCLP benzene analysis detected benzene at a level above the NYSDEC STARS guidance level. All other detected contaminants were at levels below the NYSDEC guidance levels. Since five of the contaminants detected were above the NYSDEC guidance values, soil from this site should not be reused as clean fill. See Section 4.4.2 for recommendations.

Site G - Creek Bank Soils

A soil core investigation was performed at this site, in January 1999 as part of a geotechnical investigation, which resulted in the collection of one soil sample (Sample B-1 from Site G) for general industrial contamination concerns. The sample consisted of a black sandy material with no odors or elevated organic vapor readings. The black sandy material was present to a depth of approximately 0.3-1.52 m (1-5 ft). Four VOCs and ten SVOCs, were detected in the soil sample collected from this site. One of the ten SVOCs (benzo(a)pyrene) was detected at a level above the NYSDEC guidance values. Three inorganics (cadmium, arsenic, and chromium) were also detected at levels above NYSDEC guidance values. All other detected contaminants were at levels below the NYSDEC guidance levels. Since four of the contaminants detected were above the NYSDEC guidance values, soil from this site should not be reused as clean fill. See Section 4.4.2 for recommendations.

Site H - Sediments under Bridge

Two sediment samples for general industrial contamination concerns were collected from the creek. The samples were collected from both the north and south ends of the bridge adjacent to the abutments. The sediments were black in color and no elevated organic vapor readings were observed during the field investigation.

Sample DEL-H-SED1:

The analysis of the sample from the south end of the bridge (Sample DEL-H-SED1) detected three VOCs, fifteen SVOCs, and one PCB congener. Six of the fifteen SVOCs were detected at levels above the NYSDEC guidance values. Three inorganics were also detected at levels above their NYSDEC guidance values. All other detected contaminants were at levels below the NYSDEC guidance levels.

One of the inorganics detected was lead. As a result of the high total lead concentration determined during the initial analysis, Watts Engineers recommended that the lab analyze the sediment sample for TCLP lead levels. TCLP lead analysis was performed to determine whether the sediment sample could be considered a RCRA hazardous waste based on lead toxicity. TCLP lead concentration was determined to exceed the RCRA hazardous waste regulatory level for toxicity.

Sample DEL-H-SED2:

The analysis of the sample from the north end of the bridge (Sample DEL-H-SED2) detected one VOC, ten SVOCs, and one PCB congener. The VOC detected was benzene from the TCLP benzene analysis. The TCLP benzene analysis level was above the NYSDEC guidance value for petroleum contaminated soil and five of the ten SVOCs were detected at levels above their

NYSDEC guidance values. Four inorganics and TOC were also detected at a level above their NYSDEC guidance values. All other detected contaminants were at levels below the NYSDEC guidance levels.

Between these two samples, eleven of the contaminants detected were above the NYSDEC guidance values, including lead which was detected at a level above the RCRA hazardous waste level for toxicity. Sediment from this site should be considered a RCRA hazardous waste for purposes of disposal and can not be reused as clean fill. See Section 4.4.4 for recommendations.

4.4 Recommendations

4.4.1 GPR Anomalies (Potential USTs)

Construction excavations at the southeast corner of the bridge are proposed in the location of GPR anomalies that are potential USTs. Therefore, we recommend that the appropriate personnel at the NYSDEC be made aware of the presence of potential USTs at 77 Young Street (Site C). This will allow the NYSDEC to arrange for UST removal and the cleanup of associated potential contamination by responsible parties.

4.4.2 General Industrial Contamination

As a result of the findings of the Detailed Site Investigation for this project, the following actions are recommended:

Contaminated/Sediment Soil Handling:

A copy of this report should be provided to an appropriate representative of the NYSDEC in preparation for a discussion between the NYSDEC and NYSDOT regarding proper reuse and/or disposal of soil from this corridor. Topics to be discussed at this meeting should include: specifications for reuse/disposal of contaminated materials, a remediation plan, and a health and safety plan. These issues should be addressed with regard to field and laboratory results at sites A, C, E, F, G, and H.

It should be noted that the NYSDEC makes decisions on a case by case basis regarding what remedial actions should be taken during displacement of soils, sediments, or groundwaters which are contaminated as a result of petroleum or industrial spills or waste disposal practices. For excavated soils in contaminated areas of the project corridor options may include: processing under a specific NYSDEC Beneficial Use Determination (BUD), disposal at a state permitted landfill, reuse at the site of origin as subgrade material, or treatment on site.

Health and Safety:

In addition to any NYSDEC requirements, Watts Engineers recommends that the contractor's Project Safety and Health Plan (specified in the NYSDOT Standard Specifications Section 107-05) be expanded to address the environmental concerns detailed in this investigation. To this end, it is recommended that the contractor be provided with this report and the Phase I report for this project.

Also, if any unusual environmental concerns are identified during construction (e.g. strong odors, waste-like fill materials, underground tanks, fill materials inconsistent with the materials identified in this investigation, etc.), the NYSDOT Regional Environmental Staff should be consulted for further guidance.

4.4.3 Petroleum Contamination

Petroleum contamination was encountered at the former gas station at Site C, and the potential for petroleum contaminated soil was encountered at Site E. For these sites, we recommend an environmental monitor be present during excavations to separate contaminated soil from non-contaminated soil.

Petroleum contamination is not expected to be encountered at any other sites within the proposed project corridor. However, if evidence of residual petroleum contamination is encountered at any other location during construction, the EIC should contact the Regional Environmental staff for assistance in determining whether special handling provisions should be instituted for petroleum contaminated media.

4.4.4 RCRA Hazardous Waste Contamination

RCRA hazardous waste contamination for TCLP lead toxicity was encountered in the sediments collected from under the bridge (Site H). It is unclear what might be the cause for the elevated lead concentrations without additional studies and sediment samples collected from both upstream and downstream locations. If elevated lead concentrations are localized to the sediments immediately surrounding the bridge, it is possible that the lead contamination is due to lead associated with the paint on the structure. Other possible sources of the elevated lead concentrations may be fugitive emissions from years of automobile and boat traffic, release of leaded petroleum products from the adjacent service station, or cross-contamination associated with an upstream industrial source.

Watts Engineers recommends that an Erosion and Sediment Control Plan be prepared to address sediment excavation activities during construction to minimize the mobilization of contaminated sediments. One technique that could be employed would involve the use of sheet piling cofferdams during abutment excavation to reduce the release of sediments to the environment.

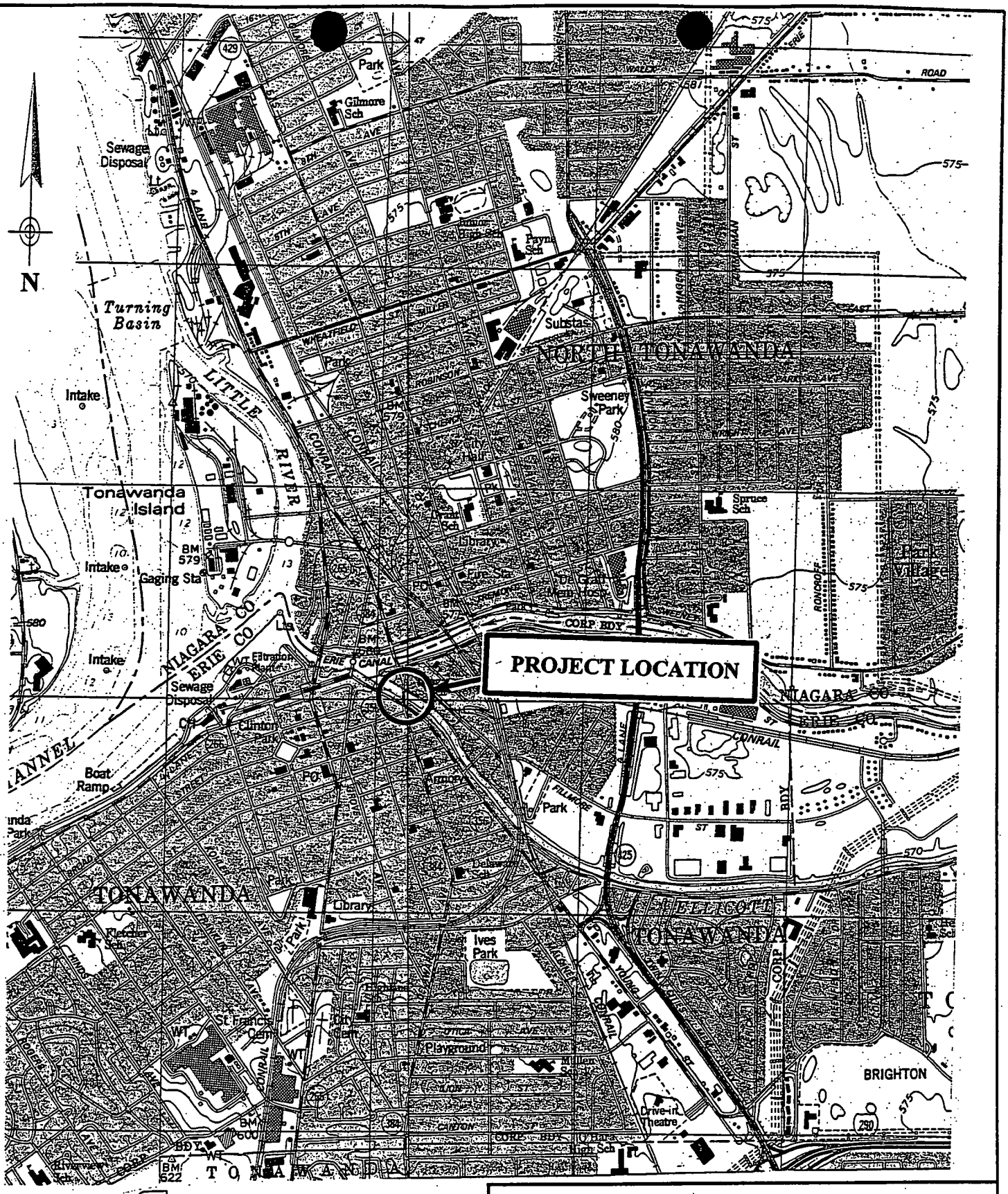
Once excavated, Watts Engineers recommends that the sediments be placed into covered rolloffs and sampled to re-confirm whether they should be considered RCRA hazardous

or a non-hazardous solid waste for purposes of disposal or reuse. Resampling is suggested since it is possible that the bulk volume of excavated sediments may not be hazardous. A contingency plan should be developed beforehand in consultation with the NYSDEC in the event that the excavated sediments are determined to be non-hazardous. The sediments could then potentially be reused as fill on the site or disposed of as a solid waste in a solid waste landfill.

Alternately, if re-sampling of the containerized sediments confirms RCRA hazardous toxicity for lead, the NYSDOT will have to obtain an EPA hazardous waste generator identification number to facilitate disposal. Prior to disposal, the sediments would need to be solidified/stabilized with an additive such as portland cement so that the sediments would pass the paint filter test prior to disposal. Disposal would involve landfilling in a permitted hazardous waste landfill.

APPENDIX A

Site Maps



SOURCE:
USGS 15' QUADRANGLE
"TONAWANDA, EAST AND TONAWANDA, WEST, N.Y."
1980

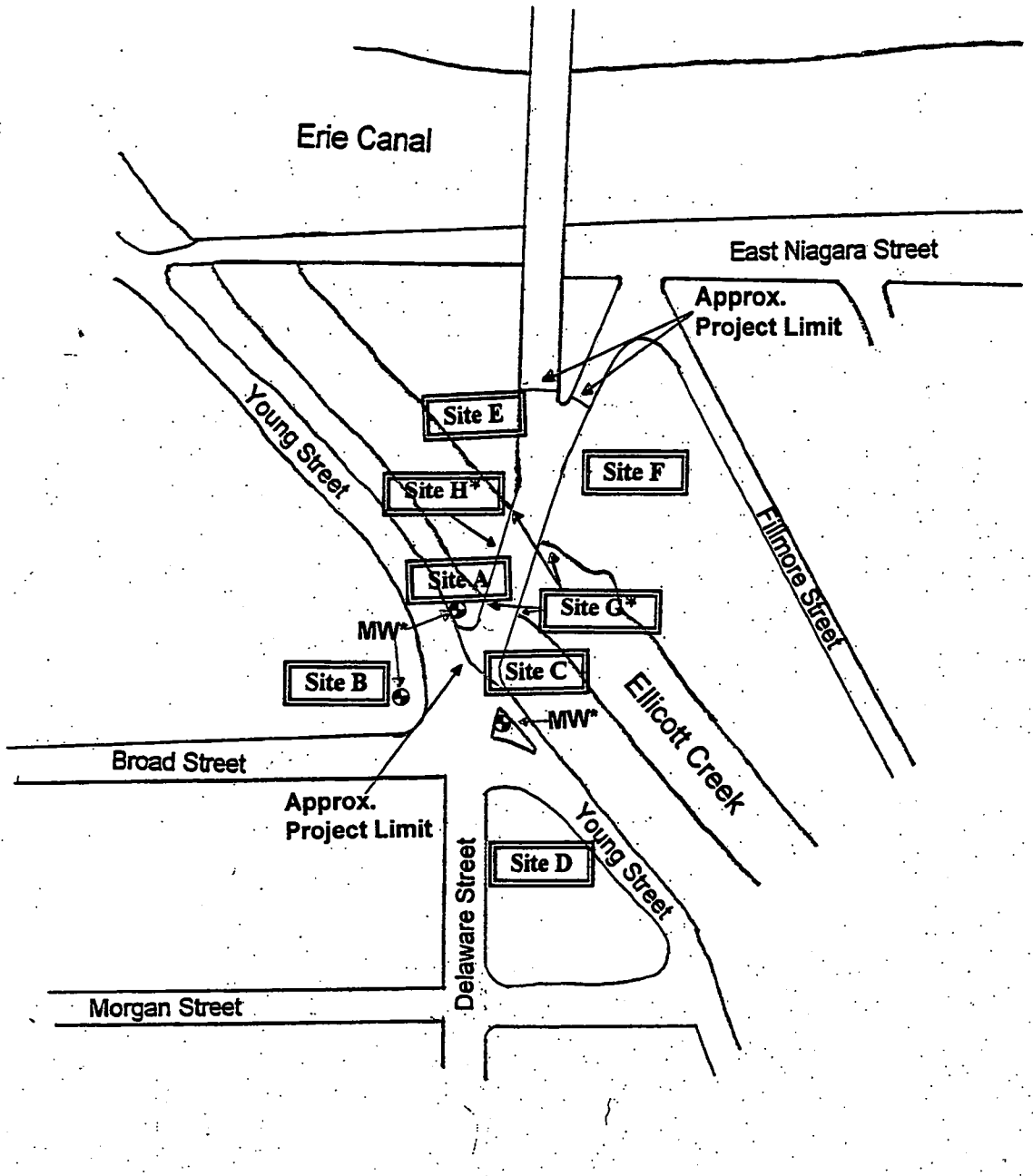
FIGURE 1

PROJECT LOCATION MAP

DELAWARE STREET, NY ROUTE 384
BIN 2047300 OVER ELLICOTT CREEK
CITY OF TONAWANDA, ERIE COUNTY
PIN 5460.29

SCALE: 1:25,000 | NOVEMBER 1999

WATTS ENGINEERS
3826 MAIN STREET
BUFFALO, NEW YORK 14226



*** NOTES:**

Site G consists of excavation areas of creek bank soils.
Site H consists of excavation areas of sediments under bridge.
MW = Approx. location of existing monitoring wells.

FIGURE 2

SITES OF ENVIRONMENTAL CONCERN

DELAWARE STREET, NY ROUTE 384
BIN 2047300 OVER ELLICOTT CREEK
CITY OF TONAWANDA, ERIE COUNTY
PIN 5460.29

NO SCALE | NOVEMBER 1999

WATTS ENGINEERS
3826 MAIN STREET
BUFFALO, NEW YORK 14226

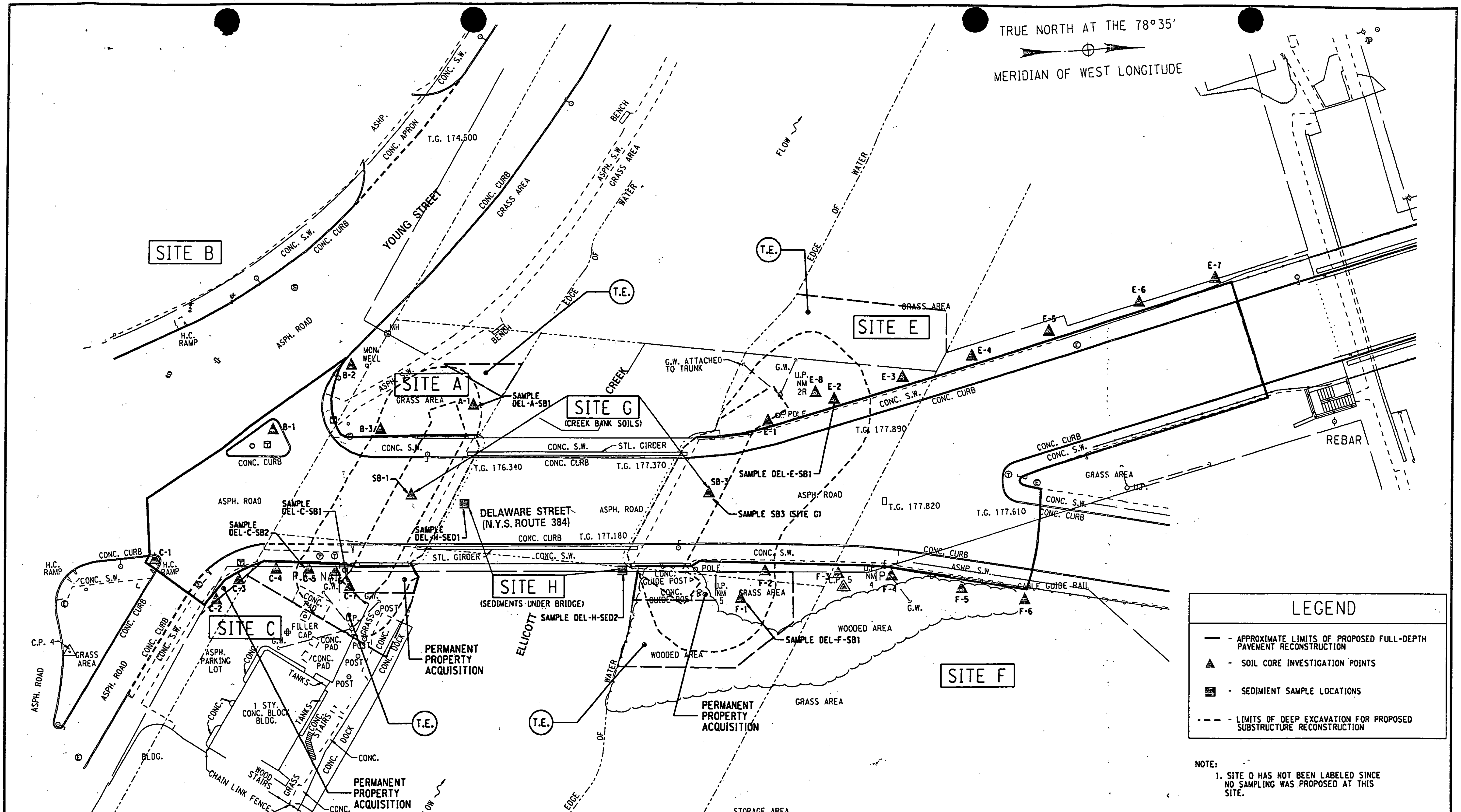
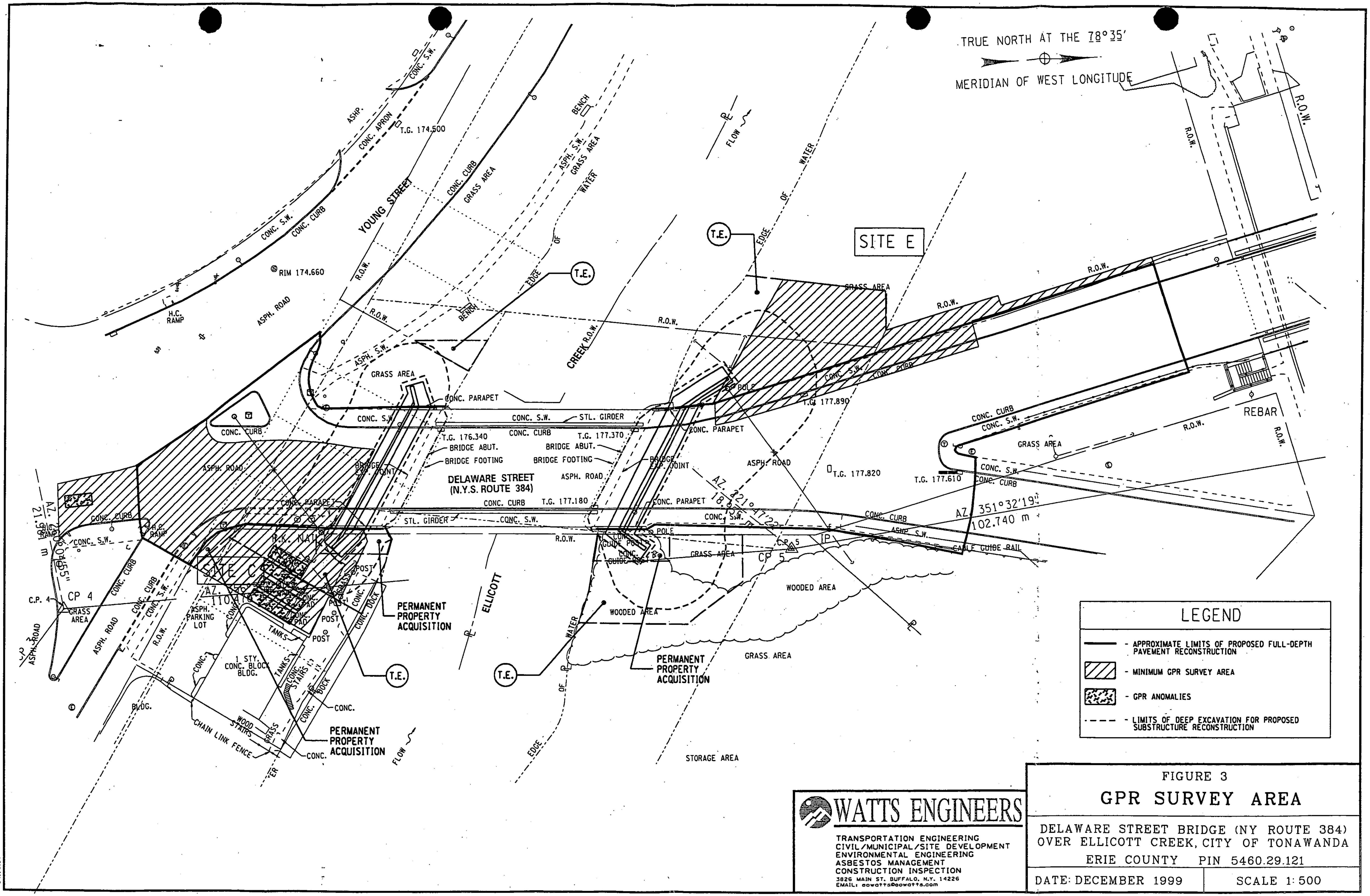

TRUE NORTH AT THE 78°35'
MERIDIAN OF WEST LONGITUDE
SITE A
SITE B
SITE C
SITE E
SITE F
SITE G
(CREEK BANK SOILS)
SITE H
(SEDIMENTS UNDER BRIDGE)
YOUNG STREET
DELAWARE STREET
(N.Y.S. ROUTE 384)
ELLICOTT CREEK
EDGE OF WATER
FLOW
SAMPLE DEL-A-SB1
SAMPLE DEL-C-SB1
SAMPLE DEL-C-SB2
SAMPLE DEL-H-SED1
SAMPLE DEL-H-SED2
SAMPLE DEL-E-SB1
SAMPLE SB3 (SITE G)
SAMPLE DEL-F-SB1
PERMANENT PROPERTY ACQUISITION
T.E.
T.G. 174.500
T.G. 176.340
T.G. 177.370
T.G. 177.180
T.G. 177.890
T.G. 177.820
T.G. 177.610
CONC. CURB
CONC. S.W.
STL. GIRDER
ASPH. ROAD
GRASS AREA
WOODED AREA
STORAGE AREA
ASPH. PARKING LOT
1 STY. CONC. BLOCK BLDG.
CHAIN LINK FENCE
CABLE GUIDE RAIL
REBAR
G.W. ATTACHED TO TRUNK
MON. WELL
LEGEND
— APPROXIMATE LIMITS OF PROPOSED FULL-DEPTH PAVEMENT RECONSTRUCTION
▲ - SOIL CORE INVESTIGATION POINTS
- SEDIMENT SAMPLE LOCATIONS
- - - LIMITS OF DEEP EXCAVATION FOR PROPOSED SUBSTRUCTURE RECONSTRUCTION
NOTE:
1. SITE D HAS NOT BEEN LABELED SINCE NO SAMPLING WAS PROPOSED AT THIS SITE.

FIGURE 4
SAMPLING LOCATION PLAN

DELAWARE STREET BRIDGE (NY ROUTE 384)
OVER ELLICOTT CREEK, CITY OF TONAWANDA
ERIE COUNTY PIN 5460.29.121

DATE: DECEMBER 1999 | SCALE 1:500

WATTS ENGINEERS
TRANSPORTATION ENGINEERING
CIVIL/MUNICIPAL/SITE DEVELOPMENT
ENVIRONMENTAL ENGINEERING
ASBESTOS MANAGEMENT
CONSTRUCTION INSPECTION
3826 MAIN ST. BUFFALO, N.Y. 14226
EMAIL: eowatts@eowatts.com



LEGEND

- APPROXIMATE LIMITS OF PROPOSED FULL-DEPTH PAVEMENT RECONSTRUCTION
- MINIMUM GPR SURVEY AREA
- GPR ANOMALIES
- LIMITS OF DEEP EXCAVATION FOR PROPOSED SUBSTRUCTURE RECONSTRUCTION

WATTS ENGINEERS

TRANSPORTATION ENGINEERING
CIVIL/MUNICIPAL/SITE DEVELOPMENT
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ASBESTOS MANAGEMENT
CONSTRUCTION INSPECTION

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EMAIL: gowatts@gowatts.com

FIGURE 3

GPR SURVEY AREA

DELAWARE STREET BRIDGE (NY ROUTE 384) OVER ELLICOTT CREEK, CITY OF TONAWANDA
ERIE COUNTY PIN 5460.29.121

DATE: DECEMBER 1999 | SCALE 1:500

APPENDIX B

Laboratory Report

WASTE STREAM TECHNOLOGY, INC.

302 Grote Street
Buffalo, NY 14207
(716) 876-5290

Analytical Data Report
Report Date : 11/05/99
Group Number : 9901-1674

Prepared For :
Mr. Justin Kellogg
Edward O. Watts, P.E., P.C.
3826 Main Street
Buffalo, NY 14226

Site : Delaware St. Br.

Field and Laboratory Information

Client Id	WST Lab #	Matrix	Date Sampled	Date Received	Time
DEL-A-SB1-8-12	WS58308	Soil	10/19/99	10/21/99	15:40
DEL-C-SB1-11.5-13	WS58309	Soil	10/19/99	10/21/99	15:40
DEL-C-SB2-0.5-5	WS58310	Soil	10/19/99	10/21/99	15:40
DEL-H-SED1	WS58311	Soil	10/19/99	10/21/99	15:40
DEL-H-SED2	WS58312	Soil	10/19/99	10/21/99	15:40
DEL-E-SB1-0.5-5	WS58313	Soil	10/20/99	10/21/99	15:40
DEL-F-SB1-4.5-7.5	WS58314	Soil	10/20/99	10/21/99	15:40
Sample Status Upon Receipt : No irregularities.					

RECEIVED
NOV 17 1999
WATTS ENGINEERS

Report Released By : Daniel W. Voll
Daniel Vollmer, Laboratory QA/QC Officer

ENVIRONMENTAL LABORATORY ACCREDITATION CERTIFICATION NUMBERS
NYSDOH ELAP #11179 NJDEPE #73977 CDHS ELAP #2189

WASTE STREAM TECHNOLOGY

Analytical Data Report
Report Date : 11/05/99
Group Number : 9901-1674

Site : Delaware St. Br.

