BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

August 5, 2016

Mr. Shawn Wright, AIA
Young and Wright Architectural
740 Seneca Street
Buffalo, New York 14210

Re: Limited Phase II Environmental Site Investigation &
Supplemental Test Pit Investigation
50 Elk Street, Buffalo, New York

Mr. Wright:

Benchmark Environmental Engineering & Science, PLLC (Benchmark) has prepared this report to present the results of the Limited Phase II and Supplemental Test Pit Investigations performed at 50 Elk Street in the City of Buffalo, NY (Site). A site location and vicinity map is provided as Figure 1.

BACKGROUND & PURPOSE

The Phase I ESA performed in May 2016 on the 50 Elk Street Site identified potential recognized environmental conditions (RECs) associated with current and/or past uses of the Site. These included the presence of water-filled pits (suspected to be in contact with groundwater) in the lower areas of the building likely associated with former milling operations, and exterior areas where the presence of surficial blackish fines with limited vegetation were observed in distinct locations west and north of the building (see Figure 2). Based on the preliminary findings of the Phase I ESA, a Limited Phase II Site Investigation was performed on June 9, 2016 followed by a Supplemental Test Pit Investigation performed on July 21, 2016. The findings and conclusions of these two investigations are presented in the following sections.

INVESTIGATION ACTIVITIES

During the Limited Phase II Investigation, one pit water sample (PIT-1) was collected using a dedicated disposable polyethylene bailer for USEPA Target Compound List (TCL) plus NYSDEC CP-51 volatile organic compounds (VOCs) (Method 8260) analysis. In addition, two surface soil grab samples (SS-1 and SS-2) were collected from 0-2 inches below ground surface within the blackish fines areas, composited (COMP-1), and analyzed for polyaromatic hydrocarbons (PAHs) (Method 8270), RCRA metals (Method 6010/7471), and Total Organic Carbon (TOC) (Lloyd Kahn).

During the Supplemental Test Pit Investigation, nineteen shallow test pits (TP-1 thru TP-19) were excavated equidistantly across the Site to further characterize overburden soils. Each

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test pit was advanced through unconsolidated soil/fill to native soils approximately 2.5 to 5.0 feet below ground surface. Non-native soils were targeted and fifteen soil/fill samples were collected and submitted for total lead (Method 6010), six of which were submitted for TCLP lead analysis.

Soil and pit water samples were collected with dedicated sampling equipment (stainless steel spoon or disposable polyethylene bailer, respectively) and placed in appropriate laboratory-provided containers, cooled to 4° C in the field, and transported under Chain-of-Custody command to Test America Laboratories, Inc. (Test America), located in Amherst, New York. Prior to sample collection, soil samples were screened with a field-calibrated photoionization detector (PID) equipped with a 10.6 eV lamp. Investigation sample locations and the black fines areas are presented on Figure 2.

FIELD OBSERVATIONS AND FINDINGS

In general, the shallow overburden was characterized from grade as a vegetated lean clay with sand (suspected topsoil) above a greyish white to black anthropogenic ashy-fill unit (mostly non-plastic fines, coal fragments, orange brick, glass, ceramic fragments, etc.) underlain by a stiff lacustrine clay unit (suspected native soil). Surficial blackish fines were observed in areas west and north of the building (see Figure 2). The topsoil unit was absent in these two areas of the Site. Test pit dimensions, observations, and sample depths are summarized in Table 1.

None of the surface soil grab samples or excavated test pit spoils exhibited PID scans above background concentrations (i.e., 0.0 ppm). Olfactory evidence of impact was not identified at any surface soil or test pit location, however anthropogenic fill material was visually observed in the upper 1 to 4 feet at each test pit location.

LABORATORY ANALYTICAL RESULTS

The analytical results of the water-filled pits were non-detect for VOCs. The black fines composite sample (COMP-1) showed elevated polycyclic aromatic hydrocarbons (PAHs) and heavy metals, some at concentrations above Part 375 restricted residential soil cleanup objectives (RRSCOs). The black fines composite sample showed elevated PAHs (benzo(a)anthracene, benzo(a)pyrene, benzo(ghi)perylene, and indeno(1,2,3-cd)pyrene) and heavy metals at concentrations above RRSCOs. The concentration of barium was 2,370 mg/kg (versus 400 mg/kg RRSCO), cadmium was 8.5 mg/kg (versus 4.3 mg/kg RRSCO), and lead was 4,970 mg/kg (versus 400 mg/kg RRSCO). Total organic carbon was 70,400 ppm. TCLP lead was reported at a concentration of 26.5 mg/L, which exceeds the TCLP regulatory level of 5 mg/L.

Analytical results of test pit soil/fill samples from 1 to 4 feet below ground surface showed elevated lead at concentrations well above the Part 375 RRSCOs for 12 of the 15 samples submitted. Total lead concentrations ranged from 45.2 mg/kg (TP-15) to 3,070 mg/kg (TP-13) compared to the RRSCO of 400 mg/kg. TCLP lead was analyzed at six test pit locations

with concentrations ranging from 0.047 mg/L (TP-14) to 1.7 mg/L (TP-13), which are below the TCLP regulatory level of 5 mg/L.

Surface soil and test pit locations are shown on Figure 2. Analytical results are provided in Attachment 1 and summarized in Tables 2 (Surface Soil) and 3 (Test Pits).

CONCLUSIONS

Based on the analytical results and field observations, the anthropogenic fill material at the 50 Elk Street exceeds the RRSCOs for several PAHs, barium, cadmium, and lead. TCLP analysis indicates that small, localized areas of characteristically hazardous lead are also present on the Site. As such, remedial action is warranted at the 50 Elk Street property.

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

Sincerely,
Benchmark Environmental Engineering & Science, PLLC

Thomas H. Forbes, P.E.
Principal Engineer

Bryan C. Hann
Project Manager

ec: J. Young (Young & Wright)

File: 0381-016-001

TABLES

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TABLE 1

TEST PIT SUMMARY

Phase II Investigations
50 Elk Street
Buffalo, New York

Location	Date	Total Depth (fbgs)	Length (feet)	Width (feet)	Fill/Ash Thickness (fbgs)	Sample Depths (fbgs)	Description (ASTM D2488: Visual-Manual Procedure)	PID Readings (ppm)
TP-1	07/21/2016	3.0	7.0	2.5	(0.0 - 1.0)	(0.0 - 1.0)	(0.0 -1.0) ASHY FILL - Dark Grey/Grey, Dry, mostly non-plastic fines, some fine sand, little fine to coarse gravel, coal pieces, orange brick, glass, broken ceramic pieces, loose. (1.0 - 3.0) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick, wood, limestone block, clay tile, medium toughness, medium dry strength, stiff.	0.0
TP-2	07/21/2016	2.5	7.0	2.5	(0.5 - 1.0)	(0.0-1.0)	(0.0 - 0.5) LEAN CLAY with SAND and ASH Fill - Brown/Dark Grey, dry, mostly, low plasticity fines, little fine sand, little fine gravel (angular), few non-plastic fines, roots, glass fragments, loose. (0.5 - 1.0) ASHY FILL - Dark Grey/black, dry, mostly non-plastic fines, some fine sand, little fine to coarse gravel (angular), cinders, (1.0 - 3.0) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick, wood, limestone block, clay tile, medium toughness, medium dry strength, stiff.	0.0
TP-3	07/21/2016	3.0	6.0	2.5	(0.0 - 1.5)	(0.0 - 1.5)	(0.0 - 1.5) ASHY FILL - Black, dry, mostly non-plastic fines, some fine sand, little fine to coarse gravel (angular), cinders, orange brick, loose. (1.5 - 3.0) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick, wood, medium toughness, medium dry strength, stiff	0.0
TP-4	07/21/2016	3.0	7.5	2.5	(0.0 - 0.7)	NA	(0.0 - 0.7) ASHY FILL - Black/dark grey, dry, mostly non-plastic fines, some fine sand, little fine to coarse gravel (angular), trace cobbles, cinders, orange brick, loose. (0.7 - 3.0) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick wood, limestone block, clay tile, medium toughness, medium dry strength, stiff	0.0
TP-5	07/21/2016	3.0	7.5	2.5	(0.5 - 1.0)	(0.0 - 0.5) (0.5 - 1.5)	(0.0 - 0.5) LEAN CLAY with SAND - Light brown, dry, mostly, low plasticity fines, little fine sand, little fine gravel (angular), few non-plastic fines, roots, glass fragments. (0.5 - 1.0) ASHY FILL - Dark Grey/black, dry, mostly non-plastic fines, some fine sand, little fine to coarse gravel (angular), cinders, orange bricks, loose. (1.0 - 3.0) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick, wood, medium toughness, medium dry strength, stiff.	0.0
TP-6	07/21/2016	4.5	7.0	2.5	(2.5-4.0)	(4.0-4.5)	(0.0 - 2.5) LEAN CLAY with SAND - Light brown, dry, mostly, low plasticity fines, little fine sand, little fine gravel (angular), few non-plastic fines, roots, orange brick, coal pieces. (2.5 - 4.0) ASHY FILL - Dark Grey/black, dry, mostly non-plastic fines, some fine sand, little fine to coarse gravel (angular), cinders, orange bricks, wire, loose. (1.0 - 3.0) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick, wood, medium toughness, medium dry strength, stiff.	0.0
TP-7	07/21/2016	3.5	7.0	2.5	(0.5 - 2.5)	(0.0 - 0.5)	(0.0 - 0.5) LEAN CLAY with SAND - Light brown, dry, mostly, low plasticity fines, little fine sand, little fine gravel (angular), few non-plastic fines, roots, orange brick, coal pieces. (0.5 - 2.5) ASHY FILL - Dark Grey/black, dry, mostly non-plastic fines, little fine sand, little fine to coarse gravel (angular), limestone block, cinders, orange bricks, loose. (2.5 - 3.5) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick, wood, medium toughness, medium dry strength, stiff.	0.0

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 1

TEST PIT SUMMARY

Phase II Investigations
50 Elk Street
Buffalo, New York

Location	Date	Total Depth (fbgs)	Length (feet)	Width (feet)	Fill/Ash Thickness (fbgs)	Sample Depths (fbgs)	Description (ASTM D2488: Visual-Manual Procedure)	PID Readings (ppm)
TP-8	07/21/2016	3.5	7.5	2.5	(0.0 - 1.5)	(0.0 - 1.5)	(0.0 - 0.7) ASHY FILL - Grey/dark grey, mostly non-plastic fines, some fine sand, little fine to coarse gravel (angular), cinders, orange brick, glass, ceramic fragments, loose. (0.7 - 3.0) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick wood, medium toughness, medium dry strength, stiff	0.0
TP-9	07/21/2016	3.5	7.5	2.5	(0.0 - 2.5)	NA	(0.0 - 2.5) ASHY FILL - Dark grey, mostly non-plastic fines, some fine sand, little fine to coarse gravel (angular), cinders, orange brick, glass, ceramic fragment, calk or glue tubes, burlap, loose. (2.5 - 3.5) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick wood, medium toughness, medium dry strength, stiff	0.0
TP-10	07/21/2016	3.5	7.5	2.5	(0.0-3.0)	(0.0 - 3.0)	(0.0 - 3.0) ASHY FILL - Dark grey/grey, dry, mostly non-plastic fines, some fine sand, little fine to coarse gravel (angular), cinders, orange brick, glass, ceramic fragments, loose. (2.5 - 3.0) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick wood, medium toughness, medium dry strength, stiff	0.0
TP-11	07/21/2016	4.0	7.5	2.5	(0.0 - 0.5)	(0.0 - 0.5)	(0.0 - 0.5) ASHY FILL - Black, mostly non-plastic fines, some fine sand, little fine to coarse gravel (angular), cinders, orange brick, glass, ceramic fragments, loose. (0.5 - 4.0) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick wood, medium toughness, medium dry strength, stiff	0.0
TP-12	07/21/2016	4.0	7.0	2.5	(0.0 - 2.5)	NA	(0.0 - 2.5) ASHY FILL - Reddish brown/dark grey, dry, mostly non-plastic fines, some fine sand, little fine to coarse gravel (angular), cinders, orange brick, glass, ceramic fragments, loose. (2.5 - 4.0) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick wood, medium toughness, medium dry strength, stiff	0.0
TP-13	07/21/2016	4.5	8.0	2.5	(0.5 - 2.5)	(0.5 - 2.5)	(0.0 - 0.5) LEAN CLAY with SAND - Light brown, dry, mostly, low plasticity fines, little fine sand, little fine gravel (angular), few non-plastic fines, roots, orange brick. (0.5 - 2.5) ASHY FILL - Light grey/white, dry, mostly non-plastic fines, little fine sand, little fine to coarse gravel (angular), limestone block, cinders, orange bricks, ceramic pieces, loose. (2.5 - 3.5) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick, wood, medium toughness, medium dry strength, stiff.	0.0
TP-14	07/21/2016	3.5	7.5	2.5	(0.0 - 1.5)	(0.0 - 1.5)	(0.0 - 1.5) ASHY FILL - Brown/light grey, dry, mostly non-plastic fines, some fine sand, little fine to coarse gravel (angular), cinders, orange brick, glass, ceramic fragments, loose. (1.5 - 3.5) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick wood, medium toughness, medium dry strength, stiff	0.0