Analytical Services

Analytical Parameters	Number of Samples	Turnaround Time
Total Organic Carbon	2	Standard
TCLP 8021 STARS	2	Standard
TCLP 8270 STARS	2	Standard
TCLP Lead	2	Standard
Total Metals	5	Standard
Ignitability	5	Standard
Pesticides/PCBs	5	Standard
8270	5	Standard
8260B	5	Standard
TCLP Benzene	5	Standard
TCLP 8021 STARS MS	1	Standard
TCLP 8270 STARS MS	1	Standard
TCLP Lead MS	1	Standard
Total Metals Dup/MS	1	Standard
Ignitability Dup	1	Standard
Pesticides MS/MSD	1	Standard
8270 MS/MSD	1	Standard
8260B MS/MSD	1	Standard

WASTE STREAM TECHNOLOGY

ORGANIC DATA QUALIFIERS

U - Indicates compound was analyzed for but not detected.

J - Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the mass spectral data indicates the presence of a compound that meets identification criteria, but the result is less than the sample quantitation limit but greater than zero.

C - This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B - This flag is used when the analyte is found in the associated blank as well as the sample.

E - This flag identifies all compounds whose concentrations exceed the calibration range of the GC/MS instrument of that specific analysis.

D - This flag identifies all compounds identified in an analysis at a secondary dilution factor.

G - Matrix spike recovery is greater than the expected upper limit of analytical performance.

L - Matrix spike recovery is less than the expected lower limit of analytical performance.

 # - Indicates that a surrogate recovery was found to be outside the expected limits of analytical performance.

$ - Indicates that the surrogate compound was diluted out. The sample had to be diluted to obtain analytical results and a recovery could not be calculated.

(%) - Indicates that the compound is a surrogate and that the value reported for this compound is in percent recovery. The quality control recovery limits are indicated in the detection limit or QC limits column.

Waste Stream Technology, Inc.

Ignitability (flash point)

SW-846 1010

Site: Delaware St. Br.
Date Received: 10/21/99

Group Number: 9901-1674
Matrix: Soil
Units: ° F

WST ID	Client ID	Date Sampled	Detection Limit	Result	Date Analyzed
WS58308	DEL-A-SB1-8-12	10/19/99	NA	>200	10/26/99
WS58309	DEL-C-SB1-11.5-13	10/19/99	NA	>200	10/26/99
WS58310	DEL-C-SB2-0.5-5	10/19/99	NA	>200	10/26/99
WS58313	DEL-E-SB1-0.5-5	10/20/99	NA	>200	10/26/99
WS58314	DEL-F-SB1-4.5-7.5	10/20/99	NA	>200	10/26/99

Waste Stream Technology, Inc.
Metals Analysis Result Report

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: mg/Kg
Matrix: Soil

WST ID: WS58308
Client ID: DEL-A-SB1-8-12
Digestion Date: 10/27/99

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	1.70	3.03	10/28/99	SW-846 6010
Barium by ICP	1.00	12.4	10/28/99	SW-846 6010
Cadmium by ICP	1.00	2.85	10/28/99	SW-846 6010
Chromium by ICP	1.00	7.95	10/28/99	SW-846 6010
Lead by ICP	4.10	7.45	10/28/99	SW-846 6010
Mercury by Cold Vapor	0.014	Not detected	11/03/99	SW-846 7471
Selenium by ICP	1.40	Not detected	10/28/99	SW-846 6010
Silver by ICP	0.500	Not detected	10/28/99	SW-846 6010

Waste Stream Technology, Inc.

Pesticides and PCBs in Soil

8081A/8082

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58308
Client ID: DEL-A-SB1-8-12
Extraction Date: 10/29/99
Date Analyzed: 10/30/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
Alpha-BHC	0.5	Not detected		U
Beta-BHC	1.0	Not detected		U
Gamma-BHC (Lindane)	0.5	Not detected		U
Delta-BHC	1.6	Not detected		U
Heptachlor	3.2	Not detected		U
Aldrin	2.8	Not detected		U
Heptachlor Epoxide	1.4	Not detected		U
Endosulfan I	0.8	Not detected		U
Dieldrin	0.8	Not detected		U
4,4'-DDE	0.8	Not detected		U
Endrin	1.8	Not detected		U
Endosulfan II	1.0	Not detected		U
4,4'-DDD	0.9	Not detected		U
Endrin Aldehyde	1.3	Not detected		U
Endosulfan Sulfate	10	Not detected		U
4,4'-DDT	2.8	Not detected		U
Endrin Ketone	2.1	Not detected		U
Methoxychlor	1.0	Not detected		U
Toxaphene	51	Not detected		U
Chlordane	12	Not detected		U
Aroclor 1016	46	Not detected		U
Aroclor 1221	38	Not detected		U
Aroclor 1232	63	Not detected		U
Aroclor 1242	29	Not detected		U
Aroclor 1248	15	Not detected		U
Aroclor 1254	9.0	Not detected		U
Aroclor 1260	10	Not detected		U
Decachlorobiphenyl (%)		90	60-150	
Tetrachloro-m-xylene (%)		88	60-150	

Dilution Factor 1

Waste Stream Technology, Inc.

Semivolatile Organics in Solids

3550/8270

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58308
Client ID: DEL-A-SB1-8-12
Extraction Date: 10/28/99
Date Analyzed: 10/29/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
4-nitroaniline	1650	Not detected		U
4-chlorophenylphenylether	330	Not detected		U
4,6-dinitro 2-methylphenol	1650	Not detected		U
n-nitrosodiphenylamine	330	Not detected		U
4-bromophenylphenylether	330	Not detected		U
hexachlorobenzene	330	Not detected		U
pentachlorophenol	1650	Not detected		U
phenanthrene	330	Not detected		U
anthracene	330	Not detected		U
carbazole	330	Not detected		U
di-n-butylphthalate	330	Not detected		U
fluoranthene	330	158		J
benzidine	3300	Not detected		U
pyrene	330	154		J
butylbenzylphthalate	330	Not detected		U
3,3'-dichlorobenzidine	660	Not detected		U
benzo(a)anthracene	330	113		J
chrysene	330	109		J
bis(2-ethylhexyl)phthalate	330	404		
di-n-octylphthalate	330	Not detected		U
benzo[b]fluoranthene	330	Not detected		U
benzo[k]fluoranthene	330	102		J
benzo[a]pyrene	330	110		J
indeno[1,2,3-cd]pyrene	330	Not detected		U
dibenzo[a,h]anthracene	330	Not detected		U
benzo[g,h,i]perylene	330	Not detected		U
2-Fluorophenol (%)		66	25-121	
Phenol-d6 (%)		75	24-113	
Nitrobenzene-d5 (%)		75	23-120	
2-Fluorobiphenyl (%)		91	30-115	
2,4,6-Tribromophenol (%)		96	19-122	
Terphenyl-d14 (%)		111	18-137	

Dilution Factor 1

Waste Stream Technology, Inc.

Semivolatile Organics in Solids

3550/8270

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58308
Client ID: DEL-A-SB1-8-12
Extraction Date: 10/28/99
Date Analyzed: 10/29/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
phenol	330	Not detected		U
bis(2-chloroethyl)ether	330	Not detected		U
2-chlorophenol	330	Not detected		U
1,3-dichlorobenzene	330	Not detected		U
1,4-dichlorobenzene	330	Not detected		U
benzyl alcohol	660	Not detected		U
1,2-dichlorobenzene	330	Not detected		U
2-methylphenol	330	Not detected		U
bis(2-chloroisopropyl)ether	330	Not detected		U
3 & 4-methylphenol	330	Not detected		U
N-nitrosodi-n-propylamine	330	Not detected		U
hexachloroethane	330	Not detected		U
nitrobenzene	330	Not detected		U
isophorone	330	Not detected		U
2-nitrophenol	330	Not detected		U
2,4-dimethylphenol	330	Not detected		U
bis(2-chloroethoxy)methane	330	Not detected		U
benzoic acid	1650	Not detected		U
2,4-dichlorophenol	330	Not detected		U
1,2,4-trichlorobenzene	330	Not detected		U
naphthalene	330	Not detected		U
4-chloroaniline	660	Not detected		U
hexachlorobutadiene	330	Not detected		U
4-chloro-3-methylphenol	660	Not detected		U
2-methylnaphthalene	330	Not detected		U
hexachlorocyclopentadiene	330	Not detected		U
2,4,6-trichlorophenol	330	Not detected		U
2,4,5-trichlorophenol	330	Not detected		U
2-chloronaphthalene	330	Not detected		U
2-nitroaniline	1650	Not detected		U
dimethylphthalate	330	Not detected		U
acenaphthylene	330	Not detected		U
3-nitroaniline	1650	Not detected		U
2,6-dinitrotoluene	330	Not detected		U
acenaphthene	330	Not detected		U
2,4-dinitrophenol	1650	Not detected		U
4-nitrophenol	1650	Not detected		U
dibenzofuran	330	Not detected		U
2,4-dinitrotoluene	330	Not detected		U
diethylphthalate	330	Not detected		U
fluorene	330	Not detected		U

Waste Stream Technology, Inc.

Volatile Organics in Solids

SW-846 8260B

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58308
Client ID: DEL-A-SB1-8-12
Extraction Date: NA
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chloromethane	10	Not detected		U
bromomethane	10	Not detected		U
vinyl chloride	10	Not detected		U
chloroethane	10	Not detected		U
methylene chloride	5	Not detected		U
acetone	100	Not detected		U
carbon disulfide	5	Not detected		U
1,1-dichloroethene	5	Not detected		U
1,1-dichloroethane	5	Not detected		U
trans-1,2-dichloroethene	5	Not detected		U
chloroform	5	Not detected		U
2-butanone	100	Not detected		U
1,2-dichloroethane	5	Not detected		U
1,1,1-trichloroethane	5	Not detected		U
carbon tetrachloride	5	Not detected		U
vinyl acetate	50	Not detected		U
bromodichloromethane	5	Not detected		U
1,2-dichloropropane	5	Not detected		U
cis-1,3-dichloropropene	5	Not detected		U
trichloroethene	5	17		
benzene	5	Not detected		U
dibromochloromethane	5	Not detected		U
trans-1,3-dichloropropene	5	Not detected		U
1,1,2-trichloroethane	5	Not detected		U
2-chloroethylvinyl ether	10	Not detected		U
bromoform	5	Not detected		U
4-methyl-2-pentanone	50	Not detected		U
2-hexanone	50	Not detected		U
tetrachloroethene	5	Not detected		U
1,1,2,2-tetrachloroethane	5	Not detected		U
toluene	5	2		J
chlorobenzene	5	Not detected		U
ethylbenzene	5	Not detected		U
styrene	5	Not detected		U
m,p-xylene	5	2		J
o-xylene	5	Not detected		U
1,2-Dichloroethane-d4 (%)		105	70-121	
Toluene-d8 (%)		88	81-117	
Bromofluorobenzene (%)		99	74-121	

Dilution Factor 1

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.

TCLP Benzene Analysis

SW-846 8021

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/L
Matrix: TCLP Extract

WST ID: WS58308
Client ID: DEL-A-SB1-8-12
TCLP Date: 10/27/99
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
Benzene	0.7	Not detected		U
a,a,a-Trifluorotoluene (%)		119	91-149	

Dilution Factor 1

Waste Stream Technology, Inc.

TCLP 8270 DEC BN List

1311/8270

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99
TCLP Extraction Date: 10/25/99

Group Number: 9901-1674
Units: ug/L
Matrix: TCLP Extract

WST ID WS58309
Client ID: DEL-C-SB1-11.5-13
Extraction Date: 10/26/99
Date Analyzed: 10/29/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
anthracene	10	Not detected		U
fluorene	10	Not detected		U
phenanthrene	10	Not detected		U
pyrene	10	Not detected		U
acenaphthene	10	Not detected		U
benzo (a) anthracene	10	Not detected		U
fluoranthene	10	Not detected		U
benzo (b) fluoranthene	10	Not detected		U
benzo (k) fluoranthene	10	Not detected		U
benzo (a) pyrene	10	Not detected		U
dibenzo (a,h) anthracene	10	Not detected		U
benzo (g,h,i) perylene	10	Not detected		U
indeno (1,2,3-cd) pyrene	10	Not detected		U
naphthalene	10	8		J
chrysene	10	Not detected		U
Nitrobenzene-d5 (%)		69	35-114	
2-Fluorobiphenyl (%)		83	43-116	
Terphenyl-d14 (%)		98	33-141	

Dilution Factor 1

Waste Stream Technology, Inc.

TCLP 8021 Analysis - NYSDEC List

1311/8021

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/L
Matrix: TCLP Extract

WST ID: WS58309
Client ID: DEL-C-SB1-11.5-13
TCLP Date: 10/27/99
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
Methyl-t-butylether	5.0	Not detected		U
Benzene	0.7	4.9		
Toluene	1.0	5.0		
Ethylbenzene	1.3	10.7		
m,p-Xylene	2.8	10.2		
o-xylene	1.7	4.4		
Isopropylbenzene	1.6	7.2		
n-Propylbenzene	1.7	3.8		
1,3,5-Trimethylbenzene	1.7	9.2		
tert-butylbenzene	3.6	Not detected		U
1,2,4-Trimethylbenzene	1.4	24.6		
sec-Butylbenzene	2.2	Not detected		U
p-isopropyltoluene	1.8	10.9		
n-Butylbenzene	2.8	7.4		
Naphthalene	1.6	4.8		
a,a,a-Trifluorotoluene (%)		286	91-149	#

Dilution Factor 1

Waste Stream Technology, Inc.
TCLP Metals Analysis Result Report

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: mg/L
Matrix: TCLP Extract
TCLP Extraction Date: 10/25/99

WST ID: WS58309
Client ID: DEL-C-SB1-11.5-13
Digestion Date: 10/26/99

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Lead by ICP	0.075	0.173	10/27/99	SW-846 6010

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.
Metals Analysis Result Report

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: mg/Kg
Matrix: Soil

WST ID: WS58310
Client ID: DEL-C-SB2-0.5-5
Digestion Date: 10/27/99

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	1.70	3.89	10/28/99	SW-846 6010
Barium by ICP	1.00	34.1	10/28/99	SW-846 6010
Cadmium by ICP	1.00	2.83	10/28/99	SW-846 6010
Chromium by ICP	1.00	5.20	10/28/99	SW-846 6010
Lead by ICP	4.10	19.4	10/28/99	SW-846 6010
Mercury by Cold Vapor	0.014	Not detected	11/03/99	SW-846 7471
Selenium by ICP	1.40	Not detected	10/28/99	SW-846 6010
Silver by ICP	0.500	Not detected	10/28/99	SW-846 6010

Waste Stream Technology, Inc.

Pesticides and PCBs in Soil

8081A/8082

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58310
Client ID: DEL-C-SB2-0.5-5
Extraction Date: 10/29/99
Date Analyzed: 10/30/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
Alpha-BHC	0.5	Not detected		U
Beta-BHC	1.0	Not detected		U
Gamma-BHC (Lindane)	0.5	Not detected		U
Delta-BHC	1.6	Not detected		U
Heptachlor	3.2	Not detected		U
Aldrin	2.8	Not detected		U
Heptachlor Epoxide	1.4	Not detected		U
Endosulfan I	0.8	Not detected		U
Dieldrin	0.8	Not detected		U
4,4'-DDE	0.8	Not detected		U
Endrin	1.8	Not detected		U
Endosulfan II	1.0	Not detected		U
4,4'-DDD	0.9	Not detected		U
Endrin Aldehyde	1.3	Not detected		U
Endosulfan Sulfate	10	Not detected		U
4,4'-DDT	2.8	Not detected		U
Endrin Ketone	2.1	Not detected		U
Methoxychlor	1.0	Not detected		U
Toxaphene	51	Not detected		U
Chlordane	12	Not detected		U
Aroclor 1016	46	Not detected		U
Aroclor 1221	38	Not detected		U
Aroclor 1232	63	Not detected		U
Aroclor 1242	29	Not detected		U
Aroclor 1248	15	Not detected		U
Aroclor 1254	9.0	Not detected		U
Aroclor 1260	10	Not detected		U
Decachlorobiphenyl (%)		86	60-150	
Tetrachloro-m-xylene (%)		93	60-150	

Dilution Factor 1

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.

Semivolatile Organics in Solids

3550/8270

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58310
Client ID: DEL-C-SB2-0.5-5
Extraction Date: 10/28/99
Date Analyzed: 10/30/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
phenol	330	Not detected		U
bis(2-chloroethyl)ether	330	Not detected		U
2-chlorophenol	330	Not detected		U
1,3-dichlorobenzene	330	Not detected		U
1,4-dichlorobenzene	330	Not detected		U
benzyl alcohol	660	Not detected		U
1,2-dichlorobenzene	330	Not detected		U
2-methylphenol	330	Not detected		U
bis(2-chloroisopropyl)ether	330	Not detected		U
3 & 4-methylphenol	330	Not detected		U
N-nitrosodi-n-propylamine	330	Not detected		U
hexachloroethane	330	Not detected		U
nitrobenzene	330	Not detected		U
isophorone	330	Not detected		U
2-nitrophenol	330	Not detected		U
2,4-dimethylphenol	330	Not detected		U
bis(2-chloroethoxy)methane	330	Not detected		U
benzoic acid	1650	Not detected		U
2,4-dichlorophenol	330	Not detected		U
1,2,4-trichlorobenzene	330	Not detected		U
naphthalene	330	74		J
4-chloroaniline	660	Not detected		U
hexachlorobutadiene	330	Not detected		U
4-chloro-3-methylphenol	660	Not detected		U
2-methylnaphthalene	330	92		J
hexachlorocyclopentadiene	330	Not detected		U
2,4,6-trichlorophenol	330	Not detected		U
2,4,5-trichlorophenol	330	Not detected		U
2-chloronaphthalene	330	Not detected		U
2-nitroaniline	1650	Not detected		U
dimethylphthalate	330	Not detected		U
acenaphthylene	330	Not detected		U
3-nitroaniline	1650	Not detected		U
2,6-dinitrotoluene	330	Not detected		U
acenaphthene	330	Not detected		U
2,4-dinitrophenol	1650	Not detected		U
4-nitrophenol	1650	Not detected		U
dibenzofuran	330	Not detected		U
2,4-dinitrotoluene	330	Not detected		U
diethylphthalate	330	Not detected		U
fluorene	330	Not detected		U

Waste Stream Technology, Inc.

Semivolatile Organics in Solids

3550/8270

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58310
Client ID: DEL-C-SB2-0.5-5
Extraction Date: 10/28/99
Date Analyzed: 10/30/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
4-nitroaniline	1650	Not detected		U
4-chlorophenylphenylether	330	Not detected		U
4,6-dinitro 2-methylphenol	1650	Not detected		U
n-nitrosodiphenylamine	330	Not detected		U
4-bromophenylphenylether	330	Not detected		U
hexachlorobenzene	330	Not detected		U
pentachlorophenol	1650	Not detected		U
phenanthrene	330	165		J
anthracene	330	Not detected		U
carbazole	330	Not detected		U
di-n-butylphthalate	330	Not detected		U
fluoranthene	330	139		J
benzidine	3300	Not detected		U
pyrene	330	166		J
butylbenzylphthalate	330	Not detected		U
3,3'-dichlorobenzidine	660	Not detected		U
benzo(a)anthracene	330	79		J
chrysene	330	94		J
bis(2-ethylhexyl)phthalate	330	423		
di-n-octylphthalate	330	Not detected		U
benzo[b]fluoranthene	330	82		J
benzo[k]fluoranthene	330	90		J
benzo[a]pyrene	330	74		J
indeno[1,2,3-cd]pyrene	330	Not detected		U
dibenzo[a,h]anthracene	330	Not detected		U
benzo[g,h,i]perylene	330	Not detected		U
2-Fluorophenol (%)		69	25-121	
Phenol-d6 (%)		76	24-113	
Nitrobenzene-d5 (%)		81	23-120	
2-Fluorobiphenyl (%)		93	30-115	
2,4,6-Tribromophenol (%)		93	19-122	
Terphenyl-d14 (%)		131	18-137	

Dilution Factor 1

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.

Volatile Organics in Solids

SW-846 8260B

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58310
Client ID: DEL-C-SB2-0.5-5
Extraction Date: NA
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chloromethane	10	Not detected		U
bromomethane	10	Not detected		U
vinyl chloride	10	Not detected		U
chloroethane	10	Not detected		U
methylene chloride	5	5		
acetone	100	Not detected		U
carbon disulfide	5	Not detected		U
1,1-dichloroethene	5	Not detected		U
1,1-dichloroethane	5	Not detected		U
trans-1,2-dichloroethene	5	Not detected		U
chloroform	5	Not detected		U
2-butanone	100	Not detected		U
1,2-dichloroethane	5	Not detected		U
1,1,1-trichloroethane	5	Not detected		U
carbon tetrachloride	5	Not detected		U
vinyl acetate	50	Not detected		U
bromodichloromethane	5	Not detected		U
1,2-dichloropropane	5	Not detected		U
cis-1,3-dichloropropene	5	Not detected		U
trichloroethene	5	25		
benzene	5	Not detected		U
dibromochloromethane	5	Not detected		U
trans-1,3-dichloropropene	5	Not detected		U
1,1,2-trichloroethane	5	Not detected		U
2-chloroethylvinyl ether	10	Not detected		U
bromoform	5	Not detected		U
4-methyl-2-pentanone	50	Not detected		U
2-hexanone	50	Not detected		U
tetrachloroethene	5	Not detected		U
1,1,2,2-tetrachloroethane	5	Not detected		U
toluene	5	3		J
chlorobenzene	5	Not detected		U
ethylbenzene	5	1		J
styrene	5	4		J
m,p-xylene	5	Not detected		U
o-xylene	5	Not detected		U
1,2-Dichloroethane-d4 (%)		113	70-121	
Toluene-d8 (%)		84	81-117	
Bromofluorobenzene (%)		111	74-121	

Dilution Factor 1

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.

TCLP Benzene Analysis

SW-846 8021

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/L
Matrix: TCLP Extract

WST ID: WS58310
Client ID: DEL-C-SB2-0.5-5
TCLP Date: 10/27/99
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
Benzene	0.7	Not detected		U
a,a,a-Trifluorotoluene (%)		125	91-149	

Dilution Factor 1

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.
Metals Analysis Result Report

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: mg/Kg
Matrix: Soil

WST ID: WS58311
Client ID: DEL-H-SED1
Digestion Date: 10/27/99

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	1.70	2.24	10/28/99	SW-846 6010
Barium by ICP	1.00	21.2	10/28/99	SW-846 6010
Cadmium by ICP	1.00	8.86	10/28/99	SW-846 6010
Chromium by ICP	1.00	26.4	10/28/99	SW-846 6010
Lead by ICP	4.10	2480	10/28/99	SW-846 6010
Mercury by Cold Vapor	0.014	0.030	11/03/99	SW-846 7471
Selenium by ICP	1.40	Not detected	10/28/99	SW-846 6010
Silver by ICP	0.500	Not detected	10/28/99	SW-846 6010

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc

Pesticides in Soil

SW-846 8081

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58311
Client ID: DEL-H-SED1
Extraction Date: 10/29/99
Date Analyzed: 10/30/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
alpha-BHC	0.5	Not detected		U
beta-BHC	1.0	Not detected		U
gamma-BHC (Lindane)	0.5	Not detected		U
delta-BHC	1.6	Not detected		U
heptachlor	3.2	Not detected		U
aldrin	2.8	Not detected		U
heptachlor epoxide	1.4	Not detected		U
endosulfan I	0.8	Not detected		U
dieldrin	0.8	Not detected		U
4,4'-DDE	0.8	Not detected		U
endrin	1.8	Not detected		U
endosulfan II	1.0	Not detected		U
4,4'-DDD	0.9	Not detected		U
endrin aldehyde	1.3	Not detected		U
endosulfan sulfate	10	Not detected		U
4,4'-DDT	2.8	Not detected		U
endrin ketone	2.1	Not detected		U
methoxychlor	1.0	Not detected		U
toxaphene	51	Not detected		U
chlordane	12	Not detected		U
Tetrachloro-m-xylene (%)		87	60-150	
Decachlorobiphenyl (%)		84	60-150	

Dilution Factor 1

Waste Stream Technology, Inc

PCBs in Soil

SW-846 8082

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: mg/Kg
Matrix: Soil

WST ID: WS58311
Client ID: DEL-H-SED1
Extraction Date: 10/29/99
Date Analyzed: 11/01/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
aroclor 1016	0.05	Not detected		U
aroclor 1221	0.04	Not detected		U
aroclor 1232	0.06	Not detected		U
aroclor 1242	0.03	Not detected		U
aroclor 1248	0.02	Not detected		U
aroclor 1254	0.01	Not detected		U
aroclor 1260	0.01	0.17		
Decachlorobiphenyl (%)		87	60-150	
Tetrachloro-m-xylene (%)		85	60-150	

Dilution Factor 1

Waste Stream Technology, Inc

Semivolatile Organics in Solids

3550/8270

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58311
Client ID: DEL-H-SED1
Extraction Date: 10/28/99
Date Analyzed: 11/02/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
phenol	330	Not detected		U
bis(2-chloroethyl)ether	330	Not detected		U
2-chlorophenol	330	Not detected		U
1,3-dichlorobenzene	330	Not detected		U
1,4-dichlorobenzene	330	Not detected		U
benzyl alcohol	660	Not detected		U
1,2-dichlorobenzene	330	Not detected		U
2-methylphenol	330	Not detected		U
bis(2-chloroisopropyl)ether	330	Not detected		U
3 & 4-methylphenol	330	Not detected		U
N-nitrosodi-n-propylamine	330	Not detected		U
hexachloroethane	330	Not detected		U
nitrobenzene	330	Not detected		U
isophorone	330	Not detected		U
2-nitrophenol	330	Not detected		U
2,4-dimethylphenol	330	Not detected		U
bis(2-chloroethoxy)methane	330	Not detected		U
benzoic acid	1650	Not detected		U
2,4-dichlorophenol	330	Not detected		U
1,2,4-trichlorobenzene	330	Not detected		U
naphthalene	330	Not detected		U
4-chloroaniline	660	Not detected		U
hexachlorobutadiene	330	Not detected		U
4-chloro-3-methylphenol	660	Not detected		U
2-methylnaphthalene	330	Not detected		U
hexachlorocyclopentadiene	330	Not detected		U
2,4,6-trichlorophenol	330	Not detected		U
2,4,5-trichlorophenol	330	Not detected		U
2-chloronaphthalene	330	Not detected		U
2-nitroaniline	1650	Not detected		U
dimethylphthalate	330	Not detected		U
acenaphthylene	330	Not detected		U
3-nitroaniline	1650	Not detected		U
2,6-dinitrotoluene	330	Not detected		U
acenaphthene	330	135		J
2,4-dinitrophenol	1650	Not detected		U
4-nitrophenol	1650	Not detected		U
dibenzofuran	330	Not detected		U
2,4-dinitrotoluene	330	Not detected		U
diethylphthalate	330	Not detected		U
fluorene	330	Not detected		U

Waste Stream Technology, Inc

Semivolatile Organics in Solids

3550/8270

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58311
Client ID: DEL-H-SED1
Extraction Date: 10/28/99
Date Analyzed: 11/02/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
4-nitroaniline	1650	Not detected		U
4-chlorophenylphenylether	330	Not detected		U
4,6-dinitro 2-methylphenol	1650	Not detected		U
n-nitrosodiphenylamine	330	Not detected		U
4-bromophenylphenylether	330	Not detected		U
hexachlorobenzene	330	Not detected		U
pentachlorophenol	1650	Not detected		U
phenanthrene	330	2600		
anthracene	330	729		
carbazole	330	488		
di-n-butylphthalate	330	Not detected		U
fluoranthene	330	5060		
benzidine	3300	Not detected		U
pyrene	330	5490		
butylbenzylphthalate	330	Not detected		U
3,3'-dichlorobenzidine	660	Not detected		U
benzo(a)anthracene	330	2200		
chrysene	330	2480		
bis(2-ethylhexyl)phthalate	330	618		
di-n-octylphthalate	330	Not detected		U
benzo[b]fluoranthene	330	2800		
benzo[k]fluoranthene	330	2370		
benzo[a]pyrene	330	2180		
indeno[1,2,3-cd]pyrene	330	788		
dibenzo[a,h]anthracene	330	332		
benzo[g,h,i]perylene	330	651		
2-Fluorophenol (%)		71	25-121	
Phenol-d6 (%)		76	24-113	
Nitrobenzene-d5 (%)		78	23-120	
2-Fluorobiphenyl (%)		86	30-115	
2,4,6-Tribromophenol (%)		104	19-122	
Terphenyl-d14 (%)		116	18-137	

Dilution Factor 1

Waste Stream Technology, Inc.

Volatile Organics in Solids

SW-846 8260B

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58311
Client ID: DEL-H-SED1
Extraction Date: NA
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chloromethane	10	Not detected		U
bromomethane	10	Not detected		U
vinyl chloride	10	Not detected		U
chloroethane	10	Not detected		U
methylene chloride	5	Not detected		U
acetone	100	Not detected		U
carbon disulfide	5	Not detected		U
1,1-dichloroethene	5	Not detected		U
1,1-dichloroethane	5	Not detected		U
trans-1,2-dichloroethene	5	Not detected		U
chloroform	5	Not detected		U
2-butanone	100	Not detected		U
1,2-dichloroethane	5	Not detected		U
1,1,1-trichloroethane	5	Not detected		U
carbon tetrachloride	5	Not detected		U
vinyl acetate	50	Not detected		U
bromodichloromethane	5	Not detected		U
1,2-dichloropropane	5	Not detected		U
cis-1,3-dichloropropene	5	Not detected		U
trichloroethene	5	7		
benzene	5	Not detected		U
dibromochloromethane	5	Not detected		U
trans-1,3-dichloropropene	5	Not detected		U
1,1,2-trichloroethane	5	Not detected		U
2-chloroethylvinyl ether	10	Not detected		U
bromoform	5	Not detected		U
4-methyl-2-pentanone	50	Not detected		U
2-hexanone	50	Not detected		U
tetrachloroethene	5	Not detected		U
1,1,2,2-tetrachloroethane	5	Not detected		U
toluene	5	2		J
chlorobenzene	5	Not detected		U
ethylbenzene	5	Not detected		U
styrene	5	Not detected		U
m,p-xylene	5	2		J
o-xylene	5	Not detected		U
1,2-Dichloroethane-d4 (%)		98	70-121	
Toluene-d8 (%)		87	81-117	
Bromofluorobenzene (%)		106	74-121	

Dilution Factor 1

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.

TCLP Benzene Analysis

SW-846 8021

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/L
Matrix: TCLP Extract

WST ID: WS58311
Client ID: DEL-H-SED1
TCLP Date: 10/27/99
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
Benzene	0.7	Not detected		U
a,a,a-Trifluorotoluene (%)		124	91-149	

Dilution Factor 1

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.
Metals Analysis Result Report

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: mg/Kg
Matrix: Soil

WST ID: WS58312
Client ID: DEL-H-SED2
Digestion Date: 10/27/99

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	1.70	3.03	10/28/99	SW-846 6010
Barium by ICP	1.00	77.7	10/28/99	SW-846 6010
Cadmium by ICP	1.00	7.91	10/28/99	SW-846 6010
Chromium by ICP	1.00	55.8	10/28/99	SW-846 6010
Lead by ICP	4.10	712	10/28/99	SW-846 6010
Mercury by Cold Vapor	0.014	0.159	11/03/99	SW-846 7471
Selenium by ICP	1.40	Not detected	10/28/99	SW-846 6010
Silver by ICP	0.500	Not detected	10/28/99	SW-846 6010

Waste Stream Technology, Inc.

Pesticides in Soil

SW-846 8081

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58312
Client ID: DEL-H-SED2
Extraction Date: 10/29/99
Date Analyzed: 10/30/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
alpha-BHC	0.5	Not detected		U
beta-BHC	1.0	Not detected		U
gamma-BHC (Lindane)	0.5	Not detected		U
delta-BHC	1.6	Not detected		U
heptachlor	3.2	Not detected		U
aldrin	2.8	Not detected		U
heptachlor epoxide	1.4	Not detected		U
endosulfan I	0.8	Not detected		U
dieldrin	0.8	Not detected		U
4,4'-DDE	0.8	Not detected		U
endrin	1.8	Not detected		U
endosulfan II	1.0	Not detected		U
4,4'-DDD	0.9	Not detected		U
endrin aldehyde	1.3	Not detected		U
endosulfan sulfate	10	Not detected		U
4,4'-DDT	2.8	Not detected		U
endrin ketone	2.1	Not detected		U
methoxychlor	1.0	Not detected		U
toxaphene	51	Not detected		U
chlordane	12	Not detected		U
Tetrachloro-m-xylene (%)		75	60-150	
Decachlorobiphenyl (%)		72	60-150	

Dilution Factor 1

Waste Stream Technology, Inc.

PCBs in Soil

SW-846 8082

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: mg/Kg
Matrix: Soil

WST ID: WS58312
Client ID: DEL-H-SED2
Extraction Date: 10/29/99
Date Analyzed: 11/01/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
aroclor 1016	0.05	Not detected		U
aroclor 1221	0.04	Not detected		U
aroclor 1232	0.06	Not detected		U
aroclor 1242	0.03	Not detected		U
aroclor 1248	0.02	Not detected		U
aroclor 1254	0.01	Not detected		U
aroclor 1260	0.01	0.14		
Decachlorobiphenyl (%)		80	60-150	
Tetrachloro-m-xylene (%)		76	60-150	

Dilution Factor 1

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.

Semivolatile Organics in Solids

3550/8270

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58312
Client ID: DEL-H-SED2
Extraction Date: 10/28/99
Date Analyzed: 11/03/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
phenol	3300	Not detected		U
bis(2-chloroethyl)ether	3300	Not detected		U
2-chlorophenol	3300	Not detected		U
1,3-dichlorobenzene	3300	Not detected		U
1,4-dichlorobenzene	3300	Not detected		U
benzyl alcohol	6600	Not detected		U
1,2-dichlorobenzene	3300	Not detected		U
2-methylphenol	3300	Not detected		U
bis(2-chloroisopropyl)ether	3300	Not detected		U
3 & 4-methylphenol	3300	Not detected		U
N-nitrosodi-n-propylamine	3300	Not detected		U
hexachloroethane	3300	Not detected		U
nitrobenzene	3300	Not detected		U
isophorone	3300	Not detected		U
2-nitrophenol	3300	Not detected		U
2,4-dimethylphenol	3300	Not detected		U
bis(2-chloroethoxy)methane	3300	Not detected		U
benzoic acid	17000	Not detected		U
2,4-dichlorophenol	3300	Not detected		U
1,2,4-trichlorobenzene	3300	Not detected		U
naphthalene	3300	Not detected		U
4-chloroaniline	6600	Not detected		U
hexachlorobutadiene	3300	Not detected		U
4-chloro-3-methylphenol	6600	Not detected		U
2-methylnaphthalene	3300	Not detected		U
hexachlorocyclopentadiene	3300	Not detected		U
2,4,6-trichlorophenol	3300	Not detected		U
2,4,5-trichlorophenol	3300	Not detected		U
2-chloronaphthalene	3300	Not detected		U
2-nitroaniline	17000	Not detected		U
dimethylphthalate	3300	Not detected		U
acenaphthylene	3300	Not detected		U
3-nitroaniline	17000	Not detected		U
2,6-dinitrotoluene	3300	Not detected		U
acenaphthene	3300	Not detected		U
2,4-dinitrophenol	17000	Not detected		U
4-nitrophenol	17000	Not detected		U
dibenzofuran	3300	Not detected		U
2,4-dinitrotoluene	3300	Not detected		U
diethylphthalate	3300	Not detected		U
fluorene	3300	Not detected		U

Waste Stream Technology, Inc.

Semivolatile Organics in Solids

3550/8270

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58312
Client ID: DEL-H-SED2
Extraction Date: 10/28/99
Date Analyzed: 11/03/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
4-nitroaniline	17000	Not detected		U
4-chlorophenylphenylether	3300	Not detected		U
4,6-dinitro 2-methylphenol	17000	Not detected		U
n-nitrosodiphenylamine	3300	Not detected		U
4-bromophenylphenylether	3300	Not detected		U
hexachlorobenzene	3300	Not detected		U
pentachlorophenol	17000	Not detected		U
phenanthrene	3300	3770		
anthracene	3300	Not detected		U
carbazole	3300	Not detected		U
di-n-butylphthalate	3300	Not detected		U
fluoranthene	3300	5890		
benzidine	33000	Not detected		U
pyrene	3300	8420		
butylbenzylphthalate	3300	Not detected		U
3,3'-dichlorobenzidine	6600	Not detected		U
benzo(a)anthracene	3300	2340		J
chrysene	3300	2740		J
bis(2-ethylhexyl)phthalate	3300	3010		J
di-n-octylphthalate	3300	Not detected		U
benzo[b]fluoranthene	3300	1820		J
benzo[k]fluoranthene	3300	2760		J
benzo[a]pyrene	3300	2380		J
indeno[1,2,3-cd]pyrene	3300	Not detected		U
dibenzo[a,h]anthracene	3300	Not detected		U
benzo[g,h,i]perylene	3300	1230		J
2-Fluorophenol (%)		101	25-121	
Phenol-d6 (%)		99	24-113	
Nitrobenzene-d5 (%)		88	23-120	
2-Fluorobiphenyl (%)		113	30-115	
2,4,6-Tribromophenol (%)		100	19-122	
Terphenyl-d14 (%)		166	18-137	#

Dilution Factor 10

Waste Stream Technology, Inc.

Volatile Organics in Solids

SW-846 8260B

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58312
Client ID: DEL-H-SED2
Extraction Date: NA
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chloromethane	10	Not detected		U
bromomethane	10	Not detected		U
vinyl chloride	10	Not detected		U
chloroethane	10	Not detected		U
methylene chloride	5	Not detected		U
acetone	100	Not detected		U
carbon disulfide	5	Not detected		U
1,1-dichloroethene	5	Not detected		U
1,1-dichloroethane	5	Not detected		U
trans-1,2-dichloroethene	5	Not detected		U
chloroform	5	Not detected		U
2-butanone	100	Not detected		U
1,2-dichloroethane	5	Not detected		U
1,1,1-trichloroethane	5	Not detected		U
carbon tetrachloride	5	Not detected		U
vinyl acetate	50	Not detected		U
bromodichloromethane	5	Not detected		U
1,2-dichloropropane	5	Not detected		U
cis-1,3-dichloropropene	5	Not detected		U
trichloroethene	5	Not detected		U
benzene	5	Not detected		U
dibromochloromethane	5	Not detected		U
trans-1,3-dichloropropene	5	Not detected		U
1,1,2-trichloroethane	5	Not detected		U
2-chloroethylvinyl ether	10	Not detected		U
bromoform	5	Not detected		U
4-methyl-2-pentanone	50	Not detected		U
2-hexanone	50	Not detected		U
tetrachloroethene	5	Not detected		U
1,1,2,2-tetrachloroethane	5	Not detected		U
toluene	5	Not detected		U
chlorobenzene	5	Not detected		U
ethylbenzene	5	Not detected		U
styrene	5	Not detected		U
m,p-xylene	5	Not detected		U
o-xylene	5	Not detected		U
1,2-Dichloroethane-d4 (%)		92	70-121	
Toluene-d8 (%)		87	81-117	
Bromofluorobenzene (%)		113	74-121	

Dilution Factor 1

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.

TCLP 8270 DEC BN List

1311/8270

Site: Delaware St. Br.
Date Sampled: 10/20/99
Date Received: 10/21/99
TCLP Extraction Date: 10/25/99

Group Number: 9901-1674
Units: ug/L
Matrix: TCLP Extract

WST ID WS58313
Client ID: DEL-E-SB1-0.5-5
Extraction Date: 10/26/99
Date Analyzed: 10/29/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
anthracene	10	Not detected		U
fluorene	10	Not detected		U
phenanthrene	10	Not detected		U
pyrene	10	Not detected		U
acenaphthene	10	Not detected		U
benzo (a) anthracene	10	Not detected		U
fluoranthene	10	Not detected		U
benzo (b) fluoranthene	10	Not detected		U
benzo (k) fluoranthene	10	Not detected		U
benzo (a) pyrene	10	Not detected		U
dibenzo (a,h) anthracene	10	Not detected		U
benzo (g,h,i) perylene	10	Not detected		U
indeno (1,2,3-cd) pyrene	10	Not detected		U
naphthalene	10	Not detected		U
chrysene	10	Not detected		U
Nitrobenzene-d5 (%)		74	35-114	
2-Fluorobiphenyl (%)		78	43-116	
Terphenyl-d14 (%)		90	33-141	

Dilution Factor 1

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.

TCLP 8021 Analysis - NYSDEC List

1311/8021

Site: Delaware St. Br.
Date Sampled: 10/20/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/L
Matrix: TCLP Extract

WST ID: WS58313
Client ID: DEL-E-SB1-0.5-5
TCLP Date: 10/27/99
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
Methyl-t-butylether	5.0	Not detected		U
Benzene	0.7	Not detected		U
Toluene	1.0	2.2		
Ethylbenzene	1.3	Not detected		U
m,p-Xylene	2.8	Not detected		U
o-xylene	1.7	Not detected		U
Isopropylbenzene	1.6	Not detected		U
n-Propylbenzene	1.7	Not detected		U
1,3,5-Trimethylbenzene	1.7	Not detected		U
tert-butylbenzene	3.6	Not detected		U
1,2,4-Trimethylbenzene	1.4	Not detected		U
sec-Butylbenzene	2.2	Not detected		U
p-isopropyltoluene	1.8	Not detected		U
n-Butylbenzene	2.8	Not detected		U
Naphthalene	1.6	Not detected		U
a,a,a-Trifluorotoluene (%)		122	91-149	

Dilution Factor 1

WASTE STREAM TECHNOLOGY

W[redacted]te Stream Technology, Inc.[redacted]

TCLP Metals Analysis Result Report

Site: Delaware St. Br.
Date Sampled: 10/20/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: mg/L
Matrix: TCLP Extract
TCLP Extraction Date: 10/25/99

WST ID: WS58313
Client ID: DEL-E-SB1-0.5-5
Digestion Date: 10/26/99

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Lead by ICP	0.075	0.092	10/27/99	SW-846 6010

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.
Metals Analysis Result Report

Site: Delaware St. Br.
Date Sampled: 10/20/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: mg/Kg
Matrix: Soil

WST ID: WS58314
Client ID: DEL-F-SB1-4.5-7.5
Digestion Date: 10/27/99

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Arsenic by ICP	1.70	3.63	10/28/99	SW-846 6010
Barium by ICP	1.00	39.5	10/28/99	SW-846 6010
Cadmium by ICP	1.00	Not detected	11/02/99	SW-846 6010
Chromium by ICP	1.00	5.77	10/28/99	SW-846 6010
Lead by ICP	4.10	33.2	10/28/99	SW-846 6010
Mercury by Cold Vapor	0.014	Not detected	11/03/99	SW-846 7471
Selenium by ICP	1.40	Not detected	10/28/99	SW-846 6010
Silver by ICP	0.500	Not detected	10/28/99	SW-846 6010

Waste Stream Technology, Inc.

Pesticides and PCBs in Soil

8081A/8082

Site: Delaware St. Br.
Date Sampled: 10/20/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58314
Client ID: DEL-F-SB1-4.5-7.5
Extraction Date: 10/29/99
Date Analyzed: 10/31/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
Alpha-BHC	0.5	Not detected		U
Beta-BHC	1.0	Not detected		U
Gamma-BHC (Lindane)	0.5	Not detected		U
Delta-BHC	1.6	Not detected		U
Heptachlor	3.2	Not detected		U
Aldrin	2.8	Not detected		U
Heptachlor Epoxide	1.4	Not detected		U
Endosulfan I	0.8	Not detected		U
Dieldrin	0.8	Not detected		U
4,4'-DDE	0.8	Not detected		U
Endrin	1.8	Not detected		U
Endosulfan II	1.0	Not detected		U
4,4'-DDD	0.9	Not detected		U
Endrin Aldehyde	1.3	Not detected		U
Endosulfan Sulfate	10	Not detected		U
4,4'-DDT	2.8	Not detected		U
Endrin Ketone	2.1	Not detected		U
Methoxychlor	1.0	Not detected		U
Toxaphene	51	Not detected		U
Chlordane	12	Not detected		U
Aroclor 1016	46	Not detected		U
Aroclor 1221	38	Not detected		U
Aroclor 1232	63	Not detected		U
Aroclor 1242	29	Not detected		U
Aroclor 1248	15	Not detected		U
Aroclor 1254	9.0	Not detected		U
Aroclor 1260	10	Not detected		U
Decachlorobiphenyl (%)		75	60-150	
Tetrachloro-m-xylene (%)		92	60-150	

Dilution Factor 1

Waste Stream Technology, Inc.

Semivolatile Organics in Solids

3550/8270

Site: Delaware St. Br.
Date Sampled: 10/20/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58314
Client ID: DEL-F-SB1-4.5-7.5
Extraction Date: 10/28/99
Date Analyzed: 10/30/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
phenol	330	Not detected		U
bis(2-chloroethyl)ether	330	Not detected		U
2-chlorophenol	330	Not detected		U
1,3-dichlorobenzene	330	Not detected		U
1,4-dichlorobenzene	330	Not detected		U
benzyl alcohol	660	Not detected		U
1,2-dichlorobenzene	330	Not detected		U
2-methylphenol	330	Not detected		U
bis(2-chloroisopropyl)ether	330	Not detected		U
3 & 4-methylphenol	330	Not detected		U
N-nitrosodi-n-propylamine	330	Not detected		U
hexachloroethane	330	Not detected		U
nitrobenzene	330	Not detected		U
isophorone	330	Not detected		U
2-nitrophenol	330	Not detected		U
2,4-dimethylphenol	330	Not detected		U
bis(2-chloroethoxy)methane	330	Not detected		U
benzoic acid	1650	Not detected		U
2,4-dichlorophenol	330	Not detected		U
1,2,4-trichlorobenzene	330	Not detected		U
naphthalene	330	113		J
4-chloroaniline	660	Not detected		U
hexachlorobutadiene	330	Not detected		U
4-chloro-3-methylphenol	660	Not detected		U
2-methylnaphthalene	330	96		J
hexachlorocyclopentadiene	330	Not detected		U
2,4,6-trichlorophenol	330	Not detected		U
2,4,5-trichlorophenol	330	Not detected		U
2-chloronaphthalene	330	Not detected		U
2-nitroaniline	1650	Not detected		U
dimethylphthalate	330	Not detected		U
acenaphthylene	330	Not detected		U
3-nitroaniline	1650	Not detected		U
2,6-dinitrotoluene	330	Not detected		U
acenaphthene	330	Not detected		U
2,4-dinitrophenol	1650	Not detected		U
4-nitrophenol	1650	Not detected		U
dibenzofuran	330	Not detected		U
2,4-dinitrotoluene	330	Not detected		U
diethylphthalate	330	Not detected		U
fluorene	330	Not detected		U

Waste Stream Technology, Inc.

Semivolatile Organics in Solids

3550/8270

Site: Delaware St. Br.
Date Sampled: 10/20/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58314
Client ID: DEL-F-SB1-4.5-7.5
Extraction Date: 10/28/99
Date Analyzed: 10/30/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
4-nitroaniline	1650	Not detected		U
4-chlorophenylphenylether	330	Not detected		U
4,6-dinitro 2-methylphenol	1650	Not detected		U
n-nitrosodiphenylamine	330	Not detected		U
4-bromophenylphenylether	330	Not detected		U
hexachlorobenzene	330	Not detected		U
pentachlorophenol	1650	Not detected		U
phenanthrene	330	331		
anthracene	330	78		J
carbazole	330	Not detected		U
di-n-butylphthalate	330	201		J
fluoranthene	330	418		
benzidine	3300	Not detected		U
pyrene	330	447		
butylbenzylphthalate	330	Not detected		U
3,3'-dichlorobenzidine	660	Not detected		U
benzo(a)anthracene	330	274		J
chrysene	330	302		J
bis(2-ethylhexyl)phthalate	330	166		J
di-n-octylphthalate	330	Not detected		U
benzo[b]fluoranthene	330	286		J
benzo[k]fluoranthene	330	279		J
benzo[a]pyrene	330	266		J
indeno[1,2,3-cd]pyrene	330	94		J
dibenzo[a,h]anthracene	330	Not detected		U
benzo[g,h,i]perylene	330	93		J
2-Fluorophenol (%)		62	25-121	
Phenol-d6 (%)		70	24-113	
Nitrobenzene-d5 (%)		72	23-120	
2-Fluorobiphenyl (%)		88	30-115	
2,4,6-Tribromophenol (%)		93	19-122	
Terphenyl-d14 (%)		115	18-137	

Dilution Factor 1

Waste Stream Technology, Inc.

Volatile Organics in Solids

SW-846 8260B

Site: Delaware St. Br.
Date Sampled: 10/20/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/kg
Matrix: Soil

WST ID: WS58314
Client ID: DEL-F-SB1-4.5-7.5
Extraction Date: NA
Date Analyzed: 10/29/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chloromethane	10	Not detected		U
bromomethane	10	Not detected		U
vinyl chloride	10	Not detected		U
chloroethane	10	Not detected		U
methylene chloride	5	8		
acetone	100	Not detected		U
carbon disulfide	5	Not detected		U
1,1-dichloroethene	5	Not detected		U
1,1-dichloroethane	5	Not detected		U
trans-1,2-dichloroethene	5	Not detected		U
chloroform	5	Not detected		U
2-butanone	100	Not detected		U
1,2-dichloroethane	5	Not detected		U
1,1,1-trichloroethane	5	Not detected		U
carbon tetrachloride	5	Not detected		U
vinyl acetate	50	Not detected		U
bromodichloromethane	5	Not detected		U
1,2-dichloropropane	5	Not detected		U
cis-1,3-dichloropropene	5	Not detected		U
trichloroethene	5	30		
benzene	5	Not detected		U
dibromochloromethane	5	Not detected		U
trans-1,3-dichloropropene	5	Not detected		U
1,1,2-trichloroethane	5	Not detected		U
2-chloroethylvinyl ether	10	Not detected		U
bromoform	5	Not detected		U
4-methyl-2-pentanone	50	Not detected		U
2-hexanone	50	Not detected		U
tetrachloroethene	5	Not detected		U
1,1,2,2-tetrachloroethane	5	Not detected		U
toluene	5	4		J
chlorobenzene	5	Not detected		U
ethylbenzene	5	1		J
styrene	5	Not detected		U
m,p-xylene	5	3		J
o-xylene	5	Not detected		U
1,2-Dichloroethane-d4 (%)		114	70-121	
Toluene-d8 (%)		79	81-117	#
Bromofluorobenzene (%)		111	74-121	

Dilution Factor 1

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.

TCLP Benzene Analysis

SW-846 8021

Site: Delaware St. Br.
Date Sampled: 10/20/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: ug/L
Matrix: TCLP Extract

WST ID: WS58314
Client ID: DEL-F-SB1-4.5-7.5
TCLP Date: 10/27/99
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
Benzene	0.7	1.6		
a,a,a-Trifluorotoluene (%)		117	91-149	

Dilution Factor 1

Quality Control Result Reports

Waste Stream Technology, Inc.

PCB & Pesticide Method Blank

8081A/8082

Site: Delaware St. Br.
Date Sampled: NA
Date Received: NA

Group Number: 9901-1674
Units: ug/kg

WST ID MB99302
Client ID: NA
Extraction Date: 10/29/99
Date Analyzed: 10/30/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
Alpha-BHC	0.5	Not detected		U
Beta-BHC	1.0	Not detected		U
Gamma-BHC (Lindane)	0.5	Not detected		U
Delta-BHC	1.6	Not detected		U
Heptachlor	3.2	Not detected		U
Aldrin	2.8	Not detected		U
Heptachlor Epoxide	1.4	Not detected		U
Endosulfan I	0.8	Not detected		U
Dieldrin	0.8	Not detected		U
4,4'-DDE	0.8	Not detected		U
Endrin	1.8	Not detected		U
Endosulfan II	1.0	Not detected		U
4,4'-DDD	0.9	Not detected		U
Endrin Aldehyde	1.3	Not detected		U
Endosulfan Sulfate	10	Not detected		U
4,4'-DDT	2.8	Not detected		U
Endrin Ketone	2.1	Not detected		U
Methoxychlor	1.0	Not detected		U
Toxaphene	51	Not detected		U
Chlordane	12	Not detected		U
Aroclor 1016	46	Not detected		U
Aroclor 1221	38	Not detected		U
Aroclor 1232	63	Not detected		U
Aroclor 1242	29	Not detected		U
Aroclor 1248	15	Not detected		U
Aroclor 1254	9.0	Not detected		U
Aroclor 1260	10	Not detected		U
Decachlorobiphenyl (%)		97	60-150	
Tetrachloro-m-xylene (%)		94	60-150	

Dilution Factor 1
MB denotes Method Blank
NA denotes Not Applicable

WASTE STREAM TECHNOLOGY

Waste Stream Technology, Inc.

Pesticides Reference Recovery

SW-846 8081A

Site: Delaware St. Br.
Date Sampled: NA
Date Received: NA

Group Number: 9901-1674
Units: %

WST ID: MR99302
lient ID: NA
Extraction Date: 10/29/99
Date Analyzed: 10/30/99

Compound	Result	QC Limits (%)	Qualifier
Alpha-BHC	96.8	46-144	
Beta-BHC	97.7	62-128	
Gamma-BHC (Lindane)	99.1	54-134	
Delta-BHC	110	53-140	
Heptachlor	107	59-147	
Aldrin	94.3	58-125	
Heptachlor Epoxide	99.1	60-128	
Endosulfan I	98.4	62-116	
4,4'-DDE	110	55-134	
Dieldrin	95.1	63-123	
Endrin	114	64-141	
Endosulfan II	99.0	58-132	
4,4'-DDD	109	62-133	
Endrin Aldehyde	85.7	54-138	
Endosulfan Sulfate	110	58-140	
4,4'-DDT	108	68-144	
Endrin Ketone	114	54-147	
Methoxychlor	116	74-150	
Tetrachloro-m-xylene (%)	95	60-150	
Decachlorobiphenyl (%)	100	60-150	

MR denotes Method Reference
NA denotes Not Applicable

Waste Stream Technology, Inc.

Soil PCB Reference Recovery

SW-846 8082

Site: Delaware St. Br.
Date Sampled: NA
Date Received: NA

Group Number: 9901-1674
Units: %

WST ID: MR99302
lient ID: NA
Extraction Date: 10/29/99
Date Analyzed: 10/30/99

Compound	Result	QC Limits (%)	Qualifier
Aroclor 1016	94.6	54-148	
Aroclor 1260	98.2	64-129	
Decachlorbiphenyl (%)	99	60-150	
Tetrachloro-m-xylene (%)	96	60-150	

MR denotes Method Reference
NA denotes Not Applicable

Waste Stream Technology, Inc.

Method 8081A Pesticide Report

Soil Matrix Spike/Matrix Spike Duplicate Analysis Summary

Site : Delaware St. Br.
Date Sampled : 10/19/99
Date Received : 10/20/99
WST Sample # Spiked : WS58308
Client ID: DEL-A-SB1-8-12

Group Number : 9901-1674
Date Extracted : 10/29/99
Date Analyzed : 10/30/99
Matrix: Soil

Compound	Matrix Spike % Recovery	Matrix Spike Dup % Recovery	% RPD	QC Limits	
				% RPD	% Recovery
gamma-BHC (Lindane)	94	100	5.9	50	46 -127
Heptachlor	85	83	2.1	31	35 - 130
Aldrin	87	89	1.4	43	34 - 132
Dieldrin	108	120	10	38	31 - 134
Endrin	116	123	5.6	45	42 - 139
4,4'-DDT	74	56	27	50	23 - 134
Surrogate Recovery %					
Tetrachloro-m-xylene	88	90			60 - 150
Decachlorobiphenyl	88	87			60 - 150

Waste Stream Technology, Inc.