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TABLE 1

TEST PIT SUMMARY

Phase II Investigations
50 Elk Street
Buffalo, New York

Location	Date	Total Depth (fbgs)	Length (feet)	Width (feet)	Fill/Ash Thickness (fbgs)	Sample Depths (fbgs)	Description (ASTM D2488: Visual-Manual Procedure)	PID Readings (ppm)
TP-15	07/21/2016	4.0	7.5	2.5	(0.0 - 2.5)	(0.0 - 2.5) (2.5 - 4.0)	(0.0 - 2.5) ASHY FILL - White/light grey, dry, mostly non-plastic fines, some fine sand, little fine to coarse gravel (angular), coal fragments, orange brick, glass bottle, ceramic fragments, loose. (2.5 - 4.0) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick wood, medium toughness, medium dry strength, stiff	0.0
TP-16	07/21/2016	3.5	8.0	2.5	(0.0 - 2.5)	NA	(0.0 - 0.5) LEAN CLAY with SAND and Fill - Light brown, dry, mostly, low plasticity fines, little fine sand, little fine gravel (angular), few non-plastic fines, roots, rail road ties, orange brick. (0.5 - 2.5) ASHY FILL - Light grey/white, dry, mostly non-plastic fines, little fine sand, little fine to coarse gravel (angular), limestone block, cinders, glass, orange bricks, ceramic pieces, loose. (2.5 - 3.5) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick, wood, medium toughness, medium dry strength, stiff.	0.0
TP-17	07/21/2016	2.5	5.5	2.5	(0.0 - 1.0)	(0.0 - 1.0)	(0.0 - 1.0) ASHY FILL - White/light grey, dry, mostly non-plastic fines, some fine sand, little fine to coarse gravel (angular), coal fragments, orange brick, glass bottle, ceramic fragments, loose. (1.0 - 2.5) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick wood, medium toughness, medium dry strength, stiff	0.0
TP-18	07/21/2016	4.0	8.0	2.5	(0.0 - 1.0)	NA	(0.0 - 0.5) ASHY FILL - Dark grey/black, dry, mostly non-plastic fines, little fine sand, few fine to coarse gravel (angular), cinders, glass, ceramic pieces, loose. (0.5 - 1.0) ASHY FILL - Light grey/white, dry, mostly non-plastic fines, little fine sand, little fine to coarse gravel (angular), cinders, glass, orange bricks fragments, ceramic pieces, loose. (1.0 - 4.0) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick, wood, medium toughness, medium dry strength, stiff.	0.0
TP-19	07/21/2016	5.0	7.5	2.5	(0.5 - 3.0)	NA	(0.0 - 0.5) LEAN CLAY with SAND and Fill - Light brown, dry, mostly, low plasticity fines, little fine sand, little fine gravel (angular), few non-plastic fines, roots, orange brick. (0.5 - 3.0) ASHY FILL - Light grey/white, dry, mostly non-plastic fines, little fine sand, little fine to coarse gravel (angular), limestone block, cinders, glass, orange bricks, ceramic pieces, metal loose. (3.0 - 5.0) LEAN CLAY with Fill - Brown, moist, mostly low plasticity fines, few fine sand, orange brick, wood, medium toughness, medium dry strength, stiff.	0.0

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TABLE 2A

SURFACE SOIL ANALYTICAL RESULTS vs. USCOs

Phase II Investigations
50 Elk Street
Buffalo, New York

Parameter	Part 375 USCO	Sample Location, Sample Date, & Depth Interval (fbgs)
		COMP-1 (SS-1 & SS-2) 06/09/16 0.0 - 0.2
OVM Measurement (ppm)		
OVM Measurement	--	0.2 / 1.4
SEMIVOLATILE ORGANICS (SVOCs, mg/Kg)		
Acenaphthene	20	0.26 J
Antrhacene	100	0.58 J
Benzo(a)anthracene	1	**1.4**
Benzo(a)pyrene	1	**1.2**
Benzo(b)fluoranthene	1	**1.9**
Benzo(ghi)perylene	100	0.78 J
Benzo(k)fluoranthene	0.8	0.62 J
Chrysene	1	**1.6**
Fluoranthene	100	3.1
Fluorene	30	0.32 J
Indeno(1,2,3-cd)pyrene	0.5	**0.69 J**
Naphthalene	12	0.14 J
Phenanthrene	100	2.5
Pyrene	100	2.3
RCRA Metals (mg/kg)		
Arsenic	13	**15.8**
Barium	350	**2370**
Cadmium	2.5	**8.5**
Chromium	30	18.6
Lead	63	**4970**
Mercury	0.18	**0.24**
Selenium	3.9	ND
Silver	2	ND
General Chemistry (mg/kg)		
Total Organic Carbon	--	70400
TCLP (mg/L)		
Lead	5	**26.5**

Notes:

1. ND = Not Detected.
2. J = The analyte was positively identified; the associated numerical value is an approx. concentration of the analyte in the sample.
3. Only those SVOCs detected at a minimum of one location are presented.
4. Values exceeding Part 375 Unrestricted Soil Cleanup Objectives (USCOs) are highlighted in orange.

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TABLE 2B

SURFACE SOIL ANALYTICAL RESULTS vs. PGWSCOs

Phase II Investigations
50 Elk Street
Buffalo, New York

Parameter	Part 375 PGWSCO	Sample Location, Sample Date, & Depth Interval (fbgs)
		COMP-1 (SS-1 & SS-2) 06/09/16 0.0 - 0.2
OVM Measurement (ppm)		
OVM Measurement	--	0.2 / 1.4
SEMIVOLATILE ORGANICS (SVOCs, mg/Kg)		
Acenaphthene	98	0.26 J
Antrhacene	1000	0.58 J
Benzo(a)anthracene	1	**1.4**
Benzo(a)pyrene	22	1.2
Benzo(b)fluoranthene	1.7	**1.9**
Benzo(ghi)perylene	1000	0.78 J
Benzo(k)fluoranthene	1.7	0.62 J
Chrysene	1	**1.6**
Fluoranthene	1000	3.1
Fluorene	386	0.32 J
Indeno(1,2,3-cd)pyrene	8.2	0.69 J
Naphthalene	12	0.14 J
Phenanthrene	1000	2.5
Pyrene	1000	2.3
RCRA Metals (mg/kg)		
Arsenic	16	15.8
Barium	820	**2370**
Cadmium	7.5	**8.5**
Chromium	--	18.6
Lead	450	**4970**
Mercury	0.73	0.24
Selenium	4	ND
Silver	8.3	ND
General Chemistry (mg/kg)		
Total Organic Carbon	--	70400
TCLP (mg/L)		
Lead	5	**26.5**

Notes:

1. ND = Not Detected.
2. J = The analyte was positively identified; the associated numerical value is an approx. concentration of the analyte in the sample.
3. Only those SVOCs detected at a minimum of one location are presented.
4. Values exceeding Part 375 Protection of Groundwater Soil Cleanup Objectives (PGWSCOs) are highlighted in blue.

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TABLE 2C

SURFACE SOIL ANALYTICAL RESULTS vs. RRSCOs

Phase II Investigations
50 Elk Street
Buffalo, New York

Parameter	Part 375 RRSCO	Sample Location, Sample Date, & Depth Interval (fbgs)
		COMP-1 (SS-1 & SS-2) 06/09/16 0.0 - 0.2
OVM Measurement (ppm)		
OVM Measurement	--	0.2 / 1.4
SEMIVOLATILE ORGANICS (SVOCs, mg/Kg)		
Acenaphthene	100	0.26 J
Antrhacene	100	0.58 J
Benzo(a)anthracene	1	**1.4**
Benzo(a)pyrene	1	**1.2**
Benzo(b)fluoranthene	1	**1.9**
Benzo(ghi)perylene	100	0.78 J
Benzo(k)fluoranthene	3.9	0.62 J
Chrysene	3.9	1.6
Fluoranthene	100	3.1
Fluorene	100	0.32 J
Indeno(1,2,3-cd)pyrene	0.5	**0.69 J**
Naphthalene	100	0.14 J
Phenanthrene	100	2.5
Pyrene	100	2.3
RCRA Metals (mg/kg)		
Arsenic	16	15.8
Barium	400	**2370**
Cadmium	4.3	**8.5**
Chromium	180	18.6
Lead	400	**4970**
Mercury	0.81	0.24
Selenium	180	ND
Silver	180	ND
General Chemistry (mg/kg)		
Total Organic Carbon	--	70400
TCLP (mg/L)		
Lead	5	**26.5**

Notes:

1. ND = Not Detected.
2. J = The analyte was positively identified; the associated numerical value is an approx. concentration of the analyte in the sample.
3. Only those SVOCs detected at a minimum of one location are presented.
4. Values exceeding Part 375 Restricted Residential Soil Cleanup Objectives (RRSCOs) are highlighted in yellow.

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TABLE 2D

SURFACE SOIL ANALYTICAL RESULTS vs. CSCOs

Phase II Investigations
50 Elk Street
Buffalo, New York

Parameter	Part 375 CSCO	Sample Location, Sample Date, & Depth Interval (fbgs)
		COMP-1 (SS-1 & SS-2) 06/09/16 0.0 - 0.2
OVM Measurement (ppm)		
OVM Measurement	--	0.2 / 1.4
SEMIVOLATILE ORGANICS (SVOCs, mg/Kg)		
Acenaphthene	500	0.26 J
Antrhacene	500	0.58 J
Benzo(a)anthracene	5.6	1.4
Benzo(a)pyrene	1	**1.2**
Benzo(b)fluoranthene	5.6	1.9
Benzo(ghi)perylene	500	0.78 J
Benzo(k)fluoranthene	56	0.62 J
Chrysene	56	1.6
Fluoranthene	500	3.1
Fluorene	500	0.32 J
Indeno(1,2,3-cd)pyrene	5.6	0.69 J
Naphthalene	500	0.14 J
Phenanthrene	500	2.5
Pyrene	500	2.3
RCRA Metals (mg/kg)		
Arsenic	16	15.8
Barium	400	**2370**
Cadmium	9.3	8.5
Chromium	1500	18.6
Lead	1000	**4970**
Mercury	2.8	0.24
Selenium	1500	ND
Silver	1500	ND
General Chemistry (mg/kg)		
Total Organic Carbon	--	70400
TCLP (mg/L)		
Lead	5	**26.5**

Notes:

1. ND = Not Detected.
2. J = The analyte was positively identified; the associated numerical value is an approx. concentration of the analyte in the sample.
3. Only those SVOCs detected at a minimum of one location are presented.
4. Values exceeding Part 375 Commercial Soil Cleanup Objectives (CSCOs) are highlighted in green.

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TABLE 2E

SURFACE SOIL ANALYTICAL RESULTS vs. ISCOs

Phase II Investigations
50 Elk Street
Buffalo, New York

Parameter	Part 375 ISCO	Sample Location, Sample Date, & Depth Interval (fbgs)
		COMP-1 (SS-1 & SS-2) 06/09/16 0.0 - 0.2
OVM Measurement (ppm)		
OVM Measurement	--	0.2 / 1.4
SEMIVOLATILE ORGANICS (SVOCs, mg/Kg)		
Acenaphthene	1000	0.26 J
Antrhacene	1000	0.58 J
Benzo(a)anthracene	11	1.4
Benzo(a)pyrene	1.1	**1.2**
Benzo(b)fluoranthene	11	1.9
Benzo(ghi)perylene	1000	0.78 J
Benzo(k)fluoranthene	110	0.62 J
Chrysene	110	1.6
Fluoranthene	1000	3.1
Fluorene	1000	0.32 J
Indeno(1,2,3-cd)pyrene	11	0.69 J
Naphthalene	1000	0.14 J
Phenanthrene	1000	2.5
Pyrene	1000	2.3
RCRA Metals (mg/kg)		
Arsenic	16	15.8
Barium	10000	2370
Cadmium	60	8.5
Chromium	6800	18.6
Lead	3900	**4970**
Mercury	5.7	0.24
Selenium	6800	ND
Silver	6800	ND
General Chemistry (mg/kg)		
Total Organic Carbon	--	70400
TCLP (mg/L)		
Lead	5	**26.5**

Notes:

1. ND = Not Detected.
2. J = The analyte was positively identified; the associated numerical value is an approx. concentration of the analyte in the sample.
3. Only those SVOCs detected at a minimum of one location are presented.
4. Values exceeding Part 375 Industrial Soil Cleanup Objectives (ISCOs) are highlighted in purple.

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TABLE 3A

TEST PIT INVESTIGATION SOIL/FILL RESULTS vs. USCOs

Phase II Investigations
50 Elk Street
Buffalo, New York

Test Pit Location	Sample Depth (fbgs)	Part 375 USCO	
		63	5
		Total Lead (mg/kg)	TCLP Lead (mg/L)
TP-1	0.0 - 1.0	**838**	--
TP-2	0.0 - 1.0	**556**	0.13
TP-3	0.0 - 1.5	**1620**	--
TP-5	0.0 - 0.5	**184**	--
TP-5	0.5 - 1.5	**994**	0.59
TP-6	4.0 - 4.5	**1370**	--
TP-7	0.0 - 0.5	**574**	--
TP-8	0.0 - 1.5	**512**	--
TP-10	0.0 - 3.0	**1090**	0.38
TP-11	0.0 - 0.5	**930**	0.31
TP-13	0.5 - 2.5	**3070**	1.7
TP-14	0.0 - 1.5	**728**	0.047
TP-15	0.0 - 2.5	**620**	--
TP-15	2.5 - 4.0	45.2	--
TP-17	0.0 - 1.0	**334**	--

Notes:
1. ND = Not Detected.
2. Only those SVOCs detected at a minimum of one location are presented.
3. Values exceeding Part 375 Unrestricted Soil Cleanup Objectives (USCOs) and USEPA Maximum Concentration for Toxicity Characteristic are highlighted in orange.

TABLE 3B

TEST PIT INVESTIGATION SOIL/FILL RESULTS vs. PGWSCOs

Phase II Investigations
50 Elk Street
Buffalo, New York

Test Pit Location	Sample Depth (fbgs)	Part 375 PGWSCO	
		450	5
		Total Lead (mg/kg)	TCLP Lead (mg/L)
TP-1	0.0 - 1.0	**838**	--
TP-2	0.0 - 1.0	**556**	0.13
TP-3	0.0 - 1.5	**1620**	--
TP-5	0.0 - 0.5	184	--
TP-5	0.5 - 1.5	**994**	0.59
TP-6	4.0 - 4.5	**1370**	--
TP-7	0.0 - 0.5	**574**	--
TP-8	0.0 - 1.5	**512**	--
TP-10	0.0 - 3.0	**1090**	0.38
TP-11	0.0 - 0.5	**930**	0.31
TP-13	0.5 - 2.5	**3070**	1.7
TP-14	0.0 - 1.5	**728**	0.047
TP-15	0.0 - 2.5	**620**	--
TP-15	2.5 - 4.0	45.2	--
TP-17	0.0 - 1.0	334	--

Notes:
1. ND = Not Detected.
2. Only those SVOCs detected at a minimum of one location are presented.
3. Values exceeding Part 375 Protection of Groundwater Soil Cleanup Objectives (PGWSCOs) and USEPA Maximum Concentration for Toxicity Characteristic are highlighted in blue.

TABLE 3C

TEST PIT INVESTIGATION SOIL/FILL RESULTS vs. RRSCOs

Phase II Investigations
50 Elk Street
Buffalo, New York

Test Pit Location	Sample Depth (fbgs)	Part 375 RRSCO	
		400	5
		Total Lead (mg/kg)	TCLP Lead (mg/L)
TP-1	0.0 - 1.0	**838**	--
TP-2	0.0 - 1.0	**556**	0.13
TP-3	0.0 - 1.5	**1620**	--
TP-5	0.0 - 0.5	184	--
TP-5	0.5 - 1.5	**994**	0.59
TP-6	4.0 - 4.5	**1370**	--
TP-7	0.0 - 0.5	**574**	--
TP-8	0.0 - 1.5	**512**	--
TP-10	0.0 - 3.0	**1090**	0.38
TP-11	0.0 - 0.5	**930**	0.31
TP-13	0.5 - 2.5	**3070**	1.7
TP-14	0.0 - 1.5	**728**	0.047
TP-15	0.0 - 2.5	**620**	--
TP-15	2.5 - 4.0	45.2	--
TP-17	0.0 - 1.0	334	--

Notes:
1. ND = Not Detected.
2. Only those SVOCs detected at a minimum of one location are presented.
3. Values exceeding Part 375 Restricted Residential Soil Cleanup Objectives (RRSCOs) and USEPA Maximum Concentration for Toxicity Characteristic are highlighted in yellow.

TABLE 3D

TEST PIT INVESTIGATION SOIL/FILL RESULTS vs. CSCOs

Phase II Investigations
50 Elk Street
Buffalo, New York

Test Pit Location	Sample Depth (fbgs)	Part 375 CSCO	
		1000	5
		Total Lead (mg/kg)	TCLP Lead (mg/L)
TP-1	0.0 - 1.0	838	--
TP-2	0.0 - 1.0	556	0.13
TP-3	0.0 - 1.5	**1620**	--
TP-5	0.0 - 0.5	184	--
TP-5	0.5 - 1.5	994	0.59
TP-6	4.0 - 4.5	**1370**	--
TP-7	0.0 - 0.5	574	--
TP-8	0.0 - 1.5	512	--
TP-10	0.0 - 3.0	**1090**	0.38
TP-11	0.0 - 0.5	930	0.31
TP-13	0.5 - 2.5	**3070**	1.7
TP-14	0.0 - 1.5	728	0.047
TP-15	0.0 - 2.5	620	--
TP-15	2.5 - 4.0	45.2	--
TP-17	0.0 - 1.0	334	--

Notes:
1. ND = Not Detected.
2. Only those SVOCs detected at a minimum of one location are presented.
3. Values exceeding Part 375 Commercial Soil Cleanup Objectives (CCSCOs) and USEPA Maximum Concentration for Toxicity Characteristic are highlighted in green.

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 3E

TEST PIT INVESTIGATION SOIL/FILL RESULTS vs. ISCOs

Phase II Investigations
50 Elk Street
Buffalo, New York

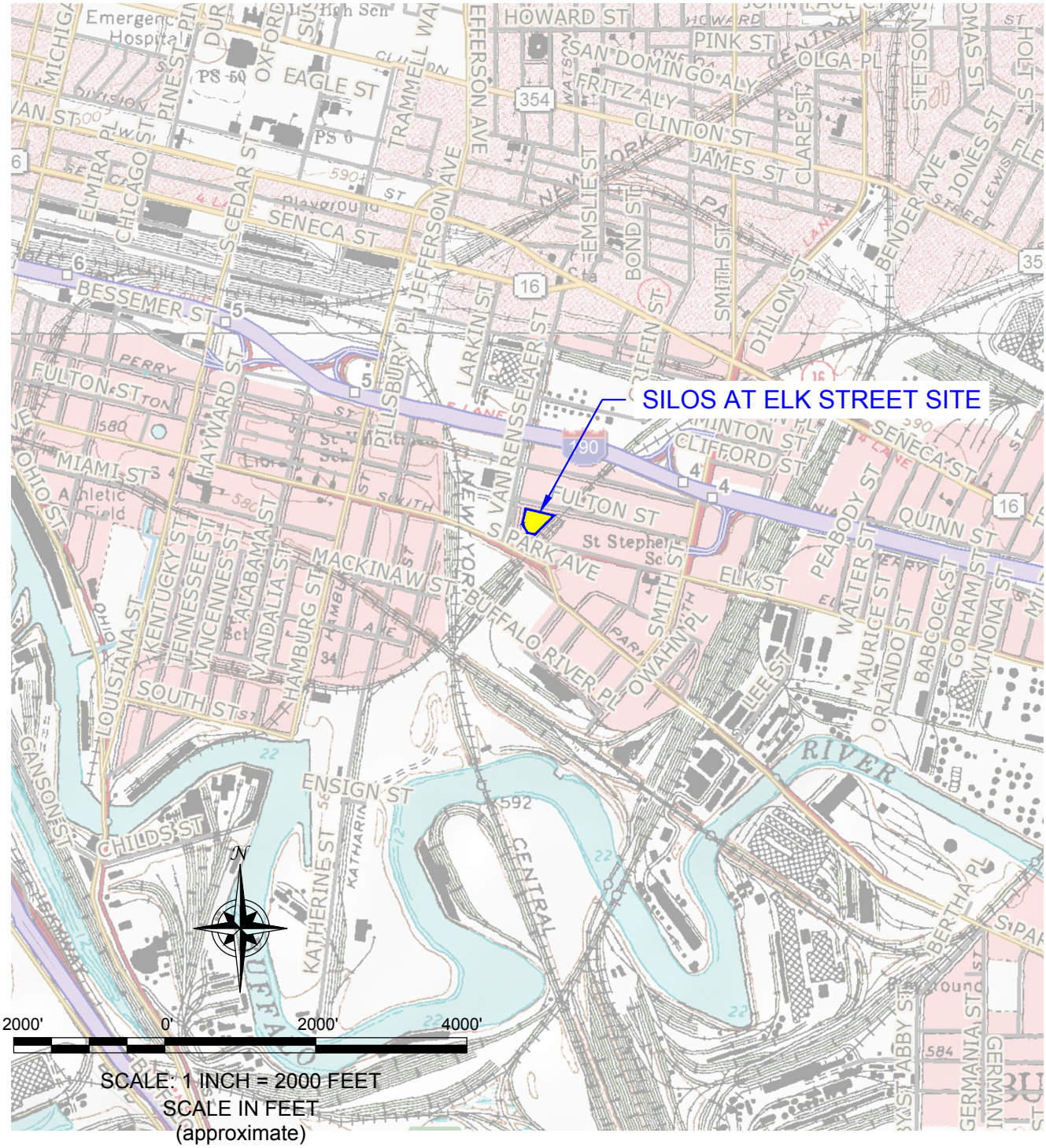
Test Pit Location	Sample Depth (fbgs)	Part 375 ISCO	
		3900	5
		Total Lead (mg/kg)	TCLP Lead (mg/L)
TP-1	0.0 - 1.0	838	--
TP-2	0.0 - 1.0	556	0.13
TP-3	0.0 - 1.5	1620	--
TP-5	0.0 - 0.5	184	--
TP-5	0.5 - 1.5	994	0.59
TP-6	4.0 - 4.5	1370	--
TP-7	0.0 - 0.5	574	--
TP-8	0.0 - 1.5	512	--
TP-10	0.0 - 3.0	1090	0.38
TP-11	0.0 - 0.5	930	0.31
TP-13	0.5 - 2.5	3070	1.7
TP-14	0.0 - 1.5	728	0.047
TP-15	0.0 - 2.5	620	--
TP-15	2.5 - 4.0	45.2	--
TP-17	0.0 - 1.0	334	--

Notes:
1. ND = Not Detected.
2. Only those SVOCs detected at a minimum of one location are presented.
3. Values exceeding Part 375 Industrial Soil Cleanup Objectives (ISCOs) and USEPA Maximum Concentration for Toxicity Characteristic are highlighted in purple.