VOC Soil Method Blank Results

SW-846 8260B

Site: Delaware St. Br.
Date Sampled: NA
Date Received: NA

Group Number: 9901-1674
Units: µg/kg

WST ID: IB102899
lient ID: NA
Extraction Date: NA
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
chloromethane	10	Not detected		U
bromomethane	10	Not detected		U
vinyl chloride	10	Not detected		U
chloroethane	10	Not detected		U
methylene chloride	5	Not detected		U
acetone	100	Not detected		U
carbon disulfide	5	Not detected		U
1,1-dichloroethene	5	Not detected		U
1,1-dichloroethane	5	Not detected		U
trans-1,2-Dichloroethene	5	Not detected		U
chloroform	5	Not detected		U
1,2-dichloroethane	5	Not detected		U
2-butanone	100	Not detected		U
1,1,1-trichloroethane	5	Not detected		U
carbon tetrachloride	5	Not detected		U
vinyl acetate	5	Not detected		U
bromodichloromethane	5	Not detected		U
1,2-dichloropropene	5	Not detected		U
cis-1,3-dichloropropene	5	Not detected		U
trichloroethene	5	Not detected		U
benzene	5	Not detected		U
dibromochloromethane	5	Not detected		U
trans-1,3-dichloropropene	5	Not detected		U
1,1,2-trichloroethane	5	Not detected		U
2-chloroethylvinyl ether	10	Not detected		U
bromoform	5	Not detected		U
4-methyl-2-pentanone	50	Not detected		U
2-hexanone	50	Not detected		U
tetrachloroethene	5	Not detected		U
1,1,2,2-tetrachloroethane	5	Not detected		U
toluene	5	Not detected		U
chlorobenzene	5	Not detected		U
ethylbenzene	5	Not detected		U
styrene	5	Not detected		U
m,p-xylene	5	Not detected		U
o-xylene	5	Not detected		U
1,2-Dichloroethane-d4 (%)		99	70-121	
Toluene-d8 (%)		89	81-117	
Bromofluorobenzene (%)		94	74-121	

Dilution Factor 1

IB denotes Instrument Blank
NA denotes Not Applicable

Waste Stream Technology, Inc.

Soil VOC Ref Sample Recoveries

SW-846 8260A

Site: Delaware St. Br.
Date Sampled: NA
Date Received: NA

Group Number: 9901-1674
Units: %

WST ID: MR102899
lient ID: NA
Extraction Date: NA
Date Analyzed: 10/28/99

Compound	Result	QC Limits (%)	Qualifier
chloromethane	120	1-195	
bromomethane	102	25-157	
vinyl chloride	100	54-142	
chloroethane	107	22-174	
methylene chloride	110	19-196	
acetone	133	28-209	
carbon disulfide	99.0	58-174	
1,1-dichloroethene	113	72-160	
1,1-dichloroethane	122	81-148	
trans-1,2-dichloroethene	107	83-142	
chloroform	115	71-145	
1,2-dichloroethane	113	78-141	
2-butanone	102	30-215	
1,1,1-trichloroethane	114	84-136	
carbon tetrachloride	116	73-147	
vinyl acetate	81.2	1-276	
bromodichloromethane	115	87-129	
1,2-dichloropropane	114	80-125	
cis-1,3-dichloropropene	110	89-135	
trichloroethene	110	90-125	
benzene	107	86-135	
dibromochloromethane	111	88-125	
trans-1,3-dichloropropene	113	89-122	
1,1,2-trichloroethane	109	90-124	
2-chloroethylvinyl ether	108	22-185	
bromoform	108	82-130	
4-methyl-2-pentanone	97.7	68-145	
2-hexanone	94.0	65-154	
tetrachloroethene	106	88-134	
1,1,2,2-tetrachloroethane	102	79-133	
toluene	107	91-130	
chlorobenzene	107	95-119	
ethylbenzene	108	95-126	
styrene	107	87-126	
m,p-xylene	107	98-126	
o-xylene	105	95-125	
1,2-dichloroethane-d4 (%)	95	70-121	
toluene-d8 (%)	90	81-117	
bromofluorobenzene (%)	99	74-121	

MR denotes Method Reference
NA denotes Not Applicable

Waste Stream Technology

Method 8260B Volatile Organic Compound Analysis Report

Soil Matrix Spike/Matrix Spike Duplicate Results

Site : Delaware St. Br.
Sample Date : 10/19/99
Date Received : 10/20/99
WST Sample # Spiked : WS58308
Client ID: DEL-A-SB1-8-12

Group Number : 9901-1674
Date Analyzed : 10/26/99
Matrix : Soil

Compound	Matrix Spike % Recovery	Matrix Spike Dup % Recovery	% RPD	QC Limits % RPD	QC Limits % Recovery
1,1-dichloroethene	103	108	4.9	22	59 - 172
trichloroethene	112	97	12.8	24	62 - 137
benzene	109	111	2.2	21	66 - 142
toluene	102	110	7.8	21	59 - 139
chlorobenzene	103	106	2.8	21	60 - 133
Surrogate Recovery %					
1,2-dichloroethane-d4	101	103			70- 121
toluene-d8	87	88			81 - 117
bromofluorobenzene	104	95			74 - 121

W[redacted]te Stream Technology, Inc.

Method Blank for Soil SVOC

3550/8270

Site: Delaware St. Br.
Date Sampled: NA
Date Received: NA

Group Number: 9901-1674
Units: µg/Kg

WST ID: MB102899
lient ID: NA
Extraction Date: 10/28/99
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
n-nitrosodimethylamine	330	Not detected		U
phenol	330	Not detected		U
bis(2-chloroethyl)ether	330	Not detected		U
2-chlorophenol	330	Not detected		U
1,3-dichlorobenzene	330	Not detected		U
1,4-dichlorobenzene	330	Not detected		U
benzyl alcohol	660	Not detected		U
1,2-dichlorobenzene	330	Not detected		U
2-methylphenol	330	Not detected		U
bis(2-chloroisopropyl)ether	330	Not detected		U
3 & 4-methylphenol	330	Not detected		U
n-nitroso-di-n-propylamine	330	Not detected		U
hexachloroethane	330	Not detected		U
nitrobenzene	330	Not detected		U
isophorone	330	Not detected		U
2-nitrophenol	330	Not detected		U
2,4-dimethylphenol	330	Not detected		U
bis(2-chloroethoxy)methane	330	Not detected		U
benzoic acid	1650	Not detected		U
2,4-dichlorophenol	330	Not detected		U
1,2,4-trichlorobenzene	330	Not detected		U
naphthalene	330	Not detected		U
4-chloroaniline	660	Not detected		U
hexachlorobutadiene	330	Not detected		U
4-chloro-3-methylphenol	660	Not detected		U
2-methylnaphthalene	330	Not detected		U
hexachlorocyclopentadiene	330	Not detected		U
2,4,6-trichlorophenol	330	Not detected		U
2,4,5-trichlorophenol	330	Not detected		U
2-chloronaphthalene	330	Not detected		U
2-nitroaniline	1650	Not detected		U
dimethylphthalate	330	Not detected		U
acenaphthylene	330	Not detected		U
3-nitroaniline	1650	Not detected		U
2,6-dinitrotoluene	330	Not detected		U
acenaphthene	330	Not detected		U
2,4-dinitrophenol	1650	Not detected		U
4-nitrophenol	1650	Not detected		U
dibenzofuran	330	Not detected		U
2,4-dinitrotoluene	330	Not detected		U
diethylphthalate	330	Not detected		U

W[redacted]te Stream Technology, Inc.

Method Blank for Soil SVOC

3550/8270

Site: Delaware St. Br.
Date Sampled: NA
Date Received: NA

Group Number: 9901-1674
Units: µg/Kg

WST ID: MB102899
lient ID: NA
Extraction Date: 10/28/99
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
fluorene	330	Not detected		U
4-nitroaniline	1650	Not detected		U
4-chlorophenylphenylether	330	Not detected		U
4,6-dinitro-2-methylphenol	1650	Not detected		U
n-nitrosodiphenylamine	330	Not detected		U
4-bromophenylphenylether	330	Not detected		U
hexachlorobenzene	330	Not detected		U
pentachlorophenol	1650	Not detected		U
phenanthrene	330	Not detected		U
anthracene	330	Not detected		U
carbazole	330	Not detected		U
di-n-butylphthalate	330	Not detected		U
fluoranthene	330	Not detected		U
benzidine	3300	Not detected		U
pyrene	330	Not detected		U
butylbenzylphthalate	330	Not detected		U
3,3'-dichlorobenzidine	660	Not detected		U
benzo(a)anthracene	330	Not detected		U
chrysene	330	Not detected		U
bis(2-ethylhexyl)phthalate	330	Not detected		U
di-n-octylphthalate	330	Not detected		U
benzo(b)fluoranthene	330	Not detected		U
benzo(k)fluoranthene	330	Not detected		U
benzo(a)pyrene	330	Not detected		U
indeno(1,2,3-cd)pyrene	330	Not detected		U
dibenzo(a,h)anthracene	330	Not detected		U
benzo(g,h,i)perylene	330	Not detected		U
2-Fluorophenol (%)		68	25-121	
Phenol-d6 (%)		76	24-113	
Nitrobenzene-d5 (%)		79	23-120	
2-Fluorobiphenyl (%)		83	30-115	
2,4,6-Tribromophenol (%)		96	19-122	
Terphenyl-d14 (%)		109	18-137	

Dilution Factor 1
MB denotes Method Blank
NA denotes Not Applicable

W[redacted]te Stream Technology, Inc.

Reference for Soil SVOC

3550/8270

Site: Delaware St. Br.
Date Sampled: NA
Date Received: NA

Group Number: 9901-1674
Units: %

WST ID: MR102899
lient ID: NA
Extraction Date: 10/28/99
Date Analyzed: 10/28/99

Compound	Result	QC Limits (%)	Qualifier
n-nitrosodimethylamine	79.2	48-132	
phenol	83.2	40-130	
bis(2-chloroethyl)ether	85.6	34-131	
2-chlorophenol	80.1	40-125	
1,3-dichlorobenzene	80.1	35-121	
1,4-dichlorobenzene	80.9	35-121	
benzyl alcohol	84.4	47-130	
1,2-dichlorobenzene	81.7	38-120	
2-methylphenol	85.6	48-139	
bis(2-chloroisopropyl)ether	103	55-149	
3 & 4-methylphenol	84.4	48-139	
n-nitroso-di-n-propylamine	84.5	48-132	
hexachloroethane	82.3	37-125	
nitrobenzene	85.2	44-131	
isophorone	101	54-139	
2-nitrophenol	85.9	47-130	
2,4-dimethylphenol	94.0	50-141	
bis(2-chloroethoxy)methane	92.1	50-140	
benzoic acid	89.7	8-167	
2,4-dichlorophenol	90.2	50-124	
1,2,4-trichlorobenzene	86.0	43-122	
naphthalene	84.1	45-129	
4-chloroaniline	94.4	12-158	
hexachlorobutadiene	89.6	47-135	
4-chloro-3-methylphenol	97.2	56-138	
2-methylnaphthalene	92.0	49-126	
hexachlorocyclopentadiene	84.9	15-137	
2,4,6-trichlorophenol	94.1	53-133	
2,4,5-trichlorophenol	96.7	49-135	
2-chloronaphthalene	92.2	50-127	
2-nitroaniline	100	47-151	
dimethylphthalate	98.6	53-134	
acenaphthylene	97.7	56-143	
3-nitroaniline	103	50-142	
2,6-dinitrotoluene	91.9	54-138	
acenaphthene	94.6	53-138	
2,4-dinitrophenol	88.4	20-133	
4-nitrophenol	99.2	26-150	
dibenzofuran	96.0	51-130	
2,4-dinitrotoluene	104	50-140	
diethylphthalate	104	51-140	
fluorene	97.3	54-146	
4-nitroaniline	103	41-149	

W[redacted]te Stream Technology, Inc.

Reference for Soil SVOC

3550/8270

Site: Delaware St. Br.
Date Sampled: NA
Date Received: NA

Group Number: 9901-1674
Units: %

WST ID: MR102899
lient ID: NA
Extraction Date: 10/28/99
Date Analyzed: 10/28/99

Compound	Result	QC Limits (%)	Qualifier
4-chlorophenyl-phenylether	95.7	49-136	
4,6-dinitro-2-methylphenol	93.6	21-159	
n-nitrosodiphenylamine	120	45-184	
4-bromophenyl-phenylether	85.1	50-126	
hexachlorobenzene	91.8	55-138	
pentachlorophenol	75.2	35-150	
phenanthrene	95.1	48-144	
anthracene	92.0	51-139	
carbazole	93.7	51-134	
di-n-butylphthalate	95.5	48-141	
fluoranthene	94.5	50-137	
pyrene	96.7	45-151	
butylbenzylphthalate	105	42-160	
3,3'-dichlorobenzidine	90.9	32-142	
benzo(a)anthracene	101	51-142	
chrysene	102	55-140	
bis(2-ethylhexyl)phthalate	110	30-175	
di-n-octylphthalate	106	13-199	
benzo(b)fluoranthene	101	51-141	
benzo(k)fluoranthene	108	57-147	
benzo(a)pyrene	101	54-136	
indeno(1,2,3-cd)pyrene	117	16-173	
dibenzo(a,h)anthracene	118	29-153	
benzo(g,h,i)perylene	119	15-167	
2-fluorophenol (%)	72	25-121	
phenol-d6 (%)	79	24-113	
nitrobenzene-d5 (%)	85	23-120	
2-fluorobiphenyl (%)	94	30-115	
2,4,6-tribromophenol (%)	106	19-122	
p-terphenyl-d14 (%)	106	18-137	

MR denotes Method Reference
NA denotes Not Applicable

Waste Stream Technology

Method 8270 Semivolatile Organic Compound Analysis Report

Soil Matrix Spike/Matrix Spike Duplicate Analysis

Site : Delaware St. Br.
Date Sampled : 10/19/99
WST Sample # Spiked : WS58308
Client ID : DEL-A-SB1-8-12

Group Number : 9901-1674
Date Extracted : 10/28/99
Date Analyzed : 11/4/99

Compound	Matrix Spike % Recovery	Matrix Spike Dup % Recovery	% RPD	QC Limits % RPD	QC Limits % Recovery
phenol	68	70	2.5	35	26 - 90
2-chlorophenol	80	82	1.9	50	25 - 102
1,4-dichlorobenzene	81	82	1.7	27	28 - 104
n-nitroso-di-n-propylamine	65	66	1.9	38	41 - 126
1,2,4-trichlorobenzene	95	100	5.4	23	38 - 107
4-chloro-3-methylphenol	95	98	1.0	33	26 - 103
acenaphthene	103	108	4.8	19	31 - 137
4-nitrophenol	92	96	5.0	50	11 - 114
2,4-dinitrotoluene	100 #	106 #	3.7	47	28 - 89
pentachlorophenol	56	60	6.8	47	17 - 109
pyrene	106	101	3.2	36	35 - 142
Surrogate Recovery %					
2-fluorophenol	65	65			25 - 121
phenol-d6	68	68			24 - 113
nitrobenzene-d5	76	76			23 - 120
2-fluorobiphenyl	88	90			30 - 115
2,4,6-tribromophenol	104	102			19 - 122
p-terphenyl-d14	102	98			18 - 137

# denotes a recovery outside the stated QC limits.

Waste Stream Technology, Inc.

Method Blank for TCLP 8270-DEC

1311/8270

Site: Delaware St. Br.
Date Sampled: NA
Date Received: NA
TCLP Extraction Date: 10/25/99

Group Number: 9901-1674
Units: ug/L

WST ID MB102699 DT
Client ID: NA
Extraction Date: 10/26/99
Date Analyzed: 10/29/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
Anthracene	10	Not detected		U
Fluorene	10	Not detected		U
Phenanthrene	10	Not detected		U
Pyrene	10	Not detected		U
Acenaphthene	10	Not detected		U
Benzo[a]Anthracene	10	Not detected		U
Fluoranthene	10	Not detected		U
Benzo[b]Fluoranthene	10	Not detected		U
Benzo[k]fluoranthene	10	Not detected		U
Benzo[a]pyrene	10	Not detected		U
Dibenzo[a,h]anthracene	10	Not detected		U
Benzo[g,h,i]perylene	10	Not detected		U
Indeno[1,2,3-cd]pyrene	10	Not detected		U
Naphthalene	10	Not detected		U
Chrysene	10	Not detected		U
Nitrobenzene-d5 (%)		81	35-114	
2-Fluorobiphenyl (%)		87	43-116	
Terphenyl-d14 (%)		100	33-141	

Dilution Factor 1
MB denotes Method Blank
NA denotes Not Applicable

WASTE STREAM TECHNOLOGY

Waste Stream Technology Inc.
TCLP 8270 Reference Sample Recovery Report
NYS DEC STARS Compound List

Site : Delaware St. Br.
TCLP Date : 10/25/99
Extraction Date : 10/26/99

Group Number : 9901-1674
Date Analyzed : 10/29/99

Compound	Spike Amount (ug/L)	Reference Sample Result (ug/L)	% Recovery	QC Limits % Recovery
anthracene	50	46.8	94	57 - 122
fluorene	50	47.2	94	62 - 120
phenanthrene	50	43.7	87	61 - 124
pyrene	50	46.4	93	57 - 127
acenaphthene	50	45.6	91	64 - 119
benzo[a]anthracene	50	44.7	89	60 - 123
fluoranthene	50	46.2	92	51 - 129
benzo[b]fluoranthene	50	45.3	91	50 - 131
benzo[k]fluoranthene	50	49.8	100	50 - 132
benzo[a]pyrene	50	45.9	92	56 - 128
dibenzo[a,h]anthracene	50	47.1	94	20 - 143
benzo[g,h,i]perylene	50	46.1	92	12 - 154
indeno[1,2,3-cd]pyrene	50	46.6	93	22 - 143
naphthalene	50	43.0	86	60 - 110
chrysene	50	46.5	93	62 - 125
Surrogate Recovery %				
Nitrobenzene-d5		87		35 - 114
2-Fluorobiphenyl		93		43 - 116
p-Terphenyl-d14		98		33 - 141

Waste Stream Technology Inc.
8270 TCLP Matrix Spike Recovery Report
NYS DEC STARS Compound List

Site : Delaware St. Br.
TCLP Extraction Date : 10/25/99
Solvent Extraction Date : 10/26/99
Date Analyzed : 11/4/99

Group Number : 9901-1674
WST Sample ID # : WS58313
Client ID : DEL-SB1-0.5-5

Compound	Matrix Spike Amount (ug/L)	WS Sample Result (ug/L)	Matrix Spike Sample Result (ug/L)	Percent Recovery	QC Limits % Recovery
anthracene	50	< 10	51.7	103	49 - 112
fluorene	50	< 10	51.7	103	37 - 126
phenanthrene	50	< 10	52.1	104	49 - 119
pyrene	50	< 10	51.3	103	33 - 123
acenaphthene	50	< 10	54.4	109	53 - 119
benzo[a]anthracene	50	< 10	49.7	99	34 - 123
fluoranthene	50	< 10	50.2	100	37 - 126
benzo[b]fluoranthene	50	< 10	62.0	124 #	33 - 118
benzo[k]fluoranthene	50	< 10	64.0	128 #	30 - 122
benzo[a]pyrene	50	< 10	50.5	101	32 - 121
dibenzo[a,h]anthracene	50	< 10	31.3	63	25 - 110
benzo[g,h,i]perylene	50	< 10	31.9	64	31 - 94
indeno[1,2,3-cd]pyrene	50	< 10	39.7	79	34 - 103
naphthalene	50	< 10	49.0	98	43 - 120
chrysene	50	< 10	50.5	101	34 - 128
Surrogate Recovery %					
Nitrobenzene-d5	100	74	65		35 - 114
2-Fluorobiphenyl	100	78	71		43 - 116
p-Terphenyl-d14	100	90	71		33 - 141

# denotes a recovery or RPD outside the stated QC limits. Refer to case narrative.

Waste Stream Technology, Inc.

TCLP 8021 Method Blank Result

1311/8021

Site: Delaware St. Br.
Date Sampled: NA
Date Received: NA

Group Number: 9901-1674
Units: ug/L

WST ID: MB102799 DT
Client ID: NA
TCLP Date: 10/27/99
Date Analyzed: 10/28/99

Compound	Detection Limit	Result	QC Limits (%)	Qualifier
Methyl-t-butylether	5.0	Not detected		U
Benzene	0.7	Not detected		U
Toluene	1.0	Not detected		U
Ethylbenzene	1.3	Not detected		U
m,p-Xylene	2.8	Not detected		U
o-Xylene	1.7	Not detected		U
Isopropylbenzene	1.6	Not detected		U
n-Propylbenzene	1.7	Not detected		U
1,3,5-Trimetylbenzene	1.7	Not detected		U
tert-Butylbenzene	3.6	Not detected		U
1,2,4-Trimethylbenzene	1.4	Not detected		U
sec-Butylbenzene	2.2	Not detected		U
p-Isopropyltoluene	1.8	Not detected		U
n-Butylbenzene	2.8	Not detected		U
Naphthalene	1.6	Not detected		U
a,a,a-Trifluorotoluene (%)		126	91-149	

Dilution Factor 1
MB denotes Method Blank
NA denotes Not Applicable

Waste Stream Technology Inc.
TCLP 8021 Reference Sample Recovery Report
NYS DEC STARS Compound List

Site : Delaware St. Br.
TCLP Date : 10/27/99

Group Number : 9901-1674
Date Analyzed : 10/28/99

Compound	Spike Added (ug/L)	Reference Sample Result (ug/L)	% Recovery	QC Limits % Recovery
MTBE	20	22.0	110	66 - 130
Benzene	20	21.6	108	73 - 124
Toluene	20	22.7	114	73 - 127
Ethylbenzene	20	23.0	115	60 - 122
m,p- Xylene	40	46.4	116	66 - 130
o-xylene	20	21.8	109	69 - 133
Isopropylbenzene	20	22.6	113	73 - 116
n-Propylbenzene	20	23.0	115	75 - 126
1,3,5-Trimethylbenzene	20	22.7	113	72 - 126
tert-Butylbenzene	20	20.7	104	84 - 122
1,2,4-Trimethylbenzene	20	23.8	119 #	75 - 118
sec-Butylbenzene	20	22.3	111	80 - 120
p-Isopropyltoluene	20	20.1	101	82 - 127
n-Butylbenzene	20	22.5	113	80 - 128
Naphthalene	20	21.8	109	75 - 123
Surrogate Recovery %				
a,a,a-Trifluorotoluene		113		91 - 149

# denotes a recovery outside the stated QC limits.

Waste Stream Technology Inc.
8021 TCLP Matrix Spike Recovery Report
NYS DEC STARS Compound List

Site : Delaware St. Br.
TCLP Extraction Date : 10/27/99
Date Analyzed : 10/28/99

Group Number : 9901-1674
WST Sample ID # : WS58313
Client ID : DEL-SB1-0.5-5

Compound	Matrix Spike Amount (ug/L)	WS Sample Result (ug/L)	Matrix Spike Sample Result (ug/L)	Percent Recovery	QC Limits % Recovery
MTBE	20	< 5.0	21.8	109	30 - 182
benzene	20	< 0.7	20.9	104	79 - 126
toluene	20	2.2	22.6	102	50 - 147
ethylbenzene	20	< 1.3	22.0	110	69 - 126
m,p- xylene	40	< 2.8	44.7	112	71 - 134
o-xylene	20	< 1.7	22.4	112	80 - 133
isopropylbenzene	20	< 1.6	21.3	107	65 - 131
n-propylbenzene	20	< 1.7	21.8	109	73 - 136
1,3,5-trimethylbenzene	20	< 1.7	21.8	109	60 - 143
tert-butylbenzene	20	< 3.6	22.6	113	75 - 126
1,2,4-trimethylbenzene	20	< 1.4	21.6	108	76 - 142
sec-butylbenzene	20	< 2.2	21.1	106	77 - 136
p-isopropyltoluene	20	< 1.8	20.3	101	73 - 143
n-butylbenzene	20	< 2.8	21.6	108	70 - 143
naphthalene	20	< 1.6	22.3	111	65 - 141
Surrogate Recovery %					
a,a,a-trifluorotoluene	30	122	110		91 - 149

Waste Stream Technology, Inc.
Metals Method Blank Analysis

Site: Delaware St. Br.
Date Sampled: NA
Date Received: NA

Group Number: 9901-1674
Units: mg/Kg

WST ID MB102799
Client ID: NA
Digestion Date: 10/27/99

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Ag soil Method Blank	0.500	Not detected	10/28/99	SW-846 6010
As soil Method Blank	1.70	Not detected	10/28/99	SW-846 6010
Ba soil Method Blank	1.00	Not detected	10/28/99	SW-846 6010
Cd soil Method Blank	1.00	Not detected	10/28/99	SW-846 6010
Cr soil Method Blank	1.00	Not detected	10/28/99	SW-846 6010
Hg soil Method Blank	0.014	Not detected	11/03/99	SW-846 7471
Pb soil Method Blank	4.10	Not detected	10/28/99	SW-846 6010
Se soil Method Blank	1.40	Not detected	10/28/99	SW-846 6010

MB denotes Method Blank
NA denotes Not Applicable

Waste Stream Technology Inc

Total Metals Analysis Result Report

Reference Sample Analysis Summary

Site : Delaware St. Br.
Group Number: 9901-1674

Report Units : % Recovery
Matrix : Soil

	Lab ID	RF102799-S1		
	Date Digested	10/27/99		
Analyte	Reference % Recovery QC Limits	% Recovery	Date Analyzed	Analysis Method
Silver	85 - 115	102	05/28/99	SW-846 6010
Arsenic	85 - 115	98	05/28/99	SW-846 6010
Barium	85 - 115	105	05/28/99	SW-846 6010
Cadmium	85 - 115	107	05/28/99	SW-846 6010
Chromium	85 - 115	107	05/28/99	SW-846 6010
Lead	85 - 115	100	05/28/99	SW-846 6010
Selenium	85 - 115	95	05/28/99	SW-846 6010

RF denotes Reference Sample.

Waste Stream Technology Inc

Total Metals Analysis Result Report

Reference Sample Analysis Summary

Site : Delaware St. Br.
Group Number: 9901-1674

Report Units : % Recovery
Matrix : Soil

	Lab ID	RF110299-S1		
	Date Digested	11/2/99		
Analyte	Reference % Recovery QC Limits	% Recovery	Date Analyzed	Analysis Method
Mercury	80 - 120	108	11/03/99	SW-846 7470

RF denotes Reference Sample.

Waste Stream Technology, Inc.

Total Metals Analysis Result Report
Duplicate Sample Analysis Summary

Site : Delaware St. Br.
Matrix : Soil

Group Number : 9901-1674
Report Units : mg/kg

Lab ID Number	WS58308	WS58308 Dup		
Client ID	DEL-A-SB1-8-12	DEL-A-SB1-8-12		
Date Digested	10/27/99	10/27/99		
Date Analyzed	10/28/99	10/28/99	RPD	RPD
Analyte	Initial Result	Duplicate Result	(%)	QC Limits (%)
Silver	< 0.50	< 0.50	< 0.1	25
Arsenic	3.03	2.67	13.0	25
Barium	12.4	11.6	6.2	25
Cadmium	2.85	2.98	4.6	25
Chromium	7.95	8.49	6.6	25
Lead	7.45	7.57	1.5	25
Selenium	< 1.40	< 1.40	< 0.1	25

Waste Stream Technology, Inc.

Total Metals Analysis Result Report
Duplicate Sample Analysis Summary

Site : Delaware St. Br.
Matrix : Soil

Group Number : 9901-1674
Report Units : mg/kg

Lab ID Number	WS58308	WS58308 Dup		
Client ID	DEL-A-SB1-8-12	DEL-A-SB1-8-12		
Date Digested	11/2/99	11/2/99		
Date Analyzed	11/3/99	11/3/99	RPD	RPD
Analyte	Initial Result	Duplicate Result	(%)	QC Limits (%)
Mercury	< 0.014	< 0.014	< 0.1	25

Waste Stream Technology Inc

Total Metals Analysis Result Report

Matrix Spike Sample Analysis Summary

Site : Delaware St. Br.
WST Sample No. Spiked : WS58308
Client ID : DEL-A-SB1-8-12

Group Number: 9901-1674
Report Units : % Recovery
Matrix : Soil

	Lab ID	WS58308 MS		
	Date Digested	10/27/99		
Analyte	Matrix Spike % Recovery QC Limits	% Recovery	Date Analyzed	Analysis Method
Silver	75 - 125	6 #	10/28/99	SW-846 6010
Arsenic	75 - 125	93	10/28/99	SW-846 6010
Barium	75 - 125	94	10/28/99	SW-846 6010
Cadmium	75 - 125	95	10/28/99	SW-846 6010
Chromium	75 - 125	97	10/28/99	SW-846 6010
Lead	75 - 125	90	10/28/99	SW-846 6010
Selenium	75 - 125	92	10/28/99	SW-846 6010

MS denotes Matrix Spike
# denotes a recovery outside QC limits.

Waste Stream Technology Inc

Total Metals Analysis Result Report

Matrix Spike Sample Analysis Summary

Site : Delaware St. Br.
WST Sample No. Spiked : WS58308
Client ID : DEL-A-SB1-8-12

Group Number: 9901-1674
Report Units : % Recovery
Matrix : Soil

	Lab ID	WS58308 MS		
	Date Digested	11/2/99		
Analyte	Reference % Recovery QC Limits	% Recovery	Date Analyzed	Analysis Method
Mercury	75 - 125	80	11/03/99	SW-846 7470

MS denotes Matrix Spike

Waste Stream Technology Inc

TCLP Metals Analysis Result Report

Method Blank Analysis Summary

Site : Delaware St. Br.
Group Number: 9901-1674

Report Units : % Recovery
Matrix : TCLP Extract

	Lab ID	MBTC582-T1		
	Date Digested	10/26/99		
Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Lead	0.075	< 0.075	10/27/99	SW-846 6010

MB denotes Method Blank

Waste Stream Technology Inc

TCLP Metals Analysis Result Report

Reference Sample Analysis Summary

Site : Delaware St. Br.
Group Number: 9901-1674

Report Units : % Recovery
Matrix : TCLP Extract

	Lab ID	RFTC582-T1		
	Date Digested	10/26/99		
Analyte	Reference % Recovery QC Limits	% Recovery	Date Analyzed	Analysis Method
Lead	85 - 115	97	10/27/99	SW-846 6010

RF denotes Reference Sample.

Waste Stream Technology, Inc.

TCLP Metals Analysis Result Report
Duplicate Sample Analysis Summary

Site : Delaware St. Br.
Matrix : TCLP extract

Group Number : 9901-1674
Report Units : mg/kg

Lab ID Number	WS58313	WS58313 Dup		
Client ID	DEL-E-SB1-0.5-5	DEL-E-SB1-0.5-5		
TCLP Date	10/25/99	10/25/99		
Date Digested	10/26/99	10/26/99		
Date Analyzed	10/27/99	10/27/99	RPD	RPD
Analyte	Initial Result	Duplicate Result	(%)	QC Limits (%)
Lead	0.092	0.092	0.6	25

Waste Stream Technology Inc

TCLP Metals Analysis Result Report

Matrix Spike Sample Analysis Summary

Site : Delaware St. Br.
WST Sample No. Spiked : WS58313
Client ID : DEL-E-SB1-0.5-5

Group Number: 9901-1674
Report Units : % Recovery
Matrix : TCLP Extract

	Lab ID	WS58313 MS		
	TCLP Date	10/25/99		
	Date Digested	10/26/99		
Analyte	Matrix Spike % Recovery QC Limits	% Recovery	Date Analyzed	Analysis Method
Lead	75 - 125	97	10/27/99	SW-846 6010

MS denotes Matrix Spike

HES

HUDSON ENVIRONMENTAL SERVICES, INC.
Mail: 22 Hudson Falls Rd., So. Glens Falls, NY 12803
Delivery: 211 Ferry Blvd., So. Glens Falls, NY 12803
Phone: 518/747-1060 Fax: 518/747-1062

RECEIVED
NOV 15 1999

CLIENT: Waste Stream Technology

SAMPLE DESCRIPTION: See Below

LOCATION: Buffalo, NY

H.E.S. #: See Below

DATE SAMPLED: 10/19/99

DATE SAMPLE RECD: 10/25/99

MATRIX: Solid

TYPE SAMPLE: Not Specified

SAMPLER: Client

PARAMETER: TOC

METHOD: LLOYD KAHN (MODIFIED)

HES #	SAMPLE DESCRIPTION	RESULT	UNITS	TEST DATE
991025F01	WS58311	7,722 ± 301	mg/kg	11/04/99
991025F02	WS58312	17,500 ± 901	mg/kg	11/04/99

Approval By: [signature]

Date: 11-12-99

N.Y.S.D.O.H. Lab ID# 11140

CHAIN OF CUSTODY

WASTE STREAM TECHNOLOGY

Waste Stream Technology Inc.
302 Grote Street, Buffalo, NY 14207
(716) 876-5290 • FAX (716) 876-2412

OFFICE USE ONLY
GROUP # _____
DUE DATE _____

PAGE 1 OF 1

REPORT TO: WST
302 Grote St.
Buffalo, NY 14207

CONTACT P.K. Morrow
PH. # (716) 876-5290
FAX # (716) 876-2412

BILL TO:
13086

PO#
9901

PROJECT DESCRIPTION

SAMPLER SIGNATURE

DW DRINKING WATER
GW GROUND WATER
SW SURFACE WATER
WW WASTE WATER
O OIL
SL SLUDGE
SO SOIL
S SOLID
W WIPE
OTHER

TURN AROUND TIME: 8 BD

QUOTATION NUMBER: _____

ARE SPECIAL DETECTION LIMITS REQUIRED:
YES NO
If yes please attach requirements.

Is a QC Package required:
YES NO
If yes please attach requirements

ANALYSES TO BE PERFORMED

	SAMPLE I.D.	DATE SAMPLED	TIME OF SAMPLING	SAMPLE TYPE	TOTAL NO. OF CONTAINERS	TOC									TYPE OF CONTAINER/ COMMENTS:	OFFICE USE ONLY WST. I.D.
1	WS58311	10/19/99		So	1	X									CMID2570	
2	WS58312	10/19/99		So	1	X									TOC	
3																
4																
5																
6																
7																
8																
9																
10																

REMARKS:

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
Sondra Mufto	10/22/99	15:00	UPS TRACKING # 1Z 118 947 22	10/21/99	
RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
	/ /		Cam Brown/HG	10/25/99	10:30 A.M.

CHAIN OF CUSTODY

WASTE STREAM TECHNOLOGY

Waste Stream Technology Inc.
302 Grote Street, Buffalo, NY 14207
(716) 876-5290 • FAX (716) 876-2412

OFFICE USE ONLY
GROUP # 9901-1674
DUE DATE

PAGE ____ OF ____

REPORT TO: Watts Engineers
3826 Main St
Buffalo NY 14226

CONTACT Justin Kellogg
PH.#( ) (716) 836-1540
FAX #( ) (716) 836-2402

BILL TO:

PO# 2772

PROJECT DESCRIPTION: Delaware St. Br.

SAMPLER SIGNATURE: J.K. Kellogg

TURN AROUND TIME: 10 BD (5D)

QUOTATION NUMBER:

ARE SPECIAL DETECTION LIMITS REQUIRED:
YES NO
If yes please attach requirements.

Is a QC Package required:
YES NO
If yes please attach requirements

DW DRINKING WATER
GW GROUND WATER
SW SURFACE WATER
WW WASTE WATER
O OIL
SL SLUDGE
SO SOIL
S SOLID
W WIPE
OTHER

ANALYSES TO BE PERFORMED

	SAMPLE I.D.	DATE SAMPLED	TIME OF SAMPLING	SAMPLE TYPE	TOTAL NO. OF CONTAINERS	TCLP STARS VOA TCLP STARS SVOA TCLP Lead	Ignitability	TCL VOA TCL SVOA TCL Pest/PCB	RCRA Metals	TCLP Benzene	TOC					TYPE OF CONTAINER/ COMMENTS:	OFFICE USE ONLY WST. I.D.
1	DEL-A-SB1-8-12	10/19	16:00	Soil	5		X	X	X	X						MS/MSD - Limited Volume	WS58308
2	DEL-C-SB1-11.5-13	10/19	12:30	Soil	5	X	X									Moderate Contam.	09
3	DEL-C-SB2-0.5-5	10/19	13:00	Soil	5		X	X	X	X							10
4	DEL-H-SED1	10/19	17:00	Sed	6			X	X	X	X						11
5	DEL-H-SED2	10/19	17:30	Sed	6			X	X	X	X						12
6	DEL-E-SB1-0.5-5	10/20	15:30	Soil	6	X	X									MS	13
7	DEL-F-SB1-4.5-7.5	10/20	11:16	Soil	5		X	X	X	X							14
8																	
9																	
10																	

REMARKS: Include all batch QC for all analyses.

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
J.K. Kellogg	10/21/99	15:40	[illegible]	10/21/99	15:40
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:

FAX LEAD SHEET

WASTE STREAM TECHNOLOGY
302 GROTE STREET
BUFFALO, NEW YORK 14207
Phone (716) 876-5290
Fax (716) 876-2412

DATE: 11/30 NUMBER OF PAGES (including cover): (4)

TO: Justin Kellogg

FROM: Dan FAX NUMBER: 836-2402

MESSAGE

TCLP Pb result for Delaware St. Br. Sample

Please call the number listed above if all pages are not received.

WASTE STREAM TECHNOLOGY, INC.
302 Grote Street
Buffalo, NY 14207
(716) 876-5290

Analytical Data Report
Report Date : 11/30/99
Group Number : 9901-1674

Prepared For :
Mr. Justin Kellogg
Edward O. Watts, P.E., P.C.
3826 Main Street
Buffalo, NY 14226

Site : Delaware St. Br.

Field and Laboratory Information

Client Id	WST Lab #	Matrix	Date Sampled	Date Received	Time
DEL-H-SED1	WS58311	Soil	10/19/99	10/21/99	15:40
Sample Status Upon Receipt : No irregularities.					

Analytical Parameters	Analytical Services Number of Samples	Turnaround Time
TCLP Lead	1	Standard

Report Released By : Daniel W. Vollmer
Daniel Vollmer, Laboratory QA/QC Officer

ENVIRONMENTAL LABORATORY ACCREDITATION CERTIFICATION NUMBERS
NYSDOH ELAP #11179 NJDEPE #73977 CDHS ELAP #2189

Waste Stream Technology, Inc.
TCLP Metals Analysis Result Report

Site: Delaware St. Br.
Date Sampled: 10/19/99
Date Received: 10/21/99

Group Number: 9901-1674
Units: mg/L
Matrix: TCLP Extract
TCLP Extraction Date: 11/17/99

WST ID: WS58311
Client ID: DEL-H-SED1
Digestion Date: 11/18/99

Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Lead by ICP	0.075	7.14	11/18/99	SW-846 6010

FROM: WASTE STREAM TECH. FAX: 716 876 2412 Nov-30-99 Tue 10:30 PAGE: 04

CHAIN OF CUSTODY

WASTE STREAM TECHNOLOGY

Waste Stream Technology Inc.
302 Grote Street, Buffalo, NY 14207
(716) 876-5290 • FAX (716) 876-2412

OFFICE USE ONLY
GROUP # 9901-1674
DUE DATE

PAGE ___ OF ___

REPORT TO: Watts Engineers
3826 Main St
Buffalo NY 14226

CONTACT Justin Kellogg
PH. #( ) (716) 836-1540
FAX #( ) (716) 836-2402

BILL TO:

PO# 2772

PROJECT DESCRIPTION: Delaware St. Br.

SAMPLER SIGNATURE: J.K. Kellogg

DW DRINKING WATER
GW GROUND WATER
SW SURFACE WATER
WW WASTE WATER
O OIL
SL SLUDGE
SO SOIL
S SOLID
W WIPE
OTHER

TURN AROUND TIME: 10BD (S)

QUOTATION NUMBER:

ARE SPECIAL DETECTION LIMITS REQUIRED: YES NO
If yes please attach requirements.

Is a QC Package required: YES NO
If yes please attach requirements

ANALYSES TO BE PERFORMED

	SAMPLE I.D.	DATE SAMPLED	TIME OF SAMPLING	SAMPLE TYPE	TOTAL NO. OF CONTAINERS	TCLP STARS VOA / TCLP STARS SVOA	Ignitability	TCL VOA / TCL SVOA / TCL Pest/PCB	RCRA Metals	TCLP Benzene	TOC					TYPE OF CONTAINER/ COMMENTS:	OFFICE USE ONLY WST. I.D.
1	DEL-A-SB1-8-12	10/19	16:20	Soil	5		X	X	X	X						MS/MSD - Limited Volume	WS58308
2	DEL-C-SB1-11.5-13	10/19	12:30	Soil	5	X	X									Moderate Contam.	09
3	DEL-C-SB2-0.5-5	10/19	13:00	Soil	5		X	X	X	X							10
4	DEL-H-SED1	10/19	17:00	Sed	6			X	X	X	X						11
5	DEL-H-SED2	10/19	17:30	Sed	6			X	X	X	X						12
6	DEL-E-SB1-0.5-5	10/20	15:30	Soil	6	X	X									MS	13
7	DEL-F-SB1-4.5-7.5	10/20	11:16	Soil	5		X	X	X	X							14
8																	
9																	
10																	

REMARKS:
Include all batch QC for all analyses.

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
J.K. Kellogg	10/21/99	15:40	Paul Marra	10/21/99	15:40
RELINQUISHED BY:	DATE: / /	TIME:	RECEIVED BY:	DATE: / /	TIME:

FAX LEAD SHEET

WASTE STREAM TECHNOLOGY
302 GROTE STREET
BUFFALO, NY 14207
Phone (716)876-5290
Fax (716)876-2412

DATE: 12/1/99 NUMBER OF PAGES (including cover): 6

TO: Justin Kellogg

FROM: Dan Vollmer FAX NUMBER: 836-2402

MESSAGE:

Attached is the results of the re-digestion and re-analysis of sample WS58308 (DEL-A-SB1-8-12) from the Delaware St. Br. Site for total metals analysis (except mercury). I included the results from the initial sample analysis for your comparison. I have also included the result reports for the re-digested and re-analyzed duplicate and matrix spike sample analyses as well as the associated method blank and reference sample result reports.

Please review and let me know if you have any questions or comments regarding the total metals re-analysis results.

Please call the number listed above if all pages are not received.

Waste Stream Technology, Inc.

Total Metals Analysis Result Report
Sample Re-digestion and Re-analysis Analysis Summary

Site : Delaware St. Br.
Matrix : Soil

Group Number : 9901-1674
Report Units : mg/kg

Lab ID Number	WS58308 Initial	WS58308 RE	
Client ID	DEL-A-SB1-8-12	DEL-A-SB1-8-12	
Date Digested	10/27/99	11/22/99	
Date Analyzed	10/28/99	11/30/99	Detection
Analyte	Initial Result	Duplicate Result	Limit
Silver	< 0.50	< 0.50	0.50
Arsenic	3.03	3.82	1.70
Barium	12.4	18.5	1.00
Cadmium	2.85	< 1.00	1.00
Chromium	7.95	11.10	1.00
Lead	7.45	7.03	4.10
Selenium	< 1.40	< 1.40	1.40

RE denotes Re-digested and Re-analyzed sample.

Waste Stream Technology, Inc.

Total Metals Analysis Result Report
Duplicate Sample Analysis Summary

Site : Delaware St. Br.
Matrix : Soil

Group Number : 9901-1674
Report Units : mg/kg

Lab ID Number	WS58308 RE	WS58308 RE Dup		
Client ID	DEL-A-SB1-8-12	DEL-A-SB1-8-12		
Date Digested	11/22/99	11/22/99		
Date Analyzed	11/30/99	11/30/99	RPD	RPD
Analyte	Initial Result	Duplicate Result	(%)	QC Limits (%)
Silver	< 0.50	< 0.50	< 0.1	25
Arsenic	3.82	3.67	4.2	25
Barium	18.5	12.8	36 #	25
Cadmium	< 1.00	< 1.00	< 0.1	25
Chromium	11.10	9.08	20.4	25
Lead	7.03	6.19	12.7	25
Selenium	< 1.40	< 1.40	< 0.1	25

RE denotes Re-digested and Re-analyzed sample.
Dup denotes Duplicate sample.
# denotes an RPD outside the stated QC limits.

Waste Stream Technology Inc

Total Metals Analysis Result Report

Matrix Spike Sample Analysis Summary

Site : Delaware St. Br.
WST Sample No. Spiked : WS58308
Client ID : DEL-A-SB1-8-12

Group Number: 9901-1674
Report Units : % Recovery
Matrix : Soil

	Lab ID	WS58308 RE MS		
	Date Digested	11/22/99		
Analyte	Matrix Spike % Recovery QC Limits	% Recovery	Date Analyzed	Analysis Method
Silver	75 - 125	100	11/30/99	SW-846 6010
Arsenic	75 - 125	96	11/30/99	SW-846 6010
Barium	75 - 125	93	11/30/99	SW-846 6010
Cadmium	75 - 125	93	11/30/99	SW-846 6010
Chromium	75 - 125	98	11/30/99	SW-846 6010
Lead	75 - 125	91	11/30/99	SW-846 6010
Selenium	75 - 125	95	11/30/99	SW-846 6010

RE denotes Re-digested and Re-analyzed.
MS denotes Matrix Spike

Waste Stream Technology Inc

Total Metals Analysis Result Report

Method Blank Sample Analysis Summary

Site : Delaware St. Br.
Group Number: 9901-1674

Report Units : mg/kg
Matrix : Soil

	Lab ID	MB112299-S1		
	Date Digested	11/22/99		
Analyte	Detection Limit	Result	Date Analyzed	Analysis Method
Silver	0.50	< 0.50	11/30/99	SW-846 6010
Arsenic	1.70	< 1.70	11/30/99	SW-846 6010
Barium	1.00	< 1.00	11/30/99	SW-846 6010
Cadmium	1.00	< 1.00	11/30/99	SW-846 6010
Chromium	1.00	< 1.00	11/30/99	SW-846 6010
Lead	4.10	< 4.10	11/30/99	SW-846 6010
Selenium	1.40	< 1.40	11/30/99	SW-846 6010

MB denotes Method Blank

Waste Stream Technology Inc

Total Metals Analysis Result Report

Reference Sample Analysis Summary

Site : Delaware St. Br.
Group Number: 9901-1674

Report Units : % Recovery
Matrix : Soil

	Lab ID	RF112299-S1		
	Date Digested	11/22/99		
Analyte	Reference % Recovery QC Limits	% Recovery	Date Analyzed	Analysis Method
Silver	85 - 115	101	11/30/99	SW-846 6010
Arsenic	85 - 115	99	11/30/99	SW-846 6010
Barium	85 - 115	105	11/30/99	SW-846 6010
Cadmium	85 - 115	103	11/30/99	SW-846 6010
Chromium	85 - 115	107	11/30/99	SW-846 6010
Lead	85 - 115	102	11/30/99	SW-846 6010
Selenium	85 - 115	96	11/30/99	SW-846 6010

RF denotes Reference Sample.

APPENDIX C

Soil Boring Logs for Site G

GENERAL INFORMATION & KEY TO SUBSURFACE LOGS

The Subsurface Logs attached to this report present the observations and mechanical data collected by the driller at the site, supplemented by classification of the material removed from the borings as determined through visual identification by technicians in the laboratory. It is cautioned that the materials removed from the borings represent only a fraction of the total volume of the deposits at the site and may not necessarily be representative of the subsurface conditions between adjacent borings or between the sampled intervals. The data presented on the Subsurface Logs together with the recovered samples will provide a basis for evaluating the character of the subsurface conditions relative to the project. The evaluation must consider all the recorded details and their significance relative to each other. Often analyses of standard boring data indicate the need for additional testing or sampling procedures to more accurately evaluate the subsurface conditions. Any evaluation of the contents of this report and recovered samples must be performed by Professionals. The information presented in the following defines some of the procedures and terms used on the Subsurface Logs to describe the conditions encountered.

1. The figures in the Depth column defines the scale of the Subsurface Log.

2. The sample column shows, graphically, the depth range from which a sample was recovered See Table 1 for a description of the symbols used to signify the various types of samples.

3. The Sample No. is used for identification on sample containers and/or Laboratory Test Reports.

4. Blows on Sampler—shows the results of the "Penetration Test", recording the number of blows required to drive a split spoon sampler into the soil. The number of blows required for each six inches of penetration is recorded. The first 6 inches of penetration is considered to be a seating drive. The number of blows required for the second and third 6 inches of penetration is termed the penetration resistance, N. The outside diameter of the sampler, the hammer weight and the length of drop are noted at the bottom of the Subsurface Log.

5. Blows on Casing — shows the number of blows required to advance the casing a distance of 12 inches. The casing size, the hammer weight and the length of drop are noted at the bottom of the Subsurface Log. If the casing is advanced by means other than driving, the method of advancement will be indicated in the Notes column or under the Method of Investigation at the bottom of the Subsurface Log.

6. All recovered soil samples are reviewed in the laboratory by an engineering technician, geologist or geotechnical engineer, unless noted otherwise. The visual descriptions are made on the basis of a combination of the driller's field descriptions and observations and the sample as received in the laboratory. The method of visual classification is based primarily on the Unified Soil Classification (ASTM D 2487-83) with regard to the particle size and plasticity (See Table No. 2) Additionally, the relative portion, by weight, of two or more soil types is described for granular soils in accordance with "Suggested Methods of Test for Identification of Soils" by D M. Burmister, ASTM Special Technical Publication 479, June 1970. (See Table No. 3) The description of the relative soil density or consistency is based upon the penetration records as defined on Table No. 4. The description of the soil moisture is based upon the relative wetness of the soil as recovered and is described as dry, moist, wet and saturated. Water introduced in the boring either naturally or during drilling may have affected the moisture condition of the recovered sample. Special terms are used as required to describe materials in greater detail several such terms are listed in Table 5. When sampling gravelly soils with a standard two inch diameter split spoon,the true percentage of gravel is often not recovered due to the relatively small sampler diameter. The presence of boulders and large gravel is sometimes, but not necessarily, detected by an evaluation of the casing and samplers blows or through the "action" of the drill rig as reported by the driller.

7 .The description of the rock shown is based on the recovered rock core and the driller's observations. The terms frequently used in the description are included in Table 6.

8. The stratification lines represent the approximate boundary between soil types and the transition may be gradual. Solid stratification lines are based on the driller's field observations.

9. Miscellaneous observations and procedures noted by the driller are shown in this column, including water level observations. It is important to realize the reliability of the water level observations depends upon the soil type (water does not readily stabilize in a hole through fine grained soils), and that drill water used to advance the boring may have influenced the observations. The ground water level typically will fluctuate seasonally. One or more perched or trapped water levels may exist in the ground seasonally. All the available readings should be evaluated. If definite conclusions cannot be made, it is often prudent to examine the conditions more thoroughly through test pit excavations or water observation wells.

10. The length of core run is defined as the length of penetration of the core barrel. Core recovery is the length of core recovered divided by the core run. The RQD (Rock Quality Designation) is the total pieces of NX core exceeding 4 inches in length divided by the core run. The size core barrel used is also noted.

SUBSURFACE LOG KEY

Project_____ Date Started_____

Project#_____ Date Finished_____

Location_____ Surf. Elv._____

Driller:_____ G.W. Depth_____

SJB SERVICES, INC.

Hole # _____

Sheet____ of____

Contract Drilling and Testing

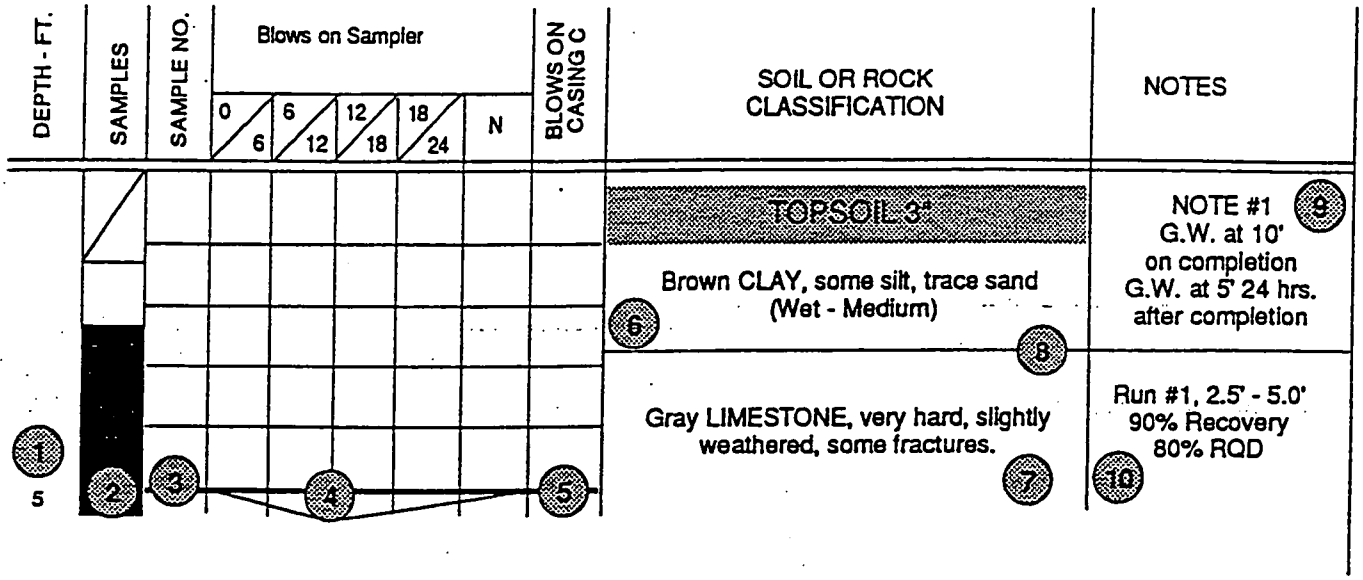

TABLE 1

- Split Spoon Sample
- Shelby Tube Sample
- Auger or Test Pit Sample
- Rock Core

TABLE 2

Identification of soil type is made on basis of an estimate of particle sizes, and in the case of fine grained soils also on the basis of plasticity.

Soil Type	Soil Particle Size	
Boulder	>12"	
Cobble	3" - 12"	
Gravel - Course	3" - 3/4"	Coarse Grained (Granular)
- Fine	3/4" - #4	
Sand - Coarse	#4 - #10	
- Medium	#10 - #40	
- Fine	#40 - #200	
Silt - Non Plastic (Granular)		
Clay-Plastic (Cohesive)	<#200	Fine Grained

TABLE 3

The following terms are used in classifying soils consisting of mixtures of 2 or more soil types. The estimate is based on weight of total sample.

Term	% of Total Sample
"and"	35-50
"some"	20-35
"little"	10-20
"trace"	less than 10

(When sampling gravelly soils with a standard split spoon, the true percentage of gravel is often not recovered due to the relatively small sampler diameter.)

TABLE 4

The relative compactness or consistency is described in accord with the following terms:

Granular Soils		Cohesive Soils	
Term	Blows per Foot, N	Term	Blows per Foot, N
Loose	<11	Very Soft	<3
Firm	11-30	Soft	3-15
Compact	31-50	Stiff	16-25
Very Compact	>51	Hard	>26

(Large particles in the soils will often significantly influence the blows per foot recorded during the Penetration Test)

TABLE 5

Varved - Horizontal uniform layers or seams of soil(s).
Layer - Soil deposit more than 6" thick.
Seam - Soil deposit more than 6" thick.
Parting - Soil deposit less than 1/8" thick.
Laminated- Irregular, horizontal and angled seams and partings of soil(s).

TABLE 6

Rock Classification Terms		Meaning
Hardness	Soft	Scratched by fingernail
	Medium Hard	Scratched easily by penknife
	Hard	Scratched very difficultly with penknife
	Very Hard	Cannot be scratched by penknife
Weathering	Very Weathered	Judged from relative amounts
	Weathered, Sound	of disintegration, iron staining, core recovery, clay seams, etc.