FIGURES

F:\CAD\Benchmark\Young and Wright Architectural\50 Elk Street\01 - Phase 2\Figure 1; Site Location & Vicinity Map.dwg

FIGURE 1



BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TURNKEY ENVIRONMENTAL RESTORATION, LLC

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

PROJECT NO.: 0381-016-001

DATE: AUGUST 2016

DRAFTED BY: BCH

SITE LOCATION & VICINITY MAP

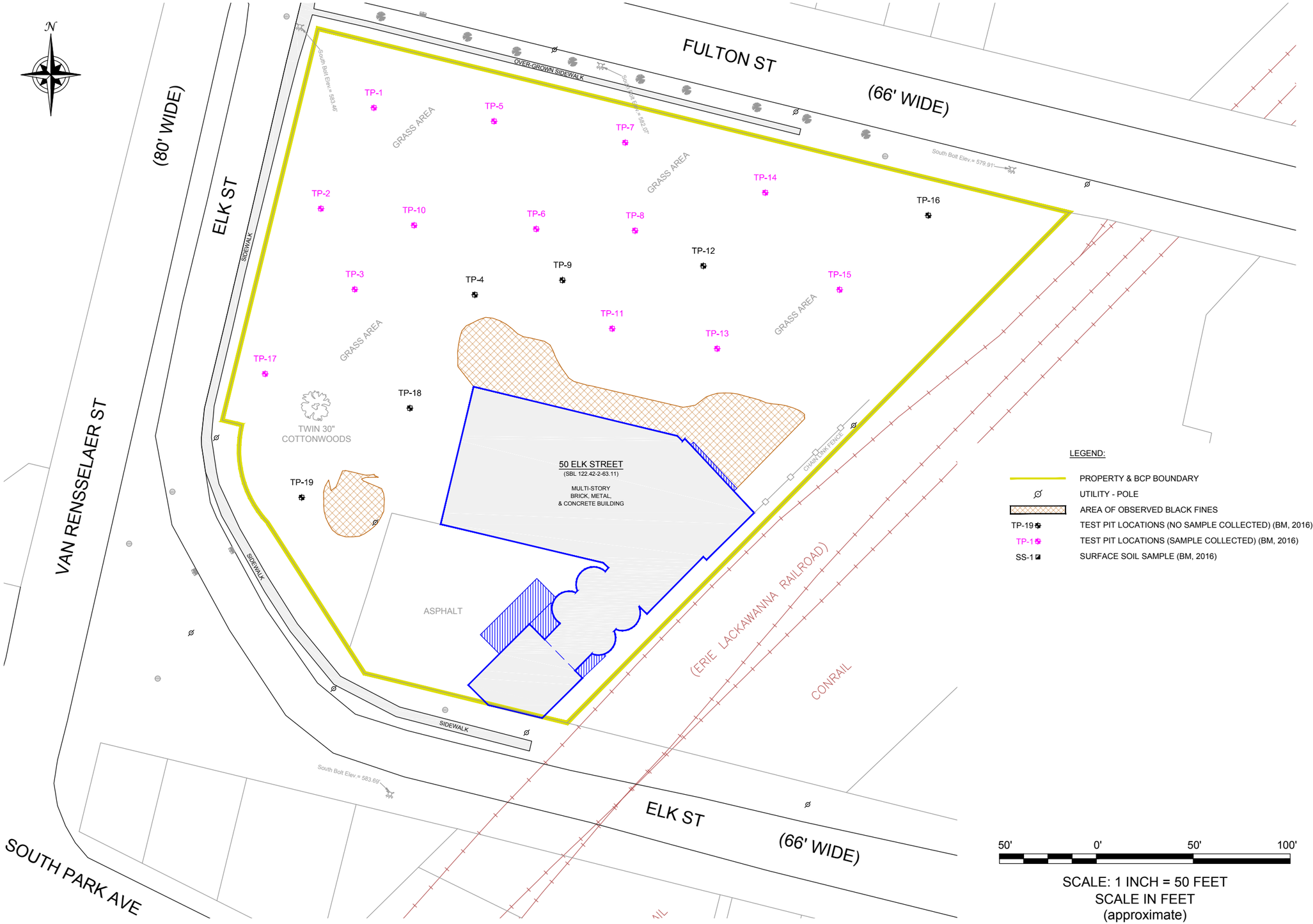
PHASE II INVESTIGATIONS

SILOS AT ELK STREET SITE
BUFFALO, NEW YORK

PREPARED FOR

SILOS AT ELK STREET, LLC

F:\CAD\Benchmark\Young and Wright Architectural\50 Elk Street\01 - Phase 2\Figure 2; Site Plan.dwg



DATE: AUGUST 2016
DRAFTED BY: BCH

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0381-016-001

SITE PLAN
PHASE II INVESTIGATIONS

SILOS AT ELK STREET SITE
BUFFALO, NEW YORK

PREPARED FOR
SILOS AT ELK STREET, LLC

FIGURE 2

ATTACHMENT 1

TESTAMERICA LABORATORIES, INC.
SAMPLE DATA SUMMARY PACKAGE

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-101479-1
Client Project/Site: Benchmark - 50 Elk St site

For:
Turnkey Environmental Restoration, LLC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

Attn: Bryan Mayback

Authorized for release by:
6/17/2016 2:06:11 PM

Brian Fischer, Manager of Project Management
(716)504-9835
brian.fischer@testamericainc.com

Table of Contents

Definitions/Glossary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-101479-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-101479-1

Job ID: 480-101479-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-101479-1

Comments
No additional comments.

Receipt
The samples were received on 6/10/2016 12:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.7º C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-306152 recovered outside acceptance criteria, low biased, for Chloromethane and Vinyl chloride. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detect for these analytes, the data have been reported. The following sample is impacted: PIT-1 (480-101479-1).

Method(s) 8260C: The laboratory control sample (LCS) for analytical batch 480-306152 recovered outside control limits for the following analyte: Dichlorodifluoromethane. Dichlorodifluoromethane has been identified as a poor performing analyte when analyzed using this method; therefore re-analysis was not performed. The following sample is impacted: PIT-1 (480-101479-1).

Method(s) 8260C: Reported analyte concentrations in the following samples are below 200 ug/kg and may be biased low due to the samples not being collected according to 5035-L/5035A-L low-level specifications: COMP-1 (SS-1 + SS-2) (480-101479-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270D: Six surrogates are used for this analysis. The laboratory's SOP allows two of these surrogates to be outside acceptance criteria without performing re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: COMP-1 (SS-1 + SS-2) (480-101479-2). These results have been reported and qualified.

Method(s) 8270D: The following samples were diluted due to appearance and viscosity: COMP-1 (SS-1 + SS-2) (480-101479-2). Elevated reporting limits (RL) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-101479-1

Client Sample ID: PIT-1 — Lab Sample ID: 480-101479-1

No Detections.

Client Sample ID: COMP-1 (SS-1 + SS-2) — Lab Sample ID: 480-101479-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	260	J	870	130	ug/Kg	5	☼	8270D	Total/NA
Anthracene	580	J	870	210	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]anthracene	1400		870	87	ug/Kg	5	☼	8270D	Total/NA
Benzo[a]pyrene	1200		870	130	ug/Kg	5	☼	8270D	Total/NA
Benzo[b]fluoranthene	1900		870	140	ug/Kg	5	☼	8270D	Total/NA
Benzo[g,h,i]perylene	780	J	870	92	ug/Kg	5	☼	8270D	Total/NA
Benzo[k]fluoranthene	620	J	870	110	ug/Kg	5	☼	8270D	Total/NA
Chrysene	1600		870	190	ug/Kg	5	☼	8270D	Total/NA
Fluoranthene	3100		870	92	ug/Kg	5	☼	8270D	Total/NA
Fluorene	320	J	870	100	ug/Kg	5	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	690	J	870	110	ug/Kg	5	☼	8270D	Total/NA
Naphthalene	140	J	870	110	ug/Kg	5	☼	8270D	Total/NA
Pyrene	2300		870	100	ug/Kg	5	☼	8270D	Total/NA
Phenanthrene	2500		870	130	ug/Kg	5	☼	8270D	Total/NA
Arsenic	15.8		2.1		mg/Kg	1	☼	6010C	Total/NA
Barium	2370		2.7		mg/Kg	5	☼	6010C	Total/NA
Cadmium	8.5		0.21		mg/Kg	1	☼	6010C	Total/NA
Chromium	18.6		0.54		mg/Kg	1	☼	6010C	Total/NA
Lead	4970		1.1		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.24	F1	0.020		mg/Kg	1	☼	7471B	Total/NA
Total Organic Carbon	70400		1000		mg/Kg	1		Lloyd Kahn	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: PIT-1
Date Collected: 06/09/16 10:45
Date Received: 06/10/16 12:45

Lab Sample ID: 480-101479-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			06/11/16 07:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/11/16 07:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			06/11/16 07:20	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			06/11/16 07:20	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			06/11/16 07:20	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			06/11/16 07:20	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			06/11/16 07:20	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			06/11/16 07:20	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			06/11/16 07:20	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			06/11/16 07:20	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			06/11/16 07:20	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			06/11/16 07:20	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			06/11/16 07:20	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			06/11/16 07:20	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			06/11/16 07:20	1
2-Butanone (MEK)	ND		10	1.3	ug/L			06/11/16 07:20	1
2-Hexanone	ND		5.0	1.2	ug/L			06/11/16 07:20	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			06/11/16 07:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			06/11/16 07:20	1
Acetone	ND		10	3.0	ug/L			06/11/16 07:20	1
Benzene	ND		1.0	0.41	ug/L			06/11/16 07:20	1
Bromoform	ND		1.0	0.26	ug/L			06/11/16 07:20	1
Bromomethane	ND		1.0	0.69	ug/L			06/11/16 07:20	1
Carbon disulfide	ND		1.0	0.19	ug/L			06/11/16 07:20	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			06/11/16 07:20	1
Chlorobenzene	ND		1.0	0.75	ug/L			06/11/16 07:20	1
Dibromochloromethane	ND		1.0	0.32	ug/L			06/11/16 07:20	1
Chloroethane	ND		1.0	0.32	ug/L			06/11/16 07:20	1
Chloroform	ND		1.0	0.34	ug/L			06/11/16 07:20	1
Chloromethane	ND		1.0	0.35	ug/L			06/11/16 07:20	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/11/16 07:20	1
Cyclohexane	ND		1.0	0.18	ug/L			06/11/16 07:20	1
Bromodichloromethane	ND		1.0	0.39	ug/L			06/11/16 07:20	1
Dichlorodifluoromethane	ND	*	1.0	0.68	ug/L			06/11/16 07:20	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/11/16 07:20	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			06/11/16 07:20	1
Isopropylbenzene	ND		1.0	0.79	ug/L			06/11/16 07:20	1
Methyl acetate	ND		2.5	1.3	ug/L			06/11/16 07:20	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			06/11/16 07:20	1
Methylcyclohexane	ND		1.0	0.16	ug/L			06/11/16 07:20	1
Methylene Chloride	ND		1.0	0.44	ug/L			06/11/16 07:20	1
m,p-Xylene	ND		2.0	0.66	ug/L			06/11/16 07:20	1
n-Butylbenzene	ND		1.0	0.64	ug/L			06/11/16 07:20	1
N-Propylbenzene	ND		1.0	0.69	ug/L			06/11/16 07:20	1
o-Xylene	ND		1.0	0.76	ug/L			06/11/16 07:20	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			06/11/16 07:20	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/11/16 07:20	1
Toluene	ND		1.0	0.51	ug/L			06/11/16 07:20	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/11/16 07:20	1

Client Sample ID: PIT-1
Date Collected: 06/09/16 10:45
Date Received: 06/10/16 12:45

Lab Sample ID: 480-101479-1
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			06/11/16 07:20	1
Trichloroethene	ND		1.0	0.46	ug/L			06/11/16 07:20	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			06/11/16 07:20	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/11/16 07:20	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/11/16 07:20	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			06/11/16 07:20	1
Styrene	ND		1.0	0.73	ug/L			06/11/16 07:20	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			06/11/16 07:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*66 - 137*		*06/11/16 07:20*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*06/11/16 07:20*	*1*
Toluene-d8 (Surr)	*94*		*71 - 126*		*06/11/16 07:20*	*1*

Client Sample ID: COMP-1 (SS-1 + SS-2)

Date Collected: 06/09/16 11:10
Date Received: 06/10/16 12:45

Lab Sample ID: 480-101479-2

Matrix: Solid
Percent Solids: 97.0

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	260	J	870	130	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Acenaphthylene	ND		870	110	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Anthracene	580	J	870	210	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Benzo[a]anthracene	1400		870	87	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Benzo[a]pyrene	1200		870	130	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Benzo[b]fluoranthene	1900		870	140	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Benzo[g,h,i]perylene	780	J	870	92	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Benzo[k]fluoranthene	620	J	870	110	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Chrysene	1600		870	190	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Dibenz(a,h)anthracene	ND		870	150	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Fluoranthene	3100		870	92	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Fluorene	320	J	870	100	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Indeno[1,2,3-cd]pyrene	690	J	870	110	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Naphthalene	140	J	870	110	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Pyrene	2300		870	100	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5
Phenanthrene	2500		870	130	ug/Kg	☼	06/13/16 07:01	06/14/16 16:10	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*49*		*39 - 146*	*06/13/16 07:01*	*06/14/16 16:10*	*5*
2-Fluorobiphenyl	*37*		*37 - 120*	*06/13/16 07:01*	*06/14/16 16:10*	*5*
2-Fluorophenol (Surr)	*34*		*18 - 120*	*06/13/16 07:01*	*06/14/16 16:10*	*5*
Phenol-d5 (Surr)	*36*		*11 - 120*	*06/13/16 07:01*	*06/14/16 16:10*	*5*
p-Terphenyl-d14 (Surr)	*36*	*X*	*65 - 153*	*06/13/16 07:01*	*06/14/16 16:10*	*5*
Nitrobenzene-d5 (Surr)	*34*		*34 - 132*	*06/13/16 07:01*	*06/14/16 16:10*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15.8		2.1		mg/Kg	☼	06/14/16 06:35	06/14/16 16:56	1
Barium	2370		2.7		mg/Kg	☼	06/14/16 06:35	06/15/16 10:49	5
Cadmium	8.5		0.21		mg/Kg	☼	06/14/16 06:35	06/14/16 16:56	1
Chromium	18.6		0.54		mg/Kg	☼	06/14/16 06:35	06/14/16 16:56	1
Lead	4970		1.1		mg/Kg	☼	06/14/16 06:35	06/14/16 16:56	1
Selenium	ND		4.3		mg/Kg	☼	06/14/16 06:35	06/14/16 16:56	1
Silver	ND		0.64		mg/Kg	☼	06/14/16 06:35	06/14/16 16:56	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.24	F1	0.020		mg/Kg	☼	06/13/16 08:00	06/13/16 15:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	70400		1000		mg/Kg			06/14/16 12:44	1

Surrogate Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-101479-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		12DCE	BFB	TOL
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)
480-101479-1	PIT-1	92	97	94
LCS 480-306152/5	Lab Control Sample	93	104	100
MB 480-306152/7	Method Blank	96	98	97

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	PHL	TPH	NBZ
Lab Sample ID	Client Sample ID	(39-146)	(37-120)	(18-120)	(11-120)	(65-153)	(34-132)
480-101479-2	COMP-1 (SS-1 + SS-2)	49	37	34	36	36 X	34
LCS 480-306280/2-A	Lab Control Sample	84	76	73	76	76	76
MB 480-306280/1-A	Method Blank	71	73	72	73	76	73

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
TPH = p-Terphenyl-d14 (Surr)
NBZ = Nitrobenzene-d5 (Surr)

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-101479-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-306152/7
Matrix: Water
Analysis Batch: 306152

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			06/10/16 23:33	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			06/10/16 23:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			06/10/16 23:33	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			06/10/16 23:33	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			06/10/16 23:33	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			06/10/16 23:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			06/10/16 23:33	1
1,2,4-Trimethylbenzene	ND		1.0	0.75	ug/L			06/10/16 23:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			06/10/16 23:33	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			06/10/16 23:33	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			06/10/16 23:33	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			06/10/16 23:33	1
1,3,5-Trimethylbenzene	ND		1.0	0.77	ug/L			06/10/16 23:33	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			06/10/16 23:33	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			06/10/16 23:33	1
2-Butanone (MEK)	ND		10	1.3	ug/L			06/10/16 23:33	1
2-Hexanone	ND		5.0	1.2	ug/L			06/10/16 23:33	1
4-Isopropyltoluene	ND		1.0	0.31	ug/L			06/10/16 23:33	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			06/10/16 23:33	1
Acetone	ND		10	3.0	ug/L			06/10/16 23:33	1
Benzene	ND		1.0	0.41	ug/L			06/10/16 23:33	1
Bromoform	ND		1.0	0.26	ug/L			06/10/16 23:33	1
Bromomethane	ND		1.0	0.69	ug/L			06/10/16 23:33	1
Carbon disulfide	ND		1.0	0.19	ug/L			06/10/16 23:33	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			06/10/16 23:33	1
Chlorobenzene	ND		1.0	0.75	ug/L			06/10/16 23:33	1
Dibromochloromethane	ND		1.0	0.32	ug/L			06/10/16 23:33	1
Chloroethane	ND		1.0	0.32	ug/L			06/10/16 23:33	1
Chloroform	ND		1.0	0.34	ug/L			06/10/16 23:33	1
Chloromethane	ND		1.0	0.35	ug/L			06/10/16 23:33	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			06/10/16 23:33	1
Cyclohexane	ND		1.0	0.18	ug/L			06/10/16 23:33	1
Bromodichloromethane	ND		1.0	0.39	ug/L			06/10/16 23:33	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			06/10/16 23:33	1
Ethylbenzene	ND		1.0	0.74	ug/L			06/10/16 23:33	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			06/10/16 23:33	1
Isopropylbenzene	ND		1.0	0.79	ug/L			06/10/16 23:33	1
Methyl acetate	ND		2.5	1.3	ug/L			06/10/16 23:33	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			06/10/16 23:33	1
Methylcyclohexane	ND		1.0	0.16	ug/L			06/10/16 23:33	1
Methylene Chloride	ND		1.0	0.44	ug/L			06/10/16 23:33	1
m,p-Xylene	ND		2.0	0.66	ug/L			06/10/16 23:33	1
n-Butylbenzene	ND		1.0	0.64	ug/L			06/10/16 23:33	1
N-Propylbenzene	ND		1.0	0.69	ug/L			06/10/16 23:33	1
o-Xylene	ND		1.0	0.76	ug/L			06/10/16 23:33	1
sec-Butylbenzene	ND		1.0	0.75	ug/L			06/10/16 23:33	1
Tetrachloroethene	ND		1.0	0.36	ug/L			06/10/16 23:33	1
Toluene	ND		1.0	0.51	ug/L			06/10/16 23:33	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-306152/7
Matrix: Water
Analysis Batch: 306152

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			06/10/16 23:33	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			06/10/16 23:33	1
Trichloroethene	ND		1.0	0.46	ug/L			06/10/16 23:33	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			06/10/16 23:33	1
Vinyl chloride	ND		1.0	0.90	ug/L			06/10/16 23:33	1
Xylenes, Total	ND		2.0	0.66	ug/L			06/10/16 23:33	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			06/10/16 23:33	1
Styrene	ND		1.0	0.73	ug/L			06/10/16 23:33	1
tert-Butylbenzene	ND		1.0	0.81	ug/L			06/10/16 23:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*66 - 137*		*06/10/16 23:33*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*06/10/16 23:33*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*06/10/16 23:33*	*1*

Lab Sample ID: LCS 480-306152/5
Matrix: Water
Analysis Batch: 306152

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	24.0		ug/L		96	73 - 126
1,1,2,2-Tetrachloroethane	25.0	24.3		ug/L		97	70 - 126
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	24.7		ug/L		99	52 - 148
1,1,2-Trichloroethane	25.0	25.0		ug/L		100	76 - 122
1,1-Dichloroethane	25.0	24.3		ug/L		97	71 - 129
1,1-Dichloroethene	25.0	25.5		ug/L		102	58 - 121
1,2,4-Trichlorobenzene	25.0	25.8		ug/L		103	70 - 122
1,2,4-Trimethylbenzene	25.0	27.5		ug/L		110	76 - 121
1,2-Dibromo-3-Chloropropane	25.0	22.8		ug/L		91	56 - 134
1,2-Dichlorobenzene	25.0	23.7		ug/L		95	80 - 124
1,2-Dichloroethane	25.0	22.7		ug/L		91	75 - 127
1,2-Dichloropropane	25.0	25.4		ug/L		102	76 - 120
1,3,5-Trimethylbenzene	25.0	26.6		ug/L		106	77 - 121
1,3-Dichlorobenzene	25.0	24.2		ug/L		97	77 - 120
1,4-Dichlorobenzene	25.0	23.1		ug/L		92	75 - 120
2-Butanone (MEK)	125	126		ug/L		101	57 - 140
2-Hexanone	125	139		ug/L		111	65 - 127
4-Isopropyltoluene	25.0	27.5		ug/L		110	73 - 120
4-Methyl-2-pentanone (MIBK)	125	136		ug/L		108	71 - 125
Acetone	125	122		ug/L		98	56 - 142
Benzene	25.0	24.9		ug/L		100	71 - 124
Bromoform	25.0	26.0		ug/L		104	52 - 132
Bromomethane	25.0	21.3		ug/L		85	55 - 144
Carbon disulfide	25.0	28.1		ug/L		113	59 - 134
Carbon tetrachloride	25.0	24.8		ug/L		99	72 - 134
Chlorobenzene	25.0	24.4		ug/L		97	72 - 120
Dibromochloromethane	25.0	25.3		ug/L		101	75 - 125