Rock Classification Terms			Meaning
Bedding	Laminated	(<1")	Natural breaks in Rock Layers
	Thin Bedded	(1"-4")	
	Bedded	(4"-12")	
	Thick Bedded	(12" - 36")	
	Massive	(>36")	

Fracturing- natural breaks in the rock oriented at an angle to the rock layers

SM 282a (2/76)

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
SOIL MECHANICS BUREAU
SUBSURFACE EXPLORATION LOG

REGION 5
COUNTY Erie
PIN 5460.29.121
PROJECT Delaware Street, NY Route 384, Bridge Over Ellicott Creek
FED SERIES
COORD. LOC. N 355457.954 E 326245.292
DATE START 1/19/99 DATE FINISH 1/19/99

HOLE B-1
LINE STA. LINE
STA 0+052.80
OFFSET 0.25 m Left
SURF. ELEV. 176.12 m
DEPTH TO WATER See Note

CASING O.D. ____ I.D. ____ WEIGHT OF HAMMER - CASING ____ LBS. HAMMER FALL - CASING ____
SAMPLER O.D. 2" I.D. 1 5/8" WEIGHT OF HAMMER - SAMPLER 140 LBS. HAMMER FALL - SAMPLER 30"

ELEV. SURFACE	BLOWS ON CASING	SAMPLE NO.	BLOWS ON SAMPLER 0/.5	.5/1.0	1.0/1.5	1.5/2.0	DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. %
			AUGER				ASPHALTIC CONCRETE	
		1	38	40			Fill - Black CINDERS with Gravel (M-NPL)	
		2	42	18				
			14	13				
		3	4	4				
			4	5				
		4	11	12			Fill - Brn. Clayey fine SAND, with Wood Fragments (M-LPL)	
			5	4				
		5	4	3				
			4	3				
		6	4	3			Fill - Red-Grey Silty Sandy CLAY, with Gravel and Wood Fragments (M-LPL)	
			4	4				
		7	3	3				
			2	1				
		8	2	5			Fill - Brn.-Black Clayey fine SAND, Gravelly	
			1	1				
		9	1	1				
			3	3				
		10	won/2.0					
		11	1	1				
			won/1.0					
		12	won/2.0					
		13	won/2.0				Fill - Brn. Silty CLAY (M-PL)	
		14	won/2.0					
		15	won/1.5					
30				3				
		16	25	23			Fill - Brn.-Black Clayey fine SAND, Gravelly with Brick Fragments (M-LPL)	
			3	3				
		17	3	3			Fill - Brn. Silty CLAY (M-PL)	
			3	3				
		18	won/1.5					
				5				
		19	19	25			Brn. Silty fine SAND, Gravelly (M-NPL)	
			31	26				
		20	17	33				
			39	43				
		21	37	51				
			50/.04					
							Boring Complete with Sample Spoon Refusal at 41.4'	
							No Free Standing Water Encountered at Boring Completion.	
							Free Standing Water Recorded at 39.0' 24 Hours After Boring Completion.	

THE SUBSURFACE INFORMATION SHOWN HEREON WAS OBTAINED FOR STATE DESIGN AND ESTIMATE PURPOSES. IT IS MADE AVAILABLE TO AUTHORIZED USERS ONLY THAT THEY MAY HAVE ACCESS TO THE SAME INFORMATION AVAILABLE TO THE STATE. IT IS PRESENTED IN GOOD FAITH, BUT IS NOT INTENDED AS A SUBSTITUTE FOR INVESTIGATIONS, INTERPRETATION OR JUDGMENT OF SUCH AUTHORIZED USERS.

CONTRACTOR ____ SM ____

DRILL RIG OPERATOR C. Ackley
SOIL & ROCK DESCRIP. C. Guzzetta / F. Minnolera
REGIONAL SOILS ENGR. ____
SHEET 1 OF 1
STRUCTURE NAME/NO. Delaware Street - Over Ellicott Creek - BIN 2047300

HOLE B-1

SM 282a (2/76)

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
SOIL MECHANICS BUREAU

SUBSURFACE EXPLORATION LOG

REGION 5
COUNTY Erie
PIN 5460.29.121
PROJECT Delaware Street, NY Route 384, Bridge Over Ellicott Creek
SOIL SERIES
COORD. LOC. N 335499.337 E 326246.233
DATE START 1/20/99 DATE FINISH 1/20/99

HOLE B-3
LINE STA. LINE
STA 0+094.25
OFFSET 0.50m Left
SURF. ELEV. 177.51 m
DEPTH TO WATER See Note

CASING O.D. ____ I.D. ____ WEIGHT OF HAMMER - CASING ____ LBS. HAMMER FALL - CASING ____
SAMPLER O.D. 2" I.D. 1 5/8" WEIGHT OF HAMMER - SAMPLER 140 LBS. HAMMER FALL - SAMPLER 30"

BLOWS PER FOOT SURFACE	BLOWS ON CASING	SAMPLE NO.	BLOWS ON SAMPLER 0/.8	BLOWS ON SAMPLER .8/1.0	BLOWS ON SAMPLER 1.0/1.8	BLOWS ON SAMPLER 1.8/2.0	DESCRIPTION OF SOIL AND ROCK	MOIST. CONT. %
			AUGER				ASPHALTIC CONCRETE	
		1	27	34			Fill - Black CINDERS with Slag (M-NPL)	
		2	21	24				
			15	16				
		3	8	5				
			3	2				
		4	2	2			Fill - Brn. fine SAND (moist, NPL)	
			3	2				
		5	woh/2.0				Fill - Brn. Silty fine SAND (M-NPL)	
		6	woh/1.5					
				1				
		7	woh/2.0					
		8	woh/2.0					
		9	1	1				
			2	1				
		10	woh/2.0				Fill - Black Silty CLAY (M-PL)	
		11	woh/1.5					
				1				
		12	woh/2.0					
		13	woh/1.0					
			2	2				
		14	2	2				
			2	2				
		15	1	1			Brn. Silty CLAY (M-PL)	
			1	1				
		16	1	1				
			1	1				
		17	woh/1.5					
		18	5	9			Brn, Clayey fine SAND, Gravelly (M-LPL)	
			17	20				
		19	25	50				
			50/.03					
							Boring Complete with Sample Spoon Refusal at 43.3'	
							No Free Standing Water Encountered at Boring Completion	

THE SUBSURFACE INFORMATION SHOWN HEREON WAS OBTAINED FOR STATE DESIGN AND ESTIMATE PURPOSES. IT IS MADE AVAILABLE TO AUTHORIZED USERS ONLY THAT THEY MAY HAVE ACCESS TO THE SAME INFORMATION AVAILABLE TO THE STATE. IT IS PRESENTED IN GOOD FAITH, BUT IS NOT INTENDED AS A SUBSTITUTE FOR INVESTIGATIONS, INTERPRETATION OR JUDGMENT OF SUCH AUTHORIZED USERS.

CONTRACTOR ____ SM ____

DRILL RIG OPERATOR C. Ackley
SOIL & ROCK DESCRIP. C. Guzzetta / F. Minnolera
REGIONAL SOILS ENGR. ____
SHEET 1 OF 1
STRUCTURE NAME/NO. Delaware Street - Over Ellicott Creek - BIN 2047300

HOLE B-3

ATTACHMENT 3

Laboratory Analytical Report

TurnKey

ANALYTICAL REPORT

Lab Number:	L2222083
Client:	Turnkey Environmental Restoration, LLC 2558 Hamburg Turnpike Suite 300 Buffalo, NY 14218
ATTN:	Chris Boron
Phone:	(716) 856-0599
Project Name:	20 TO 40 FILLMORE AVE
Project Number:	T0621-022-001-002
Report Date:	05/12/22

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2222083-01	TP-1 0-1.5 FT	SOIL	TONAWANDA, NY	04/26/22 07:44	04/27/22
L2222083-02	TP-1 3-6 FT	SOIL	TONAWANDA, NY	04/26/22 07:49	04/27/22
L2222083-03	TP-3 1-3.5 FT	SOIL	TONAWANDA, NY	04/26/22 08:25	04/27/22
L2222083-04	TP-4 0-2 FT	SOIL	TONAWANDA, NY	04/26/22 08:37	04/27/22
L2222083-05	TP-6 0.5-2 FT	SOIL	TONAWANDA, NY	04/26/22 09:17	04/27/22
L2222083-06	TP-10 0-2 FT	SOIL	TONAWANDA, NY	04/26/22 11:25	04/27/22
L2222083-07	TP-11 0-2 FT	SOIL	TONAWANDA, NY	04/26/22 11:49	04/27/22
L2222083-08	TP-12 0.5-4 FT	SOIL	TONAWANDA, NY	04/26/22 12:15	04/27/22

Project Name:	20 TO 40 FILLMORE AVE	**Lab Number:**	L2222083
Project Number:	T0621-022-001-002	**Report Date:**	05/12/22

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	20 TO 40 FILLMORE AVE	**Lab Number:**	L2222083
Project Number:	T0621-022-001-002	**Report Date:**	05/12/22

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Volatile Organics

L2222083-01 and -02: Any reported concentrations that are below 200 ug/kg may be biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

L2222083-01: The surrogate recovery is outside the acceptance criteria for 4-bromofluorobenzene (140%); however, the sample was not re-analyzed due to coelution with an obvious interference. A copy of the chromatogram is included as an attachment to this report.

L2222083-02: The surrogate recoveries are outside the acceptance criteria for toluene-d8 (152%) and 4-bromofluorobenzene (427%); however, the sample was not re-analyzed due to coelution with an obvious interference. A copy of the chromatogram is included as an attachment to this report.

Semivolatile Organics

L2222083-04D: The sample has elevated detection limits due to the dilution required by the sample matrix.

Total Metals

L2222083-01, -03 and -07: The sample has elevated detection limits for all elements, with the exception of mercury, due to the dilution required by matrix interferences encountered during analysis.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Caitlin Walukevich

Caitlin Walukevich

Title: Technical Director/Representative

Date: 05/12/22

ORGANICS

VOLATILES

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-01
Client ID: TP-1 0-1.5 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 07:44
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 05/06/22 15:11
Analyst: LAC
Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	5.3	2.4	1
1,1-Dichloroethane	ND		ug/kg	1.1	0.15	1
Chloroform	ND		ug/kg	1.6	0.15	1
Carbon tetrachloride	ND		ug/kg	1.1	0.24	1
1,2-Dichloropropane	ND		ug/kg	1.1	0.13	1
Dibromochloromethane	ND		ug/kg	1.1	0.15	1
1,1,2-Trichloroethane	ND		ug/kg	1.1	0.28	1
Tetrachloroethene	ND		ug/kg	0.53	0.21	1
Chlorobenzene	ND		ug/kg	0.53	0.14	1
Trichlorofluoromethane	ND		ug/kg	4.3	0.74	1
1,2-Dichloroethane	ND		ug/kg	1.1	0.27	1
1,1,1-Trichloroethane	ND		ug/kg	0.53	0.18	1
Bromodichloromethane	ND		ug/kg	0.53	0.12	1
trans-1,3-Dichloropropene	ND		ug/kg	1.1	0.29	1
cis-1,3-Dichloropropene	ND		ug/kg	0.53	0.17	1
Bromoform	ND		ug/kg	4.3	0.26	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.53	0.18	1
Benzene	8.6		ug/kg	0.53	0.18	1
Toluene	4.8		ug/kg	1.1	0.58	1
Ethylbenzene	7.6		ug/kg	1.1	0.15	1
Chloromethane	ND		ug/kg	4.3	0.99	1
Bromomethane	ND		ug/kg	2.1	0.62	1
Vinyl chloride	ND		ug/kg	1.1	0.36	1
Chloroethane	ND		ug/kg	2.1	0.48	1
1,1-Dichloroethene	ND		ug/kg	1.1	0.25	1
trans-1,2-Dichloroethene	ND		ug/kg	1.6	0.14	1
Trichloroethene	ND		ug/kg	0.53	0.14	1
1,2-Dichlorobenzene	ND		ug/kg	2.1	0.15	1

Project Name: 20 TO 40 FILLMORE AVE **Lab Number:** L2222083

Project Number: T0621-022-001-002 **Report Date:** 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-01 Date Collected: 04/26/22 07:44

Client ID: TP-1 0-1.5 FT Date Received: 04/27/22

Sample Location: TONAWANDA, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	2.1	0.16	1
1,4-Dichlorobenzene	ND		ug/kg	2.1	0.18	1
Methyl tert butyl ether	ND		ug/kg	2.1	0.21	1
p/m-Xylene	14		ug/kg	2.1	0.60	1
o-Xylene	2.5		ug/kg	1.1	0.31	1
cis-1,2-Dichloroethene	ND		ug/kg	1.1	0.19	1
Styrene	ND		ug/kg	1.1	0.21	1
Dichlorodifluoromethane	ND		ug/kg	11	0.98	1
Acetone	ND		ug/kg	11	5.1	1
Carbon disulfide	ND		ug/kg	11	4.8	1
2-Butanone	ND		ug/kg	11	2.4	1
4-Methyl-2-pentanone	ND		ug/kg	11	1.4	1
2-Hexanone	ND		ug/kg	11	1.2	1
Bromochloromethane	ND		ug/kg	2.1	0.22	1
1,2-Dibromoethane	ND		ug/kg	1.1	0.30	1
n-Butylbenzene	0.76	J	ug/kg	1.1	0.18	1
sec-Butylbenzene	1.8		ug/kg	1.1	0.16	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.2	1.1	1
Isopropylbenzene	4.6		ug/kg	1.1	0.12	1
p-Isopropyltoluene	2.1		ug/kg	1.1	0.12	1
n-Propylbenzene	3.1		ug/kg	1.1	0.18	1
1,2,3-Trichlorobenzene	ND		ug/kg	2.1	0.34	1
1,2,4-Trichlorobenzene	ND		ug/kg	2.1	0.29	1
1,3,5-Trimethylbenzene	20		ug/kg	2.1	0.20	1
1,2,4-Trimethylbenzene	18		ug/kg	2.1	0.36	1
Methyl Acetate	ND		ug/kg	4.3	1.0	1
Cyclohexane	3.3	J	ug/kg	11	0.58	1
1,4-Dioxane	ND		ug/kg	85	37.	1
Freon-113	ND		ug/kg	4.3	0.74	1
Methyl cyclohexane	17		ug/kg	4.3	0.64	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	120		70-130
4-Bromofluorobenzene	**140**	Q	70-130
Dibromofluoromethane	90		70-130

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-02
Client ID: TP-1 3-6 FT
Sample Location: TONAWANDA, NY
Date Collected: 04/26/22 07:49
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 05/07/22 13:43
Analyst: AJK
Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/kg	270	120	1
1,1-Dichloroethane	ND		ug/kg	54	7.9	1
Chloroform	ND		ug/kg	81	7.6	1
Carbon tetrachloride	ND		ug/kg	54	12.	1
1,2-Dichloropropane	ND		ug/kg	54	6.8	1
Dibromochloromethane	ND		ug/kg	54	7.6	1
1,1,2-Trichloroethane	ND		ug/kg	54	14.	1
Tetrachloroethene	ND		ug/kg	27	11.	1
Chlorobenzene	ND		ug/kg	27	6.9	1
Trichlorofluoromethane	ND		ug/kg	220	38.	1
1,2-Dichloroethane	ND		ug/kg	54	14.	1
1,1,1-Trichloroethane	ND		ug/kg	27	9.1	1
Bromodichloromethane	ND		ug/kg	27	5.9	1
trans-1,3-Dichloropropene	ND		ug/kg	54	15.	1
cis-1,3-Dichloropropene	ND		ug/kg	27	8.6	1
Bromoform	ND		ug/kg	220	13.	1
1,1,2,2-Tetrachloroethane	ND		ug/kg	27	9.0	1
Benzene	54		ug/kg	27	9.0	1
Toluene	320		ug/kg	54	29.	1
Ethylbenzene	7300		ug/kg	54	7.6	1
Chloromethane	ND		ug/kg	220	50.	1
Bromomethane	ND		ug/kg	110	32.	1
Vinyl chloride	ND		ug/kg	54	18.	1
Chloroethane	ND		ug/kg	110	24.	1
1,1-Dichloroethene	ND		ug/kg	54	13.	1
trans-1,2-Dichloroethene	ND		ug/kg	81	7.4	1
Trichloroethene	ND		ug/kg	27	7.4	1
1,2-Dichlorobenzene	ND		ug/kg	110	7.8	1

Project Name: 20 TO 40 FILLMORE AVE **Lab Number:** L2222083

Project Number: T0621-022-001-002 **Report Date:** 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-02 Date Collected: 04/26/22 07:49

Client ID: TP-1 3-6 FT Date Received: 04/27/22

Sample Location: TONAWANDA, NY Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/kg	110	8.0	1
1,4-Dichlorobenzene	ND		ug/kg	110	9.3	1
Methyl tert butyl ether	ND		ug/kg	110	11.	1
p/m-Xylene	18000		ug/kg	110	30.	1
o-Xylene	2100		ug/kg	54	16.	1
cis-1,2-Dichloroethene	ND		ug/kg	54	9.5	1
Styrene	ND		ug/kg	54	11.	1
Dichlorodifluoromethane	ND		ug/kg	540	50.	1
Acetone	ND		ug/kg	540	260	1
Carbon disulfide	ND		ug/kg	540	250	1
2-Butanone	ND		ug/kg	540	120	1
4-Methyl-2-pentanone	ND		ug/kg	540	69.	1
2-Hexanone	ND		ug/kg	540	64.	1
Bromochloromethane	ND		ug/kg	110	11.	1
1,2-Dibromoethane	ND		ug/kg	54	15.	1
n-Butylbenzene	2000		ug/kg	54	9.1	1
sec-Butylbenzene	2300		ug/kg	54	7.9	1
1,2-Dibromo-3-chloropropane	ND		ug/kg	160	54.	1
Isopropylbenzene	3000		ug/kg	54	5.9	1
p-Isopropyltoluene	11000		ug/kg	54	5.9	1
n-Propylbenzene	4900		ug/kg	54	9.3	1
1,2,3-Trichlorobenzene	ND		ug/kg	110	17.	1
1,2,4-Trichlorobenzene	ND		ug/kg	110	15.	1
1,3,5-Trimethylbenzene	14000		ug/kg	110	10.	1
1,2,4-Trimethylbenzene	33000	E	ug/kg	110	18.	1
Methyl Acetate	ND		ug/kg	220	52.	1
Cyclohexane	2900		ug/kg	540	30.	1
1,4-Dioxane	ND		ug/kg	4300	1900	1
Freon-113	ND		ug/kg	220	38.	1
Methyl cyclohexane	40000	E	ug/kg	220	33.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	**152**	Q	70-130
4-Bromofluorobenzene	**427**	Q	70-130
Dibromofluoromethane	76		70-130

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-02 D
Client ID: TP-1 3-6 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 07:49
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8260C
Analytical Date: 05/06/22 15:31
Analyst: LAC
Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,4-Trimethylbenzene	33000		ug/kg	1100	180	10
Methyl cyclohexane	32000		ug/kg	2200	330	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	108		70-130
4-Bromofluorobenzene	122		70-130
Dibromofluoromethane	83		70-130

Project Name: 20 TO 40 FILLMORE AVE **Lab Number:** L2222083

Project Number: T0621-022-001-002 **Report Date:** 05/12/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/06/22 08:20
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 02 Batch: WG1635424-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		ug/kg	75	7.0
Carbon tetrachloride	ND		ug/kg	50	12.
1,2-Dichloropropane	ND		ug/kg	50	6.2
Dibromochloromethane	ND		ug/kg	50	7.0
1,1,2-Trichloroethane	ND		ug/kg	50	13.
Tetrachloroethene	ND		ug/kg	25	9.8
Chlorobenzene	ND		ug/kg	25	6.4
Trichlorofluoromethane	ND		ug/kg	200	35.
1,2-Dichloroethane	ND		ug/kg	50	13.
1,1,1-Trichloroethane	ND		ug/kg	25	8.4
Bromodichloromethane	ND		ug/kg	25	5.4
trans-1,3-Dichloropropene	ND		ug/kg	50	14.
cis-1,3-Dichloropropene	ND		ug/kg	25	7.9
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	8.3
Benzene	ND		ug/kg	25	8.3
Toluene	ND		ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
Chloromethane	ND		ug/kg	200	47.
Bromomethane	ND		ug/kg	100	29.
Vinyl chloride	ND		ug/kg	50	17.
Chloroethane	ND		ug/kg	100	23.
1,1-Dichloroethene	ND		ug/kg	50	12.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4

Project Name: 20 TO 40 FILLMORE AVE **Lab Number:** L2222083

Project Number: T0621-022-001-002 **Report Date:** 05/12/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/06/22 08:20
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 02 Batch: WG1635424-5					
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
Styrene	ND		ug/kg	50	9.8
Dichlorodifluoromethane	ND		ug/kg	500	46.
Acetone	ND		ug/kg	500	240
Carbon disulfide	ND		ug/kg	500	230
2-Butanone	ND		ug/kg	500	110
4-Methyl-2-pentanone	ND		ug/kg	500	64.
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.
Methyl Acetate	ND		ug/kg	200	48.
Cyclohexane	ND		ug/kg	500	27.
1,4-Dioxane	ND		ug/kg	4000	1800
Freon-113	ND		ug/kg	200	35.
Methyl cyclohexane	ND		ug/kg	200	30.

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/06/22 08:20
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by EPA 5035 High - Westborough Lab for sample(s): 02 Batch: WG1635424-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	91		70-130

Project Name: 20 TO 40 FILLMORE AVE **Lab Number:** L2222083

Project Number: T0621-022-001-002 **Report Date:** 05/12/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/06/22 08:20
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1635989-5					
Methylene chloride	ND		ug/kg	5.0	2.3
1,1-Dichloroethane	ND		ug/kg	1.0	0.14
Chloroform	ND		ug/kg	1.5	0.14
Carbon tetrachloride	ND		ug/kg	1.0	0.23
1,2-Dichloropropane	ND		ug/kg	1.0	0.12
Dibromochloromethane	ND		ug/kg	1.0	0.14
1,1,2-Trichloroethane	ND		ug/kg	1.0	0.27
Tetrachloroethene	ND		ug/kg	0.50	0.20
Chlorobenzene	ND		ug/kg	0.50	0.13
Trichlorofluoromethane	ND		ug/kg	4.0	0.70
1,2-Dichloroethane	ND		ug/kg	1.0	0.26
1,1,1-Trichloroethane	ND		ug/kg	0.50	0.17
Bromodichloromethane	ND		ug/kg	0.50	0.11
trans-1,3-Dichloropropene	ND		ug/kg	1.0	0.27
cis-1,3-Dichloropropene	ND		ug/kg	0.50	0.16
Bromoform	ND		ug/kg	4.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/kg	0.50	0.17
Benzene	ND		ug/kg	0.50	0.17
Toluene	ND		ug/kg	1.0	0.54
Ethylbenzene	ND		ug/kg	1.0	0.14
Chloromethane	ND		ug/kg	4.0	0.93
Bromomethane	ND		ug/kg	2.0	0.58
Vinyl chloride	ND		ug/kg	1.0	0.34
Chloroethane	ND		ug/kg	2.0	0.45
1,1-Dichloroethene	ND		ug/kg	1.0	0.24
trans-1,2-Dichloroethene	ND		ug/kg	1.5	0.14
Trichloroethene	ND		ug/kg	0.50	0.14
1,2-Dichlorobenzene	ND		ug/kg	2.0	0.14
1,3-Dichlorobenzene	ND		ug/kg	2.0	0.15

Project Name: 20 TO 40 FILLMORE AVE **Lab Number:** L2222083

Project Number: T0621-022-001-002 **Report Date:** 05/12/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/06/22 08:20
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1635989-5					
1,4-Dichlorobenzene	ND		ug/kg	2.0	0.17
Methyl tert butyl ether	ND		ug/kg	2.0	0.20
p/m-Xylene	ND		ug/kg	2.0	0.56
o-Xylene	ND		ug/kg	1.0	0.29
cis-1,2-Dichloroethene	ND		ug/kg	1.0	0.18
Styrene	ND		ug/kg	1.0	0.20
Dichlorodifluoromethane	ND		ug/kg	10	0.92
Acetone	ND		ug/kg	10	4.8
Carbon disulfide	ND		ug/kg	10	4.6
2-Butanone	ND		ug/kg	10	2.2
4-Methyl-2-pentanone	ND		ug/kg	10	1.3
2-Hexanone	ND		ug/kg	10	1.2
Bromochloromethane	ND		ug/kg	2.0	0.20
1,2-Dibromoethane	ND		ug/kg	1.0	0.28
n-Butylbenzene	ND		ug/kg	1.0	0.17
sec-Butylbenzene	ND		ug/kg	1.0	0.15
1,2-Dibromo-3-chloropropane	ND		ug/kg	3.0	1.0
Isopropylbenzene	ND		ug/kg	1.0	0.11
p-Isopropyltoluene	ND		ug/kg	1.0	0.11
n-Propylbenzene	ND		ug/kg	1.0	0.17
1,2,3-Trichlorobenzene	ND		ug/kg	2.0	0.32
1,2,4-Trichlorobenzene	ND		ug/kg	2.0	0.27
1,3,5-Trimethylbenzene	ND		ug/kg	2.0	0.19
1,2,4-Trimethylbenzene	ND		ug/kg	2.0	0.33
Methyl Acetate	ND		ug/kg	4.0	0.95
Cyclohexane	ND		ug/kg	10	0.54
1,4-Dioxane	ND		ug/kg	80	35.
Freon-113	ND		ug/kg	4.0	0.69
Methyl cyclohexane	ND		ug/kg	4.0	0.60

Project Name: 20 TO 40 FILLMORE AVE **Lab Number:** L2222083

Project Number: T0621-022-001-002 **Report Date:** 05/12/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/06/22 08:20
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1635989-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	109		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	91		70-130

Project Name: 20 TO 40 FILLMORE AVE **Lab Number:** L2222083

Project Number: T0621-022-001-002 **Report Date:** 05/12/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/07/22 10:45
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1636201-5					
Methylene chloride	ND		ug/kg	250	110
1,1-Dichloroethane	ND		ug/kg	50	7.2
Chloroform	ND		ug/kg	75	7.0
Carbon tetrachloride	ND		ug/kg	50	12.
1,2-Dichloropropane	ND		ug/kg	50	6.2
Dibromochloromethane	ND		ug/kg	50	7.0
1,1,2-Trichloroethane	ND		ug/kg	50	13.
Tetrachloroethene	ND		ug/kg	25	9.8
Chlorobenzene	ND		ug/kg	25	6.4
Trichlorofluoromethane	ND		ug/kg	200	35.
1,2-Dichloroethane	ND		ug/kg	50	13.
1,1,1-Trichloroethane	ND		ug/kg	25	8.4
Bromodichloromethane	ND		ug/kg	25	5.4
trans-1,3-Dichloropropene	ND		ug/kg	50	14.
cis-1,3-Dichloropropene	ND		ug/kg	25	7.9
Bromoform	ND		ug/kg	200	12.
1,1,2,2-Tetrachloroethane	ND		ug/kg	25	8.3
Benzene	ND		ug/kg	25	8.3
Toluene	ND		ug/kg	50	27.
Ethylbenzene	ND		ug/kg	50	7.0
Chloromethane	ND		ug/kg	200	47.
Bromomethane	ND		ug/kg	100	29.
Vinyl chloride	ND		ug/kg	50	17.
Chloroethane	ND		ug/kg	100	23.
1,1-Dichloroethene	ND		ug/kg	50	12.
trans-1,2-Dichloroethene	ND		ug/kg	75	6.8
Trichloroethene	ND		ug/kg	25	6.8
1,2-Dichlorobenzene	ND		ug/kg	100	7.2
1,3-Dichlorobenzene	ND		ug/kg	100	7.4

Project Name: 20 TO 40 FILLMORE AVE **Lab Number:** L2222083

Project Number: T0621-022-001-002 **Report Date:** 05/12/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/07/22 10:45
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1636201-5					
1,4-Dichlorobenzene	ND		ug/kg	100	8.6
Methyl tert butyl ether	ND		ug/kg	100	10.
p/m-Xylene	ND		ug/kg	100	28.
o-Xylene	ND		ug/kg	50	14.
cis-1,2-Dichloroethene	ND		ug/kg	50	8.8
Styrene	14	J	ug/kg	50	9.8
Dichlorodifluoromethane	ND		ug/kg	500	46.
Acetone	ND		ug/kg	500	240
Carbon disulfide	ND		ug/kg	500	230
2-Butanone	ND		ug/kg	500	110
4-Methyl-2-pentanone	ND		ug/kg	500	64.
2-Hexanone	ND		ug/kg	500	59.
Bromochloromethane	ND		ug/kg	100	10.
1,2-Dibromoethane	ND		ug/kg	50	14.
n-Butylbenzene	ND		ug/kg	50	8.4
sec-Butylbenzene	ND		ug/kg	50	7.3
1,2-Dibromo-3-chloropropane	ND		ug/kg	150	50.
Isopropylbenzene	ND		ug/kg	50	5.4
p-Isopropyltoluene	ND		ug/kg	50	5.4
n-Propylbenzene	ND		ug/kg	50	8.6
1,2,3-Trichlorobenzene	ND		ug/kg	100	16.
1,2,4-Trichlorobenzene	ND		ug/kg	100	14.
1,3,5-Trimethylbenzene	ND		ug/kg	100	9.6
1,2,4-Trimethylbenzene	ND		ug/kg	100	17.
Methyl Acetate	ND		ug/kg	200	48.
Cyclohexane	ND		ug/kg	500	27.
1,4-Dioxane	ND		ug/kg	4000	1800
Freon-113	ND		ug/kg	200	35.
Methyl cyclohexane	ND		ug/kg	200	30.