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 480-306152/5
Matrix: Water
Analysis Batch: 306152

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	25.0	22.4		ug/L		90	69 - 136
Chloroform	25.0	23.3		ug/L		93	73 - 127
Chloromethane	25.0	17.1		ug/L		68	68 - 124
cis-1,2-Dichloroethene	25.0	24.3		ug/L		97	74 - 124
Cyclohexane	25.0	27.6		ug/L		110	59 - 135
Bromodichloromethane	25.0	24.5		ug/L		98	80 - 122
Dichlorodifluoromethane	25.0	13.8	*	ug/L		55	59 - 135
Ethylbenzene	25.0	25.8		ug/L		103	77 - 123
1,2-Dibromoethane	25.0	24.9		ug/L		100	77 - 120
Isopropylbenzene	25.0	26.7		ug/L		107	77 - 122
Methyl acetate	125	122		ug/L		97	74 - 133
Methyl tert-butyl ether	25.0	25.2		ug/L		101	64 - 127
Methylcyclohexane	25.0	27.2		ug/L		109	61 - 138
Methylene Chloride	25.0	25.6		ug/L		102	57 - 132
m,p-Xylene	25.0	27.0		ug/L		108	76 - 122
n-Butylbenzene	25.0	25.9		ug/L		103	71 - 128
N-Propylbenzene	25.0	25.8		ug/L		103	75 - 127
o-Xylene	25.0	27.0		ug/L		108	76 - 122
sec-Butylbenzene	25.0	26.4		ug/L		106	74 - 127
Tetrachloroethene	25.0	24.9		ug/L		100	74 - 122
Toluene	25.0	25.4		ug/L		102	80 - 122
trans-1,2-Dichloroethene	25.0	24.9		ug/L		100	73 - 127
trans-1,3-Dichloropropene	25.0	26.3		ug/L		105	72 - 123
Trichloroethene	25.0	24.2		ug/L		97	74 - 123
Trichlorofluoromethane	25.0	22.8		ug/L		91	62 - 152
Vinyl chloride	25.0	18.8		ug/L		75	65 - 133
cis-1,3-Dichloropropene	25.0	26.6		ug/L		106	74 - 124
Styrene	25.0	27.4		ug/L		110	70 - 130
tert-Butylbenzene	25.0	26.6		ug/L		106	75 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*66 - 137*
4-Bromofluorobenzene (Surr)	*104*		*73 - 120*
Toluene-d8 (Surr)	*100*		*71 - 126*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-306280/1-A
Matrix: Solid
Analysis Batch: 306540

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 306280

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		170	25	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Acenaphthylene	ND		170	22	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Anthracene	ND		170	42	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Benzo[a]anthracene	ND		170	17	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Benzo[a]pyrene	ND		170	25	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		06/13/16 07:01	06/14/16 15:18	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-306280/1-A
Matrix: Solid
Analysis Batch: 306540

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 306280

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Chrysene	ND		170	38	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Fluoranthene	ND		170	18	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Fluorene	ND		170	20	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Naphthalene	ND		170	22	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Pyrene	ND		170	20	ug/Kg		06/13/16 07:01	06/14/16 15:18	1
Phenanthrene	ND		170	25	ug/Kg		06/13/16 07:01	06/14/16 15:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*71*		*39 - 146*	*06/13/16 07:01*	*06/14/16 15:18*	*1*
2-Fluorobiphenyl	*73*		*37 - 120*	*06/13/16 07:01*	*06/14/16 15:18*	*1*
2-Fluorophenol (Surr)	*72*		*18 - 120*	*06/13/16 07:01*	*06/14/16 15:18*	*1*
Phenol-d5 (Surr)	*73*		*11 - 120*	*06/13/16 07:01*	*06/14/16 15:18*	*1*
p-Terphenyl-d14 (Surr)	*76*		*65 - 153*	*06/13/16 07:01*	*06/14/16 15:18*	*1*
Nitrobenzene-d5 (Surr)	*73*		*34 - 132*	*06/13/16 07:01*	*06/14/16 15:18*	*1*

Lab Sample ID: LCS 480-306280/2-A
Matrix: Solid
Analysis Batch: 306540

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 306280

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	1650	1250		ug/Kg		76	53 - 120
Acenaphthylene	1650	1280		ug/Kg		78	58 - 121
Anthracene	1650	1330		ug/Kg		81	62 - 129
Benzo[a]anthracene	1650	1320		ug/Kg		80	65 - 133
Benzo[a]pyrene	1650	1340		ug/Kg		82	64 - 127
Benzo[b]fluoranthene	1650	1270		ug/Kg		77	64 - 135
Benzo[g,h,i]perylene	1650	1340		ug/Kg		82	50 - 152
Benzo[k]fluoranthene	1650	1410		ug/Kg		85	58 - 138
Chrysene	1650	1330		ug/Kg		80	64 - 131
Dibenz(a,h)anthracene	1650	1340		ug/Kg		81	54 - 148
Fluoranthene	1650	1380		ug/Kg		84	62 - 131
Fluorene	1650	1300		ug/Kg		79	63 - 126
Indeno[1,2,3-cd]pyrene	1650	1340		ug/Kg		81	56 - 149
Naphthalene	1650	1230		ug/Kg		74	46 - 120
Pyrene	1650	1300		ug/Kg		79	51 - 133
Phenanthrene	1650	1320		ug/Kg		80	60 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*84*		*39 - 146*
2-Fluorobiphenyl	*76*		*37 - 120*
2-Fluorophenol (Surr)	*73*		*18 - 120*
Phenol-d5 (Surr)	*76*		*11 - 120*
p-Terphenyl-d14 (Surr)	*76*		*65 - 153*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-306280/2-A
Matrix: Solid
Analysis Batch: 306540

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 306280

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5 (Surr)	*76*		*34 - 132*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-306414/1-A
Matrix: Solid
Analysis Batch: 306729

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 306414

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0		mg/Kg		06/14/16 06:35	06/14/16 15:46	1
Barium	ND		0.51		mg/Kg		06/14/16 06:35	06/14/16 15:46	1
Cadmium	ND		0.20		mg/Kg		06/14/16 06:35	06/14/16 15:46	1
Chromium	ND		0.51		mg/Kg		06/14/16 06:35	06/14/16 15:46	1
Lead	ND		1.0		mg/Kg		06/14/16 06:35	06/14/16 15:46	1
Selenium	ND		4.0		mg/Kg		06/14/16 06:35	06/14/16 15:46	1
Silver	ND		0.61		mg/Kg		06/14/16 06:35	06/14/16 15:46	1

Lab Sample ID: LCSSRM 480-306414/2-A
Matrix: Solid
Analysis Batch: 306729

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 306414

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	98.5	88.38		mg/Kg		89.7	69.3 - 145.2
Barium	308	285.0		mg/Kg		92.5	74.0 - 126.0
Cadmium	146	137.2		mg/Kg		94.0	73.3 - 126.7
Chromium	182	162.1		mg/Kg		89.1	70.9 - 129.7
Lead	130	124.9		mg/Kg		96.1	72.5 - 126.9
Selenium	154	135.4		mg/Kg		87.9	67.5 - 132.5
Silver	40.9	35.53		mg/Kg		86.9	66.0 - 133.7

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-306242/1-A
Matrix: Solid
Analysis Batch: 306504

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 306242

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.019		mg/Kg		06/13/16 08:00	06/13/16 14:26	1

Method: 7471B - Mercury (CVAA) (Continued)

Lab Sample ID: LCSSRM 480-306242/2-A ^5
Matrix: Solid
Analysis Batch: 306504

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 306242

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	7.10	6.78		mg/Kg		95.5	51.3 - 149.3

Lab Sample ID: 480-101479-2 MS
Matrix: Solid
Analysis Batch: 306504

Client Sample ID: COMP-1 (SS-1 + SS-2)
Prep Type: Total/NA
Prep Batch: 306242

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.24	F1	0.350	0.506	F1	mg/Kg	☼	76	80 - 120

Lab Sample ID: 480-101479-2 MSD
Matrix: Solid
Analysis Batch: 306504

Client Sample ID: COMP-1 (SS-1 + SS-2)
Prep Type: Total/NA
Prep Batch: 306242

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.24	F1	0.324	0.494	F1	mg/Kg	☼	78	80 - 120	2	20

Method: Lloyd Kahn - Organic Carbon, Total (TOC)

Lab Sample ID: MB 200-105705/5
Matrix: Solid
Analysis Batch: 105705

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1000		mg/Kg			06/14/16 11:03	1

Lab Sample ID: LCS 200-105705/6
Matrix: Solid
Analysis Batch: 105705

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	9260	8795		mg/Kg		95	75 - 125

GC/MS VOA

Analysis Batch: 306152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-101479-1	PIT-1	Total/NA	Water	8260C	
LCS 480-306152/5	Lab Control Sample	Total/NA	Water	8260C	
MB 480-306152/7	Method Blank	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 306280

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-101479-2	COMP-1 (SS-1 + SS-2)	Total/NA	Solid	3550C	
LCS 480-306280/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 480-306280/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 306540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-101479-2	COMP-1 (SS-1 + SS-2)	Total/NA	Solid	8270D	306280
LCS 480-306280/2-A	Lab Control Sample	Total/NA	Solid	8270D	306280
MB 480-306280/1-A	Method Blank	Total/NA	Solid	8270D	306280

Metals

Prep Batch: 306242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-101479-2	COMP-1 (SS-1 + SS-2)	Total/NA	Solid	7471B	
480-101479-2 MS	COMP-1 (SS-1 + SS-2)	Total/NA	Solid	7471B	
480-101479-2 MSD	COMP-1 (SS-1 + SS-2)	Total/NA	Solid	7471B	
LCSSRM 480-306242/2-A ^5	Lab Control Sample	Total/NA	Solid	7471B	
MB 480-306242/1-A	Method Blank	Total/NA	Solid	7471B	

Prep Batch: 306414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-101479-2	COMP-1 (SS-1 + SS-2)	Total/NA	Solid	3050B	
LCSSRM 480-306414/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 480-306414/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 306504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-101479-2	COMP-1 (SS-1 + SS-2)	Total/NA	Solid	7471B	306242
480-101479-2 MS	COMP-1 (SS-1 + SS-2)	Total/NA	Solid	7471B	306242
480-101479-2 MSD	COMP-1 (SS-1 + SS-2)	Total/NA	Solid	7471B	306242
LCSSRM 480-306242/2-A ^5	Lab Control Sample	Total/NA	Solid	7471B	306242
MB 480-306242/1-A	Method Blank	Total/NA	Solid	7471B	306242

Analysis Batch: 306729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-101479-2	COMP-1 (SS-1 + SS-2)	Total/NA	Solid	6010C	306414
LCSSRM 480-306414/2-A	Lab Control Sample	Total/NA	Solid	6010C	306414
MB 480-306414/1-A	Method Blank	Total/NA	Solid	6010C	306414

Metals (Continued)

Analysis Batch: 306856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-101479-2	COMP-1 (SS-1 + SS-2)	Total/NA	Solid	6010C	306414

General Chemistry

Analysis Batch: 105705

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-101479-2	COMP-1 (SS-1 + SS-2)	Total/NA	Solid	Lloyd Kahn	
LCS 200-105705/6	Lab Control Sample	Total/NA	Solid	Lloyd Kahn	
MB 200-105705/5	Method Blank	Total/NA	Solid	Lloyd Kahn	

Analysis Batch: 306192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-101479-2	COMP-1 (SS-1 + SS-2)	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-101479-1