Project Name: 20 TO 40 FILLMORE AVE **Lab Number:** L2222083

Project Number: T0621-022-001-002 **Report Date:** 05/12/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/07/22 10:45
Analyst: LAC

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 02 Batch: WG1636201-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	93		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02 Batch: WG1635424-3 WG1635424-4								
Methylene chloride	82		84		70-130	2		30
1,1-Dichloroethane	87		88		70-130	1		30
Chloroform	85		86		70-130	1		30
Carbon tetrachloride	84		84		70-130	0		30
1,2-Dichloropropane	93		95		70-130	2		30
Dibromochloromethane	87		93		70-130	7		30
1,1,2-Trichloroethane	92		102		70-130	10		30
Tetrachloroethene	88		88		70-130	0		30
Chlorobenzene	88		90		70-130	2		30
Trichlorofluoromethane	84		83		70-139	1		30
1,2-Dichloroethane	89		95		70-130	7		30
1,1,1-Trichloroethane	87		86		70-130	1		30
Bromodichloromethane	85		88		70-130	3		30
trans-1,3-Dichloropropene	94		100		70-130	6		30
cis-1,3-Dichloropropene	92		97		70-130	5		30
Bromoform	80		86		70-130	7		30
1,1,2,2-Tetrachloroethane	100		110		70-130	10		30
Benzene	90		91		70-130	1		30
Toluene	88		89		70-130	1		30
Ethylbenzene	92		92		70-130	0		30
Chloromethane	91		88		52-130	3		30
Bromomethane	99		94		57-147	5		30
Vinyl chloride	88		85		67-130	3		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02 Batch: WG1635424-3 WG1635424-4								
Chloroethane	94		92		50-151	2		30
1,1-Dichloroethene	81		80		65-135	1		30
trans-1,2-Dichloroethene	82		83		70-130	1		30
Trichloroethene	89		90		70-130	1		30
1,2-Dichlorobenzene	92		93		70-130	1		30
1,3-Dichlorobenzene	93		92		70-130	1		30
1,4-Dichlorobenzene	92		92		70-130	0		30
Methyl tert butyl ether	87		99		66-130	13		30
p/m-Xylene	90		91		70-130	1		30
o-Xylene	89		90		70-130	1		30
cis-1,2-Dichloroethene	82		84		70-130	2		30
Styrene	88		89		70-130	1		30
Dichlorodifluoromethane	73		72		30-146	1		30
Acetone	91		103		54-140	12		30
Carbon disulfide	86		83		59-130	4		30
2-Butanone	76		88		70-130	15		30
4-Methyl-2-pentanone	83		100		70-130	19		30
2-Hexanone	73		88		70-130	19		30
Bromochloromethane	81		85		70-130	5		30
1,2-Dibromoethane	90		100		70-130	11		30
n-Butylbenzene	108		105		70-130	3		30
sec-Butylbenzene	100		96		70-130	4		30
1,2-Dibromo-3-chloropropane	80		91		68-130	13		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE

Project Number: T0621-022-001-002

Lab Number: L2222083

Report Date: 05/12/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by EPA 5035 High - Westborough Lab Associated sample(s): 02 Batch: WG1635424-3 WG1635424-4								
Isopropylbenzene	96		95		70-130	1		30
p-Isopropyltoluene	100		97		70-130	3		30
n-Propylbenzene	100		97		70-130	3		30
1,2,3-Trichlorobenzene	94		96		70-130	2		30
1,2,4-Trichlorobenzene	99		99		70-130	0		30
1,3,5-Trimethylbenzene	100		98		70-130	2		30
1,2,4-Trimethylbenzene	100		98		70-130	2		30
Methyl Acetate	77		90		51-146	16		30
Cyclohexane	89		89		59-142	0		30
1,4-Dioxane	69		85		65-136	21		30
Freon-113	85		83		50-139	2		30
Methyl cyclohexane	89		89		70-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	96		99		70-130
Toluene-d8	104		103		70-130
4-Bromofluorobenzene	105		103		70-130
Dibromofluoromethane	92		93		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE

Project Number: T0621-022-001-002

Lab Number: L2222083

Report Date: 05/12/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1635989-3 WG1635989-4								
Methylene chloride	82		84		70-130	2		30
1,1-Dichloroethane	87		88		70-130	1		30
Chloroform	85		86		70-130	1		30
Carbon tetrachloride	84		84		70-130	0		30
1,2-Dichloropropane	93		95		70-130	2		30
Dibromochloromethane	87		93		70-130	7		30
1,1,2-Trichloroethane	92		102		70-130	10		30
Tetrachloroethene	88		88		70-130	0		30
Chlorobenzene	88		90		70-130	2		30
Trichlorofluoromethane	84		83		70-139	1		30
1,2-Dichloroethane	89		95		70-130	7		30
1,1,1-Trichloroethane	87		86		70-130	1		30
Bromodichloromethane	85		88		70-130	3		30
trans-1,3-Dichloropropene	94		100		70-130	6		30
cis-1,3-Dichloropropene	92		97		70-130	5		30
Bromoform	80		86		70-130	7		30
1,1,2,2-Tetrachloroethane	100		110		70-130	10		30
Benzene	90		91		70-130	1		30
Toluene	88		89		70-130	1		30
Ethylbenzene	92		92		70-130	0		30
Chloromethane	91		88		52-130	3		30
Bromomethane	99		94		57-147	5		30
Vinyl chloride	88		85		67-130	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE

Project Number: T0621-022-001-002

Lab Number: L2222083

Report Date: 05/12/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1635989-3 WG1635989-4								
Chloroethane	94		92		50-151	2		30
1,1-Dichloroethene	81		80		65-135	1		30
trans-1,2-Dichloroethene	82		83		70-130	1		30
Trichloroethene	89		90		70-130	1		30
1,2-Dichlorobenzene	92		93		70-130	1		30
1,3-Dichlorobenzene	93		92		70-130	1		30
1,4-Dichlorobenzene	92		92		70-130	0		30
Methyl tert butyl ether	87		99		66-130	13		30
p/m-Xylene	90		91		70-130	1		30
o-Xylene	89		90		70-130	1		30
cis-1,2-Dichloroethene	82		84		70-130	2		30
Styrene	88		89		70-130	1		30
Dichlorodifluoromethane	73		72		30-146	1		30
Acetone	91		103		54-140	12		30
Carbon disulfide	86		83		59-130	4		30
2-Butanone	76		88		70-130	15		30
4-Methyl-2-pentanone	83		100		70-130	19		30
2-Hexanone	73		88		70-130	19		30
Bromochloromethane	81		85		70-130	5		30
1,2-Dibromoethane	90		100		70-130	11		30
n-Butylbenzene	108		105		70-130	3		30
sec-Butylbenzene	100		96		70-130	4		30
1,2-Dibromo-3-chloropropane	80		91		68-130	13		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE

Project Number: T0621-022-001-002

Lab Number: L2222083

Report Date: 05/12/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1635989-3 WG1635989-4								
Isopropylbenzene	96		95		70-130	1		30
p-Isopropyltoluene	100		97		70-130	3		30
n-Propylbenzene	100		97		70-130	3		30
1,2,3-Trichlorobenzene	94		96		70-130	2		30
1,2,4-Trichlorobenzene	99		99		70-130	0		30
1,3,5-Trimethylbenzene	100		98		70-130	2		30
1,2,4-Trimethylbenzene	100		98		70-130	2		30
Methyl Acetate	77		90		51-146	16		30
Cyclohexane	89		89		59-142	0		30
1,4-Dioxane	69		85		65-136	21		30
Freon-113	85		83		50-139	2		30
Methyl cyclohexane	89		89		70-130	0		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	96		99		70-130
Toluene-d8	104		103		70-130
4-Bromofluorobenzene	105		103		70-130
Dibromofluoromethane	92		93		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE

Project Number: T0621-022-001-002

Lab Number: L2222083

Report Date: 05/12/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1636201-3 WG1636201-4								
Methylene chloride	88		80		70-130	10		30
1,1-Dichloroethane	96		87		70-130	10		30
Chloroform	92		83		70-130	10		30
Carbon tetrachloride	93		85		70-130	9		30
1,2-Dichloropropane	99		90		70-130	10		30
Dibromochloromethane	91		85		70-130	7		30
1,1,2-Trichloroethane	96		90		70-130	6		30
Tetrachloroethene	97		89		70-130	9		30
Chlorobenzene	94		86		70-130	9		30
Trichlorofluoromethane	94		84		70-139	11		30
1,2-Dichloroethane	95		88		70-130	8		30
1,1,1-Trichloroethane	97		88		70-130	10		30
Bromodichloromethane	91		83		70-130	9		30
trans-1,3-Dichloropropene	99		93		70-130	6		30
cis-1,3-Dichloropropene	100		91		70-130	9		30
Bromoform	82		79		70-130	4		30
1,1,2,2-Tetrachloroethane	101		97		70-130	4		30
Benzene	97		88		70-130	10		30
Toluene	95		88		70-130	8		30
Ethylbenzene	99		92		70-130	7		30
Chloromethane	103		90		52-130	13		30
Bromomethane	109		92		57-147	17		30
Vinyl chloride	100		88		67-130	13		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE

Project Number: T0621-022-001-002

Lab Number: L2222083

Report Date: 05/12/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1636201-3 WG1636201-4								
Chloroethane	106		93		50-151	13		30
1,1-Dichloroethene	90		80		65-135	12		30
trans-1,2-Dichloroethene	92		82		70-130	11		30
Trichloroethene	97		88		70-130	10		30
1,2-Dichlorobenzene	96		90		70-130	6		30
1,3-Dichlorobenzene	99		92		70-130	7		30
1,4-Dichlorobenzene	98		90		70-130	9		30
Methyl tert butyl ether	93		87		66-130	7		30
p/m-Xylene	97		89		70-130	9		30
o-Xylene	95		87		70-130	9		30
cis-1,2-Dichloroethene	88		81		70-130	8		30
Styrene	93		86		70-130	8		30
Dichlorodifluoromethane	85		76		30-146	11		30
Acetone	111		91		54-140	20		30
Carbon disulfide	95		84		59-130	12		30
2-Butanone	85		78		70-130	9		30
4-Methyl-2-pentanone	84		83		70-130	1		30
2-Hexanone	79		75		70-130	5		30
Bromochloromethane	89		81		70-130	9		30
1,2-Dibromoethane	93		88		70-130	6		30
n-Butylbenzene	119		109		70-130	9		30
sec-Butylbenzene	110		101		70-130	9		30
1,2-Dibromo-3-chloropropane	81		78		68-130	4		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 02 Batch: WG1636201-3 WG1636201-4								
Isopropylbenzene	105		97		70-130	8		30
p-Isopropyltoluene	110		100		70-130	10		30
n-Propylbenzene	109		100		70-130	9		30
1,2,3-Trichlorobenzene	99		92		70-130	7		30
1,2,4-Trichlorobenzene	105		97		70-130	8		30
1,3,5-Trimethylbenzene	108		98		70-130	10		30
1,2,4-Trimethylbenzene	108		99		70-130	9		30
Methyl Acetate	78		76		51-146	3		30
Cyclohexane	102		91		59-142	11		30
1,4-Dioxane	80		80		65-136	0		30
Freon-113	94		86		50-139	9		30
Methyl cyclohexane	104		93		70-130	11		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	98		96		70-130
Toluene-d8	103		103		70-130
4-Bromofluorobenzene	106		106		70-130
Dibromofluoromethane	93		91		70-130

SEMIVOLATILES

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-01
Client ID: TP-1 0-1.5 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 07:44
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 05/03/22 18:00
Analyst: SZ
Percent Solids: 80%

Extraction Method: EPA 3546
Extraction Date: 05/02/22 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	29	J	ug/kg	160	21.	1
Fluoranthene	1500		ug/kg	120	24.	1
Naphthalene	250		ug/kg	200	25.	1
Benzo(a)anthracene	740		ug/kg	120	23.	1
Benzo(a)pyrene	750		ug/kg	160	50.	1
Benzo(b)fluoranthene	900		ug/kg	120	34.	1
Benzo(k)fluoranthene	330		ug/kg	120	33.	1
Chrysene	730		ug/kg	120	21.	1
Acenaphthylene	ND		ug/kg	160	32.	1
Anthracene	140		ug/kg	120	40.	1
Benzo(ghi)perylene	600		ug/kg	160	24.	1
Fluorene	32	J	ug/kg	200	20.	1
Phenanthrene	570		ug/kg	120	25.	1
Dibenzo(a,h)anthracene	110	J	ug/kg	120	24.	1
Indeno(1,2,3-cd)pyrene	640		ug/kg	160	28.	1
Pyrene	1200		ug/kg	120	20.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	62		25-120
Phenol-d6	66		10-120
Nitrobenzene-d5	76		23-120
2-Fluorobiphenyl	58		30-120
2,4,6-Tribromophenol	53		10-136
4-Terphenyl-d14	48		18-120

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-02
Client ID: TP-1 3-6 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 07:49
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 05/03/22 18:24
Analyst: SZ
Percent Solids: 84%

Extraction Method: EPA 3546
Extraction Date: 05/02/22 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	160	20.	1
Fluoranthene	ND		ug/kg	120	22.	1
Naphthalene	2100		ug/kg	190	24.	1
Benzo(a)anthracene	ND		ug/kg	120	22.	1
Benzo(a)pyrene	ND		ug/kg	160	47.	1
Benzo(b)fluoranthene	ND		ug/kg	120	33.	1
Benzo(k)fluoranthene	ND		ug/kg	120	31.	1
Chrysene	ND		ug/kg	120	20.	1
Acenaphthylene	ND		ug/kg	160	30.	1
Anthracene	ND		ug/kg	120	38.	1
Benzo(ghi)perylene	ND		ug/kg	160	23.	1
Fluorene	ND		ug/kg	190	19.	1
Phenanthrene	ND		ug/kg	120	24.	1
Dibenzo(a,h)anthracene	ND		ug/kg	120	22.	1
Indeno(1,2,3-cd)pyrene	ND		ug/kg	160	27.	1
Pyrene	ND		ug/kg	120	19.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		25-120
Phenol-d6	89		10-120
Nitrobenzene-d5	**149**	Q	23-120
2-Fluorobiphenyl	61		30-120
2,4,6-Tribromophenol	58		10-136
4-Terphenyl-d14	60		18-120

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-03
Client ID: TP-3 1-3.5 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 08:25
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 05/03/22 18:48
Analyst: SZ
Percent Solids: 79%

Extraction Method: EPA 3546
Extraction Date: 05/02/22 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	130	J	ug/kg	160	21.	1
Fluoranthene	2300		ug/kg	120	24.	1
Naphthalene	290		ug/kg	200	25.	1
Benzo(a)anthracene	1500		ug/kg	120	23.	1
Benzo(a)pyrene	2200		ug/kg	160	50.	1
Benzo(b)fluoranthene	2200		ug/kg	120	35.	1
Benzo(k)fluoranthene	590		ug/kg	120	33.	1
Chrysene	1300		ug/kg	120	21.	1
Acenaphthylene	54	J	ug/kg	160	32.	1
Anthracene	320		ug/kg	120	40.	1
Benzo(ghi)perylene	1500		ug/kg	160	24.	1
Fluorene	100	J	ug/kg	200	20.	1
Phenanthrene	1200		ug/kg	120	25.	1
Dibenzo(a,h)anthracene	340		ug/kg	120	24.	1
Indeno(1,2,3-cd)pyrene	1800		ug/kg	160	29.	1
Pyrene	1900		ug/kg	120	20.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		25-120
Phenol-d6	80		10-120
Nitrobenzene-d5	86		23-120
2-Fluorobiphenyl	63		30-120
2,4,6-Tribromophenol	57		10-136
4-Terphenyl-d14	52		18-120

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-04 D
Client ID: TP-4 0-2 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 08:37
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 05/11/22 03:47
Analyst: IM
Percent Solids: 83%

Extraction Method: EPA 3546
Extraction Date: 05/02/22 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	1100		ug/kg	790	100	5
Fluoranthene	11000		ug/kg	600	110	5
Naphthalene	630	J	ug/kg	990	120	5
Benzo(a)anthracene	4800		ug/kg	600	110	5
Benzo(a)pyrene	3200		ug/kg	790	240	5
Benzo(b)fluoranthene	4000		ug/kg	600	170	5
Benzo(k)fluoranthene	1200		ug/kg	600	160	5
Chrysene	4100		ug/kg	600	100	5
Acenaphthylene	ND		ug/kg	790	150	5
Anthracene	4100		ug/kg	600	190	5
Benzo(ghi)perylene	1700		ug/kg	790	120	5
Fluorene	2100		ug/kg	990	96.	5
Phenanthrene	14000		ug/kg	600	120	5
Dibenzo(a,h)anthracene	450	J	ug/kg	600	110	5
Indeno(1,2,3-cd)pyrene	2000		ug/kg	790	140	5
Pyrene	7900		ug/kg	600	99.	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	52		25-120
Phenol-d6	56		10-120
Nitrobenzene-d5	60		23-120
2-Fluorobiphenyl	52		30-120
2,4,6-Tribromophenol	49		10-136
4-Terphenyl-d14	42		18-120

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-05
Client ID: TP-6 0.5-2 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 09:17
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 05/03/22 19:36
Analyst: SZ
Percent Solids: 77%

Extraction Method: EPA 3546
Extraction Date: 05/02/22 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	170	22.	1
Fluoranthene	270		ug/kg	130	24.	1
Naphthalene	ND		ug/kg	210	26.	1
Benzo(a)anthracene	230		ug/kg	130	24.	1
Benzo(a)pyrene	330		ug/kg	170	52.	1
Benzo(b)fluoranthene	320		ug/kg	130	36.	1
Benzo(k)fluoranthene	100	J	ug/kg	130	34.	1
Chrysene	180		ug/kg	130	22.	1
Acenaphthylene	ND		ug/kg	170	33.	1
Anthracene	44	J	ug/kg	130	42.	1
Benzo(ghi)perylene	260		ug/kg	170	25.	1
Fluorene	ND		ug/kg	210	21.	1
Phenanthrene	140		ug/kg	130	26.	1
Dibenzo(a,h)anthracene	52	J	ug/kg	130	25.	1
Indeno(1,2,3-cd)pyrene	300		ug/kg	170	30.	1
Pyrene	240		ug/kg	130	21.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	73		25-120
Phenol-d6	77		10-120
Nitrobenzene-d5	81		23-120
2-Fluorobiphenyl	59		30-120
2,4,6-Tribromophenol	60		10-136
4-Terphenyl-d14	49		18-120

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-06
Client ID: TP-10 0-2 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 11:25
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 05/03/22 20:00
Analyst: SZ
Percent Solids: 75%

Extraction Method: EPA 3546
Extraction Date: 05/02/22 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/kg	180	23.	1
Fluoranthene	720		ug/kg	130	25.	1
Naphthalene	130	J	ug/kg	220	27.	1
Benzo(a)anthracene	340		ug/kg	130	25.	1
Benzo(a)pyrene	350		ug/kg	180	54.	1
Benzo(b)fluoranthene	480		ug/kg	130	37.	1
Benzo(k)fluoranthene	160		ug/kg	130	35.	1
Chrysene	370		ug/kg	130	23.	1
Acenaphthylene	72	J	ug/kg	180	34.	1
Anthracene	58	J	ug/kg	130	43.	1
Benzo(ghi)perylene	290		ug/kg	180	26.	1
Fluorene	23	J	ug/kg	220	21.	1
Phenanthrene	370		ug/kg	130	27.	1
Dibenzo(a,h)anthracene	53	J	ug/kg	130	26.	1
Indeno(1,2,3-cd)pyrene	310		ug/kg	180	31.	1
Pyrene	600		ug/kg	130	22.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	82		25-120
Phenol-d6	89		10-120
Nitrobenzene-d5	98		23-120
2-Fluorobiphenyl	67		30-120
2,4,6-Tribromophenol	65		10-136
4-Terphenyl-d14	50		18-120

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-07
Client ID: TP-11 0-2 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 11:49
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 05/03/22 20:24
Analyst: SZ
Percent Solids: 80%

Extraction Method: EPA 3546
Extraction Date: 05/02/22 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	46	J	ug/kg	160	21.	1
Fluoranthene	2600		ug/kg	120	23.	1
Naphthalene	210		ug/kg	200	25.	1
Benzo(a)anthracene	1200		ug/kg	120	23.	1
Benzo(a)pyrene	1100		ug/kg	160	50.	1
Benzo(b)fluoranthene	1500		ug/kg	120	34.	1
Benzo(k)fluoranthene	430		ug/kg	120	33.	1
Chrysene	1200		ug/kg	120	21.	1
Acenaphthylene	170		ug/kg	160	32.	1
Anthracene	260		ug/kg	120	40.	1
Benzo(ghi)perylene	700		ug/kg	160	24.	1
Fluorene	62	J	ug/kg	200	20.	1
Phenanthrene	1200		ug/kg	120	25.	1
Dibenzo(a,h)anthracene	160		ug/kg	120	24.	1
Indeno(1,2,3-cd)pyrene	820		ug/kg	160	28.	1
Pyrene	2100		ug/kg	120	20.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		25-120
Phenol-d6	81		10-120
Nitrobenzene-d5	89		23-120
2-Fluorobiphenyl	65		30-120
2,4,6-Tribromophenol	58		10-136
4-Terphenyl-d14	49		18-120

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-08
Client ID: TP-12 0.5-4 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 12:15
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 05/03/22 20:48
Analyst: JG
Percent Solids: 71%

Extraction Method: EPA 3546
Extraction Date: 05/02/22 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	140	J	ug/kg	180	24.	1
Fluoranthene	10000	E	ug/kg	140	27.	1
Naphthalene	330		ug/kg	230	28.	1
Benzo(a)anthracene	3900		ug/kg	140	26.	1
Benzo(a)pyrene	4000		ug/kg	180	57.	1
Benzo(b)fluoranthene	5100		ug/kg	140	39.	1
Benzo(k)fluoranthene	1100		ug/kg	140	37.	1
Chrysene	4000		ug/kg	140	24.	1
Acenaphthylene	820		ug/kg	180	36.	1
Anthracene	1400		ug/kg	140	45.	1
Benzo(ghi)perylene	2700		ug/kg	180	27.	1
Fluorene	240		ug/kg	230	22.	1
Phenanthrene	7400		ug/kg	140	28.	1
Dibenzo(a,h)anthracene	520		ug/kg	140	27.	1
Indeno(1,2,3-cd)pyrene	3000		ug/kg	180	32.	1
Pyrene	8600		ug/kg	140	23.	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	76		25-120
Phenol-d6	82		10-120
Nitrobenzene-d5	85		23-120
2-Fluorobiphenyl	63		30-120
2,4,6-Tribromophenol	59		10-136
4-Terphenyl-d14	48		18-120

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-08 D
Client ID: TP-12 0.5-4 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 12:15
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 1,8270D
Analytical Date: 05/11/22 04:12
Analyst: IM
Percent Solids: 71%

Extraction Method: EPA 3546
Extraction Date: 05/02/22 19:33

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Fluoranthene	8600		ug/kg	700	130	5

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 05/03/22 13:13
Analyst: IM

Extraction Method: EPA 3546
Extraction Date: 05/02/22 19:33

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-08 Batch: WG1633577-1					
Acenaphthene	ND		ug/kg	130	17.
Fluoranthene	ND		ug/kg	99	19.
Naphthalene	ND		ug/kg	160	20.
Benzo(a)anthracene	ND		ug/kg	99	18.
Benzo(a)pyrene	ND		ug/kg	130	40.
Benzo(b)fluoranthene	ND		ug/kg	99	28.
Benzo(k)fluoranthene	ND		ug/kg	99	26.
Chrysene	ND		ug/kg	99	17.
Acenaphthylene	ND		ug/kg	130	25.
Anthracene	ND		ug/kg	99	32.
Benzo(ghi)perylene	ND		ug/kg	130	19.
Fluorene	ND		ug/kg	160	16.
Phenanthrene	ND		ug/kg	99	20.
Dibenzo(a,h)anthracene	ND		ug/kg	99	19.
Indeno(1,2,3-cd)pyrene	ND		ug/kg	130	23.
Pyrene	ND		ug/kg	99	16.