Client Sample ID: PIT-1

Lab Sample ID: 480-101479-1
Matrix: Water
Date Collected: 06/09/16 10:45
Date Received: 06/10/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	306152	06/11/16 07:20	RAS	TAL BUF

Client Sample ID: COMP-1 (SS-1 + SS-2)

Lab Sample ID: 480-101479-2
Matrix: Solid
Date Collected: 06/09/16 11:10
Date Received: 06/10/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Lloyd Kahn		1	105705	06/14/16 12:44	KSH	TAL BUR
Total/NA	Analysis	Moisture		1	306192	06/10/16 21:54	CMK	TAL BUF

Client Sample ID: COMP-1 (SS-1 + SS-2)

Lab Sample ID: 480-101479-2
Matrix: Solid
Percent Solids: 97.0
Date Collected: 06/09/16 11:10
Date Received: 06/10/16 12:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			306280	06/13/16 07:01	CAM	TAL BUF
Total/NA	Analysis	8270D		5	306540	06/14/16 16:10	LMW	TAL BUF
Total/NA	Prep	3050B			306414	06/14/16 06:35	CMM	TAL BUF
Total/NA	Analysis	6010C		1	306729	06/14/16 16:56	AMH	TAL BUF
Total/NA	Prep	3050B			306414	06/14/16 06:35	CMM	TAL BUF
Total/NA	Analysis	6010C		5	306856	06/15/16 10:49	AMH	TAL BUF
Total/NA	Prep	7471B			306242	06/13/16 08:00	KJ1	TAL BUF
Total/NA	Analysis	7471B		1	306504	06/13/16 15:02	KJ1	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Certification Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-101479-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: TestAmerica Burlington

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0751	09-30-17
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	NA	02-02-17
Florida	NELAP	4	E87467	06-30-16 *
L-A-B	DoD ELAP		L2336	02-26-17
Maine	State Program	1	VT00008	04-17-17
Minnesota	NELAP	5	050-999-436	12-31-16
New Hampshire	NELAP	1	2006	12-18-16
New Jersey	NELAP	2	VT972	06-30-17
New York	NELAP	2	10391	04-01-17 *
Pennsylvania	NELAP	3	68-00489	04-30-17
Rhode Island	State Program	1	LAO00298	12-30-16
US Fish & Wildlife	Federal		LE-058448-0	10-31-16
USDA	Federal		P330-11-00093	10-28-16
Vermont	State Program	1	VT-4000	12-31-16
Virginia	NELAP	3	460209	12-14-16

* Certification renewal pending - certification considered valid.

Method Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-101479-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
7471B	Mercury (CVAA)	SW846	TAL BUF
Lloyd Kahn	Organic Carbon, Total (TOC)	EPA	TAL BUR
Moisture	Percent Moisture	EPA	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Sample Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-101479-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-101479-1	PIT-1	Water	06/09/16 10:45	06/10/16 12:45
480-101479-2	COMP-1 (SS-1 + SS-2)	Solid	06/09/16 11:10	06/10/16 12:45

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: Nick Succi	Lab PM: Fischer, Brian J	Carrier Tracking No(s):	COC No: 480-84312-20646.1
Client Contact: Bryan Mayback	Phone: 716-713-3937	E-Mail: brian.fischer@testamericainc.com		Page: Page 1 of 1
Company: Turnkey Environmental Restoration, LLC				Job #:
Address: 2558 Hamburg Turnpike Suite 300	Due Date Requested:			
City: Lackawanna	TAT Requested (days): Standard			
State, Zip: NY, 14218				
Phone:	PO #: B0381-016-001			
Email: bmayback@turnkeyllc.com	WO #:			
Project Name: Benchmark - 50 Elk St site	Project #: 48014192			
Site: 50 Elk St Site	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - (MOD) TCL List + CP-51 + TICs	Lloyd_Kahn - Total Organic Carbon	6010C, 7471B, 8270D (PAHs + RCRA Metals)	Total Number of containers	Special Instructions/Note:
			Preservation Code:		X	X	A	N	N	X	
Pit-1	6/9/16	10:45	G	Water			X			3	
COMP-1 (SS-1 + SS-2)	6/9/16	11:10	C	Solid				X	X	2	

480-101479 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		6/9/16			6/10/16 @ 1010	TAL
2		6/10/16 @ 1245	TEB		6/10/16 1245	TA
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.7 #1

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6/17/2016

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

480-101479 Chain of Custody

TestAmerica
LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Fischer, Brian J	22.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: brian.fischer@testamericain	Page 1 of 1
Company: TestAmerica Laboratories, Inc.			Job #: 480-101479-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 6/16/2016		
City: South Burlington	TAT Requested (days):		
State, Zip: VT, 05403			
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:		
Email:	WO #:		
Project Name: Benchmark - 50 Elk St site	Project #: 48014192		
Site:	SSOW#:		

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Lloyd_Kahn/ Routine Lloyd Kahn	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
COMP-1 (SS-1 + SS-2) (480-101479-2)	6/9/16	11:10 Eastern		Solid			X	1	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	6/10/16 1700	TAB	[signature]	6/11/16 1045	TABTV
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ☒ Yes ☐ No
Custody Seal No.: 693404
Cooler Temperature(s) °C and Other Remarks: 2.1°C


ORIGIN ID:DKKA (716) 691-2600
CHAR BRONSON
TEST AMERICA
10 HAZELWOOD
AMHERST , NY 14228
UNITED STATES US
SHIP DATE: 10JUN16
ACTWGT: 6.9 LB
CAD: 846654/CAFE2912
DIMS: 15x13x10 IN
BILL RECIPIENT
TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
REF: BURLINGTON
DEPT: SAMPLE CONTROL
FedEx
Express
TRK# 0201 5657 0120 2895
SATURDAY 12:00P
PRIORITY OVERNIGHT
XO BTVA
05403
VT-US BTV
548V-484 RITC APV EXP 04/17

Login Sample Receipt Checklist

Client: Turnkey Environmental Restoration, LLC

Job Number: 480-101479-1

Login Number: 101479
List Number: 1
Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	False	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Turnkey Environmental Restoration, LLC

Job Number: 480-101479-1

Login Number: 101479
List Number: 2
Creator: Lavigne III, Scott M

List Source: TestAmerica Burlington
List Creation: 06/11/16 02:26 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	693404
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.1ºC
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-102012-1
Client Project/Site: Benchmark - 50 Elk St site

For:
Turnkey Environmental Restoration, LLC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

Attn: Bryan Mayback

Authorized for release by:
6/28/2016 11:00:19 AM

Brian Fischer, Manager of Project Management
(716)504-9835
brian.fischer@testamericainc.com

Table of Contents

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-102012-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-102012-1

Job ID: 480-102012-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-102012-1

Comments
No additional comments.

Receipt
The sample was received on 6/21/2016 2:50 PM; the sample arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 2.9º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-102012-1

Client Sample ID: COMP-1 (SS-1 + SS-2) **Lab Sample ID: 480-102012-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	26.5		0.020		mg/L	1		6010C	TCLP

This Detection Summary does not include radiochemical test results.

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-102012-1

Client Sample ID: COMP-1 (SS-1 + SS-2)
Date Collected: 06/09/16 11:10
Date Received: 06/21/16 14:50

Lab Sample ID: 480-102012-1
Matrix: Solid

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	26.5		0.020		mg/L		06/24/16 15:16	06/24/16 20:02	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-102012-1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-308326/2-A
Matrix: Solid
Analysis Batch: 308588

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 308326

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.020		mg/L		06/24/16 15:16	06/24/16 19:28	1

Lab Sample ID: LCS 480-308326/3-A
Matrix: Solid
Analysis Batch: 308588

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 308326

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.00	1.05		mg/L		105	80 - 120

Lab Sample ID: LB 480-308166/1-B
Matrix: Solid
Analysis Batch: 308588

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 308326

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.020		mg/L		06/24/16 15:16	06/24/16 19:24	1

QC Association Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-102012-1

Metals

Leach Batch: 308166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-102012-1	COMP-1 (SS-1 + SS-2)	TCLP	Solid	1311	
LB 480-308166/1-B	Method Blank	TCLP	Solid	1311	

Prep Batch: 308326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-102012-1	COMP-1 (SS-1 + SS-2)	TCLP	Solid	3010A	308166
LB 480-308166/1-B	Method Blank	TCLP	Solid	3010A	308166
LCS 480-308326/3-A	Lab Control Sample	Total/NA	Solid	3010A	
MB 480-308326/2-A	Method Blank	Total/NA	Solid	3010A	

Analysis Batch: 308588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-102012-1	COMP-1 (SS-1 + SS-2)	TCLP	Solid	6010C	308326
LB 480-308166/1-B	Method Blank	TCLP	Solid	6010C	308326
LCS 480-308326/3-A	Lab Control Sample	Total/NA	Solid	6010C	308326
MB 480-308326/2-A	Method Blank	Total/NA	Solid	6010C	308326

Lab Chronicle

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-102012-1

Client Sample ID: COMP-1 (SS-1 + SS-2)
Date Collected: 06/09/16 11:10
Date Received: 06/21/16 14:50

Lab Sample ID: 480-102012-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			308166	06/23/16 12:17	CPH	TAL BUF
TCLP	Prep	3010A			308326	06/24/16 15:16	CMM	TAL BUF
TCLP	Analysis	6010C		1	308588	06/24/16 20:02	AMH	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-102012-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-17

Analysis Method	Prep Method	Matrix	Analyte

Method Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-102012-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL BUF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 50 Elk St site

TestAmerica Job ID: 480-102012-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-102012-1	COMP-1 (SS-1 + SS-2)	Solid	06/09/16 11:10	06/21/16 14:50

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Tonawanda Environmental Restoration	Bryan Magbauch	6/21/16	274009
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
2558 Hamburg Tpke, Suite 300	716-856-0635		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Lackawanna / NY / 14218	Mike Surwit	Brian Fischer	
Project Name and Location (State)	**Carrier/Waybill Number**		
Buckmaster - 50 Elk St Site			
Contract/Purchase Order/Quote No.			
PO: B0381-016-001			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	TCLP Lead	Special Instructions/ Conditions of Receipt
Comp-1 (SS-1 + SS-2)	6/9/16	11:10				X	X						X	~~Hold~~

480-102012 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other Standard

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	6/21/16	11:00	1. Received By	6/21/16	1245
2. Relinquished By	6/21/16	1450	2. Received By	6/21/16	1450
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

2.9 #

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Turnkey Environmental Restoration, LLC

Job Number: 480-102012-1

Login Number: 102012

List Source: TestAmerica Buffalo

List Number: 1

Creator: Janish, Carl M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	BMTK
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-103550-1
Client Project/Site: Benchmark - Lead/TCLP Lead analysis

For:
Benchmark Env. Eng. & Science, PLLC
2558 Hamburg Turnpike
Suite 300
Lackawanna, New York 14218

Attn: Mr. Tom Forbes

Authorized for release by:
7/27/2016 4:58:37 PM

Brian Fischer, Manager of Project Management
(716)504-9835
brian.fischer@testamericainc.com

Table of Contents

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-13 (0.5-2.5) — Lab Sample ID: 480-103550-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	3070		1.1	0.26	mg/Kg	1	☼	6010C	Total/NA
Lead	1.7		0.020	0.0030	mg/L	1		6010C	TCLP

Client Sample ID: TP-14 (0-1.5) — Lab Sample ID: 480-103550-2

Sample Analysis Not Complete.

Client Sample ID: TP-15 (0-2.5) — Lab Sample ID: 480-103550-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	620	B	1.1	0.27	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: TP-2 (0-1) — Lab Sample ID: 480-103550-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	556		1.1	0.26	mg/Kg	1	☼	6010C	Total/NA
Lead	0.13		0.020	0.0030	mg/L	1		6010C	TCLP

Client Sample ID: TP-3 (0-1.5) — Lab Sample ID: 480-103550-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	1620	B	1.5	0.36	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: TP-10 (0-3.0) — Lab Sample ID: 480-103550-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	1090		1.2	0.28	mg/Kg	1	☼	6010C	Total/NA
Lead	0.38		0.020	0.0030	mg/L	1		6010C	TCLP

Client Sample ID: TP-5 (0.5-1.5) — Lab Sample ID: 480-103550-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	994		1.1	0.26	mg/Kg	1	☼	6010C	Total/NA
Lead	0.59		0.020	0.0030	mg/L	1		6010C	TCLP

Client Sample ID: TP-8 (0-1.5) — Lab Sample ID: 480-103550-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	512	B	1.1	0.26	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: TP-1 (0-1) — Lab Sample ID: 480-103550-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	838	B	1.0	0.25	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: TP-11 (0-0.5) — Lab Sample ID: 480-103550-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	930		1.0	0.24	mg/Kg	1	☼	6010C	Total/NA
Lead	0.31		0.020	0.0030	mg/L	1		6010C	TCLP

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-17 (0-1.0) — Lab Sample ID: 480-103550-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	334	B	1.1	0.26	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: TP-5 (0-0.5) — Lab Sample ID: 480-103550-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	184		1.0	0.24	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: TP-7 (0-0.5) — Lab Sample ID: 480-103550-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	574		1.0	0.24	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: TP-6 (4-4.5) — Lab Sample ID: 480-103550-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	1370		1.2	0.30	mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: TP-15 (2.5-4.0) — Lab Sample ID: 480-103550-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	45.2		1.2	0.28	mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-13 (0.5-2.5)
Date Collected: 07/21/16 13:15
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-1
Matrix: Solid

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1.7		0.020	0.0030	mg/L		07/26/16 12:05	07/27/16 12:05	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-13 (0.5-2.5)
Date Collected: 07/21/16 13:15
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-1
Matrix: Solid
Percent Solids: 91.8

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	3070		1.1	0.26	mg/Kg	☼	07/26/16 14:29	07/27/16 13:39	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-14 (0-1.5)
Date Collected: 07/21/16 13:21
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-2
Matrix: Solid
Percent Solids: 94.1

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	728		1.1	0.26	mg/Kg	☼	07/26/16 14:29	07/27/16 13:43	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-15 (0-2.5)
Date Collected: 07/21/16 13:55
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-3
Matrix: Solid
Percent Solids: 92.2

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	620	B	1.1	0.27	mg/Kg	☼	07/25/16 16:35	07/26/16 13:48	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-2 (0-1)
Date Collected: 07/21/16 09:53
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-4
Matrix: Solid

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.13		0.020	0.0030	mg/L		07/26/16 12:05	07/27/16 12:09	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-2 (0-1)
Date Collected: 07/21/16 09:53
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-4
Matrix: Solid
Percent Solids: 95.5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	556		1.1	0.26	mg/Kg	☼	07/26/16 14:29	07/27/16 13:47	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-3 (0-1.5)
Date Collected: 07/21/16 10:03
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-5
Matrix: Solid
Percent Solids: 69.4

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1620	B	1.5	0.36	mg/Kg	☼	07/25/16 16:35	07/26/16 13:51	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-10 (0-3.0)
Date Collected: 07/21/16 12:44
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-6
Matrix: Solid

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.38		0.020	0.0030	mg/L		07/26/16 12:05	07/27/16 12:27	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-10 (0-3.0)
Date Collected: 07/21/16 12:44
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-6
Matrix: Solid
Percent Solids: 90.7

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1090		1.2	0.28	mg/Kg	☼	07/26/16 14:29	07/27/16 13:50	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-5 (0.5-1.5)
Date Collected: 07/21/16 10:41
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-7
Matrix: Solid

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.59		0.020	0.0030	mg/L		07/26/16 12:05	07/27/16 12:31	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-5 (0.5-1.5)
Date Collected: 07/21/16 10:41
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-7
Matrix: Solid
Percent Solids: 94.7

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	994		1.1	0.26	mg/Kg	☼	07/26/16 14:29	07/27/16 13:54	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-8 (0-1.5)
Date Collected: 07/21/16 12:28
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-8
Matrix: Solid
Percent Solids: 95.4

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	512	B	1.1	0.26	mg/Kg	☼	07/25/16 16:35	07/26/16 13:54	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-1 (0-1)
Date Collected: 07/21/16 09:38
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-9
Matrix: Solid
Percent Solids: 91.9

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	838	B	1.0	0.25	mg/Kg	☼	07/25/16 16:35	07/26/16 13:58	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-11 (0-0.5)
Date Collected: 07/21/16 12:55
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-10
Matrix: Solid

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.31		0.020	0.0030	mg/L		07/26/16 12:05	07/27/16 12:35	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-11 (0-0.5)
Date Collected: 07/21/16 12:55
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-10
Matrix: Solid
Percent Solids: 95.6

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	930		1.0	0.24	mg/Kg	☼	07/26/16 14:29	07/27/16 13:58	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-17 (0-1.0)
Date Collected: 07/21/16 14:20
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-11
Matrix: Solid
Percent Solids: 92.9

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	334	B	1.1	0.26	mg/Kg	☼	07/25/16 16:35	07/26/16 14:01	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-5 (0-0.5)
Date Collected: 07/21/16 11:47
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-12
Matrix: Solid
Percent Solids: 92.4

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	184		1.0	0.24	mg/Kg	☼	07/26/16 14:29	07/27/16 14:01	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-7 (0-0.5)
Date Collected: 07/21/16 11:57
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-13
Matrix: Solid
Percent Solids: 95.5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	574		1.0	0.24	mg/Kg	☼	07/26/16 14:29	07/27/16 14:16	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-6 (4-4.5)
Date Collected: 07/21/16 10:54
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-14
Matrix: Solid
Percent Solids: 85.5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	1370		1.2	0.30	mg/Kg	☼	07/26/16 14:29	07/27/16 14:19	1

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-15 (2.5-4.0)
Date Collected: 07/21/16 13:53
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-15
Matrix: Solid
Percent Solids: 85.2

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	45.2		1.2	0.28	mg/Kg	☼	07/26/16 14:29	07/27/16 14:23	1

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-312804/1-A
Matrix: Solid
Analysis Batch: 312986

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 312804

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.346	J	0.94	0.23	mg/Kg		07/25/16 16:35	07/26/16 12:28	1

Lab Sample ID: LCDSRM 480-312804/3-A
Matrix: Solid
Analysis Batch: 312986

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 312804

Analyte	Spike Added	LCDSRM Result	LCDSRM Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	130	144.5		mg/Kg		111.2	72.5 - 126.9	7	20

Lab Sample ID: LCSSRM 480-312804/2-A
Matrix: Solid
Analysis Batch: 312986

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 312804

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	130	135.4		mg/Kg		104.2	72.5 - 126.9

Lab Sample ID: MB 480-312933/2-A
Matrix: Solid
Analysis Batch: 313201

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 312933

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.020	0.0030	mg/L		07/26/16 12:05	07/27/16 11:47	1

Lab Sample ID: LCS 480-312933/3-A
Matrix: Solid
Analysis Batch: 313201

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 312933

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	1.00	1.02		mg/L		102	80 - 120

Lab Sample ID: MB 480-312970/1-A
Matrix: Solid
Analysis Batch: 313229

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 312970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.95	0.23	mg/Kg		07/26/16 14:29	07/27/16 12:49	1

Lab Sample ID: LCSSRM 480-312970/2-A
Matrix: Solid
Analysis Batch: 313229

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 312970

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	130	124.2		mg/Kg		95.5	72.5 - 126.9

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: LB 480-312712/1-B
Matrix: Solid
Analysis Batch: 313201

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 312933

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.020	0.0030	mg/L		07/26/16 12:05	07/27/16 11:43	1

Lab Sample ID: 480-103550-4 MS
Matrix: Solid
Analysis Batch: 313201

Client Sample ID: TP-2 (0-1)
Prep Type: TCLP
Prep Batch: 312933

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Lead	0.13		1.00	1.19		mg/L		105	75 - 125

Lab Sample ID: 480-103550-4 MSD
Matrix: Solid
Analysis Batch: 313201

Client Sample ID: TP-2 (0-1)
Prep Type: TCLP
Prep Batch: 312933

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Lead	0.13		1.00	1.17		mg/L		104	75 - 125	1	20

Metals

Leach Batch: 312712

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-103550-1	TP-13 (0.5-2.5)	TCLP	Solid	1311	
480-103550-4	TP-2 (0-1)	TCLP	Solid	1311	
480-103550-6	TP-10 (0-3.0)	TCLP	Solid	1311	
480-103550-7	TP-5 (0.5-1.5)	TCLP	Solid	1311	
480-103550-10	TP-11 (0-0.5)	TCLP	Solid	1311	
LB 480-312712/1-B	Method Blank	TCLP	Solid	1311	
480-103550-4 MS	TP-2 (0-1)	TCLP	Solid	1311	
480-103550-4 MSD	TP-2 (0-1)	TCLP	Solid	1311	

Prep Batch: 312804

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-103550-3	TP-15 (0-2.5)	Total/NA	Solid	3050B	
480-103550-5	TP-3 (0-1.5)	Total/NA	Solid	3050B	
480-103550-8	TP-8 (0-1.5)	Total/NA	Solid	3050B	
480-103550-9	TP-1 (0-1)	Total/NA	Solid	3050B	
480-103550-11	TP-17 (0-1.0)	Total/NA	Solid	3050B	
MB 480-312804/1-A	Method Blank	Total/NA	Solid	3050B	
LCDSRM 480-312804/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 480-312804/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 312933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-103550-1	TP-13 (0.5-2.5)	TCLP	Solid	3010A	312712
480-103550-4	TP-2 (0-1)	TCLP	Solid	3010A	312712
480-103550-6	TP-10 (0-3.0)	TCLP	Solid	3010A	312712
480-103550-7	TP-5 (0.5-1.5)	TCLP	Solid	3010A	312712
480-103550-10	TP-11 (0-0.5)	TCLP	Solid	3010A	312712
LB 480-312712/1-B	Method Blank	TCLP	Solid	3010A	312712
MB 480-312933/2-A	Method Blank	Total/NA	Solid	3010A	
LCS 480-312933/3-A	Lab Control Sample	Total/NA	Solid	3010A	
480-103550-4 MS	TP-2 (0-1)	TCLP	Solid	3010A	312712
480-103550-4 MSD	TP-2 (0-1)	TCLP	Solid	3010A	312712

Prep Batch: 312970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-103550-1	TP-13 (0.5-2.5)	Total/NA	Solid	3050B	
480-103550-2	TP-14 (0-1.5)	Total/NA	Solid	3050B	
480-103550-4	TP-2 (0-1)	Total/NA	Solid	3050B	
480-103550-6	TP-10 (0-3.0)	Total/NA	Solid	3050B	
480-103550-7	TP-5 (0.5-1.5)	Total/NA	Solid	3050B	
480-103550-10	TP-11 (0-0.5)	Total/NA	Solid	3050B	
480-103550-12	TP-5 (0-0.5)	Total/NA	Solid	3050B	
480-103550-13	TP-7 (0-0.5)	Total/NA	Solid	3050B	
480-103550-14	TP-6 (4-4.5)	Total/NA	Solid	3050B	
480-103550-15	TP-15 (2.5-4.0)	Total/NA	Solid	3050B	
MB 480-312970/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 480-312970/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 312986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-103550-3	TP-15 (0-2.5)	Total