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	87		25-120
Phenol-d6	91		10-120
Nitrobenzene-d5	90		23-120
2-Fluorobiphenyl	73		30-120
2,4,6-Tribromophenol	67		10-136
4-Terphenyl-d14	72		18-120

Lab Control Sample Analysis
Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG1633577-2 WG1633577-3								
Acenaphthene	83		78		31-137	6		50
Fluoranthene	81		77		40-140	5		50
Naphthalene	83		80		40-140	4		50
Benzo(a)anthracene	85		80		40-140	6		50
Benzo(a)pyrene	74		68		40-140	8		50
Benzo(b)fluoranthene	73		68		40-140	7		50
Benzo(k)fluoranthene	75		70		40-140	7		50
Chrysene	77		71		40-140	8		50
Acenaphthylene	82		78		40-140	5		50
Anthracene	80		75		40-140	6		50
Benzo(ghi)perylene	87		80		40-140	8		50
Fluorene	85		80		40-140	6		50
Phenanthrene	80		75		40-140	6		50
Dibenzo(a,h)anthracene	87		80		40-140	8		50
Indeno(1,2,3-cd)pyrene	94		86		40-140	9		50
Pyrene	80		75		35-142	6		50

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE

Project Number: T0621-022-001-002

Lab Number: L2222083

Report Date: 05/12/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-08 Batch: WG1633577-2 WG1633577-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	95		88		25-120
Phenol-d6	102		94		10-120
Nitrobenzene-d5	98		91		23-120
2-Fluorobiphenyl	79		74		30-120
2,4,6-Tribromophenol	72		68		10-136
4-Terphenyl-d14	71		66		18-120

METALS

Project Name: 20 TO 40 FILLMORE AVE
Lab Number: L2222083
Project Number: T0621-022-001-002
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-01
Client ID: TP-1 0-1.5 FT
Sample Location: TONAWANDA, NY
Date Collected: 04/26/22 07:44
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	6.51		mg/kg	0.983	0.204	2	05/11/22 10:05	05/11/22 17:57	EPA 3050B	1,6010D	MC
Barium, Total	84.9		mg/kg	0.983	0.171	2	05/11/22 10:05	05/11/22 17:57	EPA 3050B	1,6010D	MC
Cadmium, Total	0.482	J	mg/kg	0.983	0.096	2	05/11/22 10:05	05/11/22 17:57	EPA 3050B	1,6010D	MC
Chromium, Total	5.40		mg/kg	0.983	0.094	2	05/11/22 10:05	05/11/22 17:57	EPA 3050B	1,6010D	MC
Lead, Total	158		mg/kg	4.91	0.263	2	05/11/22 10:05	05/11/22 17:57	EPA 3050B	1,6010D	MC
Mercury, Total	0.218		mg/kg	0.079	0.051	1	05/11/22 11:05	05/11/22 13:17	EPA 7471B	1,7471B	ZK
Selenium, Total	ND		mg/kg	1.96	0.254	2	05/11/22 10:05	05/11/22 17:57	EPA 3050B	1,6010D	MC
Silver, Total	ND		mg/kg	0.983	0.278	2	05/11/22 10:05	05/11/22 17:57	EPA 3050B	1,6010D	MC

Project Name: 20 TO 40 FILLMORE AVE
Lab Number: L2222083
Project Number: T0621-022-001-002
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-02
Client ID: TP-1 3-6 FT
Sample Location: TONAWANDA, NY
Date Collected: 04/26/22 07:49
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 84%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.24		mg/kg	0.471	0.098	1	05/11/22 10:05	05/11/22 17:11	EPA 3050B	1,6010D	MC
Barium, Total	29.5		mg/kg	0.471	0.082	1	05/11/22 10:05	05/11/22 17:11	EPA 3050B	1,6010D	MC
Cadmium, Total	0.273	J	mg/kg	0.471	0.046	1	05/11/22 10:05	05/11/22 17:11	EPA 3050B	1,6010D	MC
Chromium, Total	8.72		mg/kg	0.471	0.045	1	05/11/22 10:05	05/11/22 17:11	EPA 3050B	1,6010D	MC
Lead, Total	405		mg/kg	2.36	0.126	1	05/11/22 10:05	05/11/22 17:11	EPA 3050B	1,6010D	MC
Mercury, Total	ND		mg/kg	0.075	0.049	1	05/11/22 11:05	05/11/22 13:20	EPA 7471B	1,7471B	ZK
Selenium, Total	0.141	J	mg/kg	0.943	0.122	1	05/11/22 10:05	05/11/22 17:11	EPA 3050B	1,6010D	MC
Silver, Total	ND		mg/kg	0.471	0.133	1	05/11/22 10:05	05/11/22 17:11	EPA 3050B	1,6010D	MC

Project Name: 20 TO 40 FILLMORE AVE
Lab Number: L2222083
Project Number: T0621-022-001-002
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-03
Client ID: TP-3 1-3.5 FT
Sample Location: TONAWANDA, NY
Date Collected: 04/26/22 08:25
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 79%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	3.59		mg/kg	0.978	0.204	2	05/11/22 10:05	05/11/22 18:12	EPA 3050B	1,6010D	MC
Barium, Total	90.1		mg/kg	0.978	0.170	2	05/11/22 10:05	05/11/22 18:12	EPA 3050B	1,6010D	MC
Cadmium, Total	0.254	J	mg/kg	0.978	0.096	2	05/11/22 10:05	05/11/22 18:12	EPA 3050B	1,6010D	MC
Chromium, Total	3.14		mg/kg	0.978	0.094	2	05/11/22 10:05	05/11/22 18:12	EPA 3050B	1,6010D	MC
Lead, Total	320		mg/kg	4.89	0.262	2	05/11/22 10:05	05/11/22 18:12	EPA 3050B	1,6010D	MC
Mercury, Total	0.184		mg/kg	0.081	0.053	1	05/11/22 11:05	05/11/22 13:30	EPA 7471B	1,7471B	ZK
Selenium, Total	1.26	J	mg/kg	1.96	0.252	2	05/11/22 10:05	05/11/22 18:12	EPA 3050B	1,6010D	MC
Silver, Total	ND		mg/kg	0.978	0.277	2	05/11/22 10:05	05/11/22 18:12	EPA 3050B	1,6010D	MC

Project Name: 20 TO 40 FILLMORE AVE
Lab Number: L2222083
Project Number: T0621-022-001-002
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-04
Client ID: TP-4 0-2 FT
Sample Location: TONAWANDA, NY
Date Collected: 04/26/22 08:37
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 83%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	4.82		mg/kg	0.465	0.097	1	05/11/22 10:05	05/11/22 17:21	EPA 3050B	1,6010D	MC
Barium, Total	40.3		mg/kg	0.465	0.081	1	05/11/22 10:05	05/11/22 17:21	EPA 3050B	1,6010D	MC
Cadmium, Total	0.610		mg/kg	0.465	0.046	1	05/11/22 10:05	05/11/22 17:21	EPA 3050B	1,6010D	MC
Chromium, Total	16.9		mg/kg	0.465	0.045	1	05/11/22 10:05	05/11/22 17:21	EPA 3050B	1,6010D	MC
Lead, Total	40.4		mg/kg	2.33	0.125	1	05/11/22 10:05	05/11/22 17:21	EPA 3050B	1,6010D	MC
Mercury, Total	0.091		mg/kg	0.076	0.050	1	05/11/22 11:05	05/11/22 13:33	EPA 7471B	1,7471B	ZK
Selenium, Total	0.405	J	mg/kg	0.931	0.120	1	05/11/22 10:05	05/11/22 17:21	EPA 3050B	1,6010D	MC
Silver, Total	ND		mg/kg	0.465	0.132	1	05/11/22 10:05	05/11/22 17:21	EPA 3050B	1,6010D	MC

Project Name: 20 TO 40 FILLMORE AVE
Lab Number: L2222083
Project Number: T0621-022-001-002
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-05
Client ID: TP-6 0.5-2 FT
Sample Location: TONAWANDA, NY
Date Collected: 04/26/22 09:17
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 77%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.06		mg/kg	0.502	0.104	1	05/11/22 10:05	05/11/22 17:26	EPA 3050B	1,6010D	MC
Barium, Total	60.2		mg/kg	0.502	0.087	1	05/11/22 10:05	05/11/22 17:26	EPA 3050B	1,6010D	MC
Cadmium, Total	0.322	J	mg/kg	0.502	0.049	1	05/11/22 10:05	05/11/22 17:26	EPA 3050B	1,6010D	MC
Chromium, Total	8.48		mg/kg	0.502	0.048	1	05/11/22 10:05	05/11/22 17:26	EPA 3050B	1,6010D	MC
Lead, Total	537		mg/kg	2.51	0.135	1	05/11/22 10:05	05/11/22 17:26	EPA 3050B	1,6010D	MC
Mercury, Total	0.145		mg/kg	0.083	0.054	1	05/11/22 11:05	05/11/22 13:36	EPA 7471B	1,7471B	ZK
Selenium, Total	0.377	J	mg/kg	1.00	0.130	1	05/11/22 10:05	05/11/22 17:26	EPA 3050B	1,6010D	MC
Silver, Total	ND		mg/kg	0.502	0.142	1	05/11/22 10:05	05/11/22 17:26	EPA 3050B	1,6010D	MC

Project Name: 20 TO 40 FILLMORE AVE
Lab Number: L2222083
Project Number: T0621-022-001-002
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-06
Client ID: TP-10 0-2 FT
Sample Location: TONAWANDA, NY
Date Collected: 04/26/22 11:25
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 75%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	5.27		mg/kg	0.530	0.110	1	05/11/22 10:05	05/11/22 17:32	EPA 3050B	1,6010D	MC
Barium, Total	157		mg/kg	0.530	0.092	1	05/11/22 10:05	05/11/22 17:32	EPA 3050B	1,6010D	MC
Cadmium, Total	1.06		mg/kg	0.530	0.052	1	05/11/22 10:05	05/11/22 17:32	EPA 3050B	1,6010D	MC
Chromium, Total	12.3		mg/kg	0.530	0.051	1	05/11/22 10:05	05/11/22 17:32	EPA 3050B	1,6010D	MC
Lead, Total	699		mg/kg	2.65	0.142	1	05/11/22 10:05	05/11/22 17:32	EPA 3050B	1,6010D	MC
Mercury, Total	1.37		mg/kg	0.085	0.055	1	05/11/22 11:05	05/11/22 13:40	EPA 7471B	1,7471B	ZK
Selenium, Total	0.233	J	mg/kg	1.06	0.137	1	05/11/22 10:05	05/11/22 17:32	EPA 3050B	1,6010D	MC
Silver, Total	ND		mg/kg	0.530	0.150	1	05/11/22 10:05	05/11/22 17:32	EPA 3050B	1,6010D	MC

Project Name: 20 TO 40 FILLMORE AVE
Lab Number: L2222083
Project Number: T0621-022-001-002
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-07
Client ID: TP-11 0-2 FT
Sample Location: TONAWANDA, NY
Date Collected: 04/26/22 11:49
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 80%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	7.80		mg/kg	0.984	0.204	2	05/11/22 10:05	05/11/22 18:17	EPA 3050B	1,6010D	MC
Barium, Total	127		mg/kg	0.984	0.171	2	05/11/22 10:05	05/11/22 18:17	EPA 3050B	1,6010D	MC
Cadmium, Total	1.82		mg/kg	0.984	0.096	2	05/11/22 10:05	05/11/22 18:17	EPA 3050B	1,6010D	MC
Chromium, Total	24.4		mg/kg	0.984	0.094	2	05/11/22 10:05	05/11/22 18:17	EPA 3050B	1,6010D	MC
Lead, Total	228		mg/kg	4.92	0.264	2	05/11/22 10:05	05/11/22 18:17	EPA 3050B	1,6010D	MC
Mercury, Total	0.452		mg/kg	0.079	0.051	1	05/11/22 11:05	05/11/22 13:43	EPA 7471B	1,7471B	ZK
Selenium, Total	0.295	J	mg/kg	1.97	0.254	2	05/11/22 10:05	05/11/22 18:17	EPA 3050B	1,6010D	MC
Silver, Total	0.423	J	mg/kg	0.984	0.278	2	05/11/22 10:05	05/11/22 18:17	EPA 3050B	1,6010D	MC

Project Name: 20 TO 40 FILLMORE AVE
Lab Number: L2222083
Project Number: T0621-022-001-002
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-08
Client ID: TP-12 0.5-4 FT
Sample Location: TONAWANDA, NY
Date Collected: 04/26/22 12:15
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Percent Solids: 71%

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Arsenic, Total	2.80		mg/kg	0.559	0.116	1	05/11/22 10:05	05/11/22 17:42	EPA 3050B	1,6010D	MC
Barium, Total	56.6		mg/kg	0.559	0.097	1	05/11/22 10:05	05/11/22 17:42	EPA 3050B	1,6010D	MC
Cadmium, Total	0.252	J	mg/kg	0.559	0.055	1	05/11/22 10:05	05/11/22 17:42	EPA 3050B	1,6010D	MC
Chromium, Total	54.8		mg/kg	0.559	0.054	1	05/11/22 10:05	05/11/22 17:42	EPA 3050B	1,6010D	MC
Lead, Total	40.8		mg/kg	2.80	0.150	1	05/11/22 10:05	05/11/22 17:42	EPA 3050B	1,6010D	MC
Mercury, Total	0.118		mg/kg	0.089	0.058	1	05/11/22 11:05	05/11/22 13:46	EPA 7471B	1,7471B	ZK
Selenium, Total	ND		mg/kg	1.12	0.144	1	05/11/22 10:05	05/11/22 17:42	EPA 3050B	1,6010D	MC
Silver, Total	ND		mg/kg	0.559	0.158	1	05/11/22 10:05	05/11/22 17:42	EPA 3050B	1,6010D	MC

Project Name: 20 TO 40 FILLMORE AVE **Lab Number:** L2222083

Project Number: T0621-022-001-002 **Report Date:** 05/12/22

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-08 Batch: WG1637063-1										
Arsenic, Total	ND		mg/kg	0.400	0.083	1	05/11/22 10:05	05/11/22 14:49	1,6010D	SB
Barium, Total	ND		mg/kg	0.400	0.070	1	05/11/22 10:05	05/11/22 14:49	1,6010D	SB
Cadmium, Total	ND		mg/kg	0.400	0.039	1	05/11/22 10:05	05/11/22 14:49	1,6010D	SB
Chromium, Total	0.168	J	mg/kg	0.400	0.038	1	05/11/22 10:05	05/11/22 14:49	1,6010D	SB
Lead, Total	ND		mg/kg	2.00	0.107	1	05/11/22 10:05	05/11/22 14:49	1,6010D	SB
Selenium, Total	ND		mg/kg	0.800	0.103	1	05/11/22 10:05	05/11/22 14:49	1,6010D	SB
Silver, Total	ND		mg/kg	0.400	0.113	1	05/11/22 10:05	05/11/22 14:49	1,6010D	SB

Prep Information

Digestion Method: EPA 3050B

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-08 Batch: WG1637067-1										
Mercury, Total	ND		mg/kg	0.083	0.054	1	05/11/22 11:05	05/11/22 12:45	1,7471B	ZK

Prep Information

Digestion Method: EPA 7471B

Lab Control Sample Analysis

Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE

Project Number: T0621-022-001-002

Lab Number: L2222083

Report Date: 05/12/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 Batch: WG1637063-2 SRM Lot Number: D113-540								
Arsenic, Total	94		-		70-130	-		
Barium, Total	87		-		75-125	-		
Cadmium, Total	90		-		75-125	-		
Chromium, Total	87		-		70-130	-		
Lead, Total	91		-		72-128	-		
Selenium, Total	94		-		66-134	-		
Silver, Total	92		-		70-131	-		
Total Metals - Mansfield Lab Associated sample(s): 01-08 Batch: WG1637067-2 SRM Lot Number: D113-540								
Mercury, Total	107		-		60-140	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1637063-3 QC Sample: L2224611-01 Client ID: MS Sample												
Arsenic, Total	4.61	11	13.7	82		-	-		75-125	-		20
Barium, Total	70.4	184	222	82		-	-		75-125	-		20
Cadmium, Total	0.482J	4.88	4.09	84		-	-		75-125	-		20
Chromium, Total	17.7	18.4	28.2	**57**	Q	-	-		75-125	-		20
Lead, Total	119	48.8	164	92		-	-		75-125	-		20
Selenium, Total	ND	11	9.02	82		-	-		75-125	-		20
Silver, Total	ND	27.6	22.3	81		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1637067-3 QC Sample: L2224702-01 Client ID: MS Sample												
Mercury, Total	33.4	1.64	59.1	**1560**	Q	-	-		80-120	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1637063-4 QC Sample: L2224611-01 Client ID: DUP Sample						
Arsenic, Total	4.61	4.04	mg/kg	13		20
Barium, Total	70.4	69.0	mg/kg	2		20
Cadmium, Total	0.482J	0.378J	mg/kg	NC		20
Chromium, Total	17.7	15.4	mg/kg	14		20
Lead, Total	119	121	mg/kg	2		20
Selenium, Total	ND	ND	mg/kg	NC		20
Silver, Total	ND	ND	mg/kg	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1637067-4 QC Sample: L2224702-01 Client ID: DUP Sample						
Mercury, Total	33.4	39.4	mg/kg	16		20

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-00

Lab Serial Dilution Analysis
Batch Quality Control

Lab Number: L2222083
Report Date: 05/12/22

Parameter	Native Sample	Serial Dilution	Units	% D	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-08 QC Batch ID: WG1637063-6 QC Sample: L2224611-01 Client ID: DUP Sample						
Barium, Total	70.4	84.2	mg/kg	20		20
Lead, Total	119	149	mg/kg	**25**	Q	20

INORGANICS
&
MISCELLANEOUS

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-01
Client ID: TP-1 0-1.5 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 07:44
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.8		%	0.100	NA	1	-	04/28/22 12:20	121,2540G	RI

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-02
Client ID: TP-1 3-6 FT
Sample Location: TONAWANDA, NY
Sample Depth:
Matrix: Soil
Date Collected: 04/26/22 07:49
Date Received: 04/27/22
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	84.1		%	0.100	NA	1	-	04/28/22 12:20	121,2540G	RI

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002
Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-03
Client ID: TP-3 1-3.5 FT
Sample Location: TONAWANDA, NY
Sample Depth:
Matrix: Soil
Date Collected: 04/26/22 08:25
Date Received: 04/27/22
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	78.8		%	0.100	NA	1	-	04/28/22 12:20	121,2540G	RI

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-04
Client ID: TP-4 0-2 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 08:37
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	83.3		%	0.100	NA	1	-	04/28/22 12:20	121,2540G	RI

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-05
Client ID: TP-6 0.5-2 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 09:17
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	76.9		%	0.100	NA	1	-	04/28/22 12:20	121,2540G	RI

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-06
Client ID: TP-10 0-2 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 11:25
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	74.8		%	0.100	NA	1	-	04/28/22 12:20	121,2540G	RI

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-07
Client ID: TP-11 0-2 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 11:49
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	79.8		%	0.100	NA	1	-	04/28/22 12:20	121,2540G	RI

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

SAMPLE RESULTS

Lab ID: L2222083-08
Client ID: TP-12 0.5-4 FT
Sample Location: TONAWANDA, NY

Date Collected: 04/26/22 12:15
Date Received: 04/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Soil

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total	70.7		%	0.100	NA	1	-	04/28/22 12:20	121,2540G	RI

Lab Duplicate Analysis

Batch Quality Control

Project Name: 20 TO 40 FILLMORE AVE

Project Number: T0621-022-001-002

Lab Number: L2222083

Report Date: 05/12/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-08 QC Batch ID: WG1632076-1 QC Sample: L2222083-01 Client ID: TP-1 0-1.5 FT						
Solids, Total	79.8	82.2	%	3		20

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2222083-01A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.5	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L2222083-01B	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		NYTCL-8260-R2(14)
L2222083-01C	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		NYTCL-8270(14),TS(7)
L2222083-01X	Vial MeOH preserved split	A	NA		3.5	Y	Absent		NYTCL-8260-R2(14)
L2222083-01Y	Vial Water preserved split	A	NA		3.5	Y	Absent	**06-MAY-22 05:38**	NYTCL-8260-R2(14)
L2222083-01Z	Vial Water preserved split	A	NA		3.5	Y	Absent	**06-MAY-22 05:38**	NYTCL-8260-R2(14)
L2222083-02A	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L2222083-02B	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		NYTCL-8260-R2(14)
L2222083-02C	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		NYTCL-8270(14),TS(7)
L2222083-02X	Vial MeOH preserved split	A	NA		3.5	Y	Absent		NYTCL-8260-R2(14)
L2222083-02Y	Vial Water preserved split	A	NA		3.5	Y	Absent	**06-MAY-22 05:38**	NYTCL-8260-R2(14)
L2222083-02Z	Vial Water preserved split	A	NA		3.5	Y	Absent	**06-MAY-22 05:38**	NYTCL-8260-R2(14)
L2222083-03A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.5	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),SE-TI(180),PB-TI(180),HG-T(28),CD-TI(180)
L2222083-03B	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		NYTCL-8270(14),TS(7)
L2222083-04A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.5	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L2222083-04B	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		NYTCL-8270(14),TS(7)
L2222083-05A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.5	Y	Absent		BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),SE-TI(180),PB-TI(180),HG-T(28),CD-TI(180)
L2222083-05B	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		NYTCL-8270(14),TS(7)

*Values in parentheses indicate holding time in days

Project Name: 20 TO 40 FILLMORE AVE
Project Number: T0621-022-001-002

Lab Number: L2222083
Report Date: 05/12/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2222083-06A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.5	Y	Absent		AS-TI(180),BA-TI(180),AG-TI(180),CR-TI(180),SE-TI(180),PB-TI(180),HG-T(28),CD-TI(180)
L2222083-06B	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		NYTCL-8270(14),TS(7)
L2222083-07A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.5	Y	Absent		BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),SE-TI(180),PB-TI(180),HG-T(28),CD-TI(180)
L2222083-07B	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		NYTCL-8270(14),TS(7)
L2222083-08A	Metals Only-Glass 60mL/2oz unpreserved	A	NA		3.5	Y	Absent		BA-TI(180),AS-TI(180),AG-TI(180),CR-TI(180),PB-TI(180),SE-TI(180),HG-T(28),CD-TI(180)
L2222083-08B	Vial Large Septa unpreserved (4oz)	A	NA		3.5	Y	Absent		NYTCL-8270(14),TS(7)

*Values in parentheses indicate holding time in days

Project Name:	20 TO 40 FILLMORE AVE	**Lab Number:**	L2222083
Project Number:	T0621-022-001-002	**Report Date:**	05/12/22

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report with 'J' Qualifiers

Project Name:	20 TO 40 FILLMORE AVE	**Lab Number:**	L2222083
Project Number:	T0621-022-001-002	**Report Date:**	05/12/22

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	20 TO 40 FILLMORE AVE	**Lab Number:**	L2222083
Project Number:	T0621-022-001-002	**Report Date:**	05/12/22

Data Qualifiers

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name:	20 TO 40 FILLMORE AVE	**Lab Number:**	L2222083
Project Number:	T0621-022-001-002	**Report Date:**	05/12/22

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

NEW YORK CHAIN OF CUSTODY

ALPHA ANALYTICAL

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8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-898-9193

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320 Forbes Blvd
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FAX: 508-822-3288

Service Centers
Mahwah, NJ 07430: 35 Whitney Rd, Suite 5
Albany, NY 12205: 14 Walker Way
Tonawanda, NY 14150: 275 Cooper Ave, Suite 105

Page 1 of 1

Date Rec'd in Lab: 4/28/22

ALPHA Job #: L2222083

Project Information

Project Name: 20 to 40 Fillmore Ave
Project Location: Tonawanda NY
Project #: T0621-022-001-002
(Use Project name as Project #) ☐
Project Manager: Chris Boron
ALPHAQuote #:

Turn-Around Time

Standard ☒ Due Date:
Rush (only if pre approved) ☐ # of Days:

Client Information

Client: Turnkey Environmental
Address: 2558 Hamburg Turnpike Lackawanna NY
Phone: (716) 818-8358
Fax: (716) 856-0583
Email: TBehrendt@Turnkeyllc.com

Deliverables

☐ ASP-A ☒ ASP-B
☐ EQuIS (1 File) ☒ EQuIS (4 File)
☐ Other

Billing Information

☐ Same as Client Info
PO #

Regulatory Requirement

☐ NY TOGS ☐ NY Part 375
☐ AWQ Standards ☐ NY CP-51
☐ NY Restricted Use ☐ Other
☐ NY Unrestricted Use
☐ NYC Sewer Discharge

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility:
☐ NJ ☐ NY
☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

Sample Filtration
☐ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Full list VOC	PAH list SVOC	RCRA METALS					Sample Specific Comments	Total Bottles
22083-01	TP-1 0-1.5ft	4/26/22	744	soil	TAB	X	X	X						
-02	TP-1 3-6 ft	↓	749	↓	↓	X	X	X						
-03	TP-3 1-3.5ft	↓	825	↓	↓		X	X						
-04	TP-4 0-2 ft	↓	837	↓	↓		X	X						
-05	TP-6 0.5-2 ft	↓	917	↓	↓		X	X						
-06	TP-10 0-2 ft	↓	1125	↓	↓		X	X						
-07	TP-11 0-2 ft	↓	1149	↓	↓		X	X						
-08	TP-12 0.5-4 ft	↓	1215	↓	↓		X	X						

	Full list VOC	PAH list SVOC	RCRA METALS
Container Type	A	A	A
Preservative	A	A	A

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By:	Date/Time	Received By:	Date/Time
TAB	4/27/22 0805	[signature] AAL	4/27/22 15:00
[signature] AAL	4/27/22 15:45	[signature]	4/28/22 0030

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

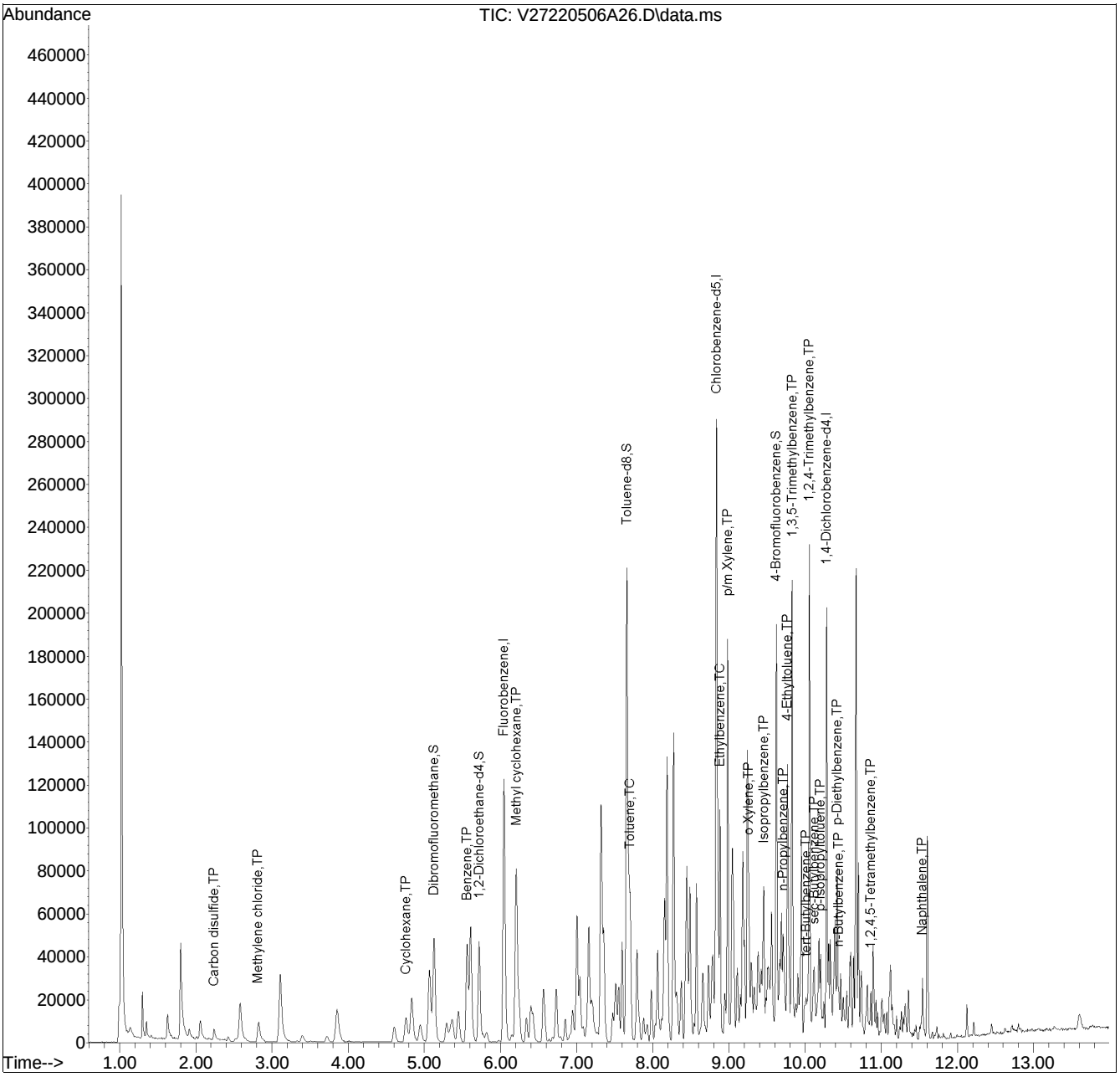
Form No: 01-25 HC (rev. 30-Sept-2013)

Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA127\2022\220506A\
Data File : V27220506A26.D
Acq On : 06 May 2022 03:11 pm
Operator : VOA127:LAC
Sample : L2222083-01,31,5.88,5,,Z,PRI
Misc : WG1635989,ICAL18933
ALS Vial : 26 Sample Multiplier: 1

Quant Time: May 06 21:17:08 2022
Quant Method : I:\VOLATILES\VOA127\2022\220506A\V127_220413B_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Apr 14 07:05:09 2022
Response via : Initial Calibration

Sub List : 8260-CurveSoil - Megamix plus Diox6A\V27220506A01.D•



Quantitation Report (QT Reviewed)

Data Path : I:\VOLATILES\VOA127\2022\220507A\
Data File : V27220507A14.D
Acq On : 07 May 2022 01:43 pm
Operator : VOA127:AJK
Sample : L2222083-02,31H,6.63,5,0.100,,X,PRI
Misc : WG1636201,ICAL18933
ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 09 13:39:03 2022
Quant Method : I:\VOLATILES\VOA127\2022\220507A\V127_220413B_8260.m
Quant Title : VOLATILES BY GC/MS
QLast Update : Thu Apr 14 07:05:09 2022
Response via : Initial Calibration

Sub List : 8260-CurveSoil - Megamix plus Diox7A\V27220507A01.D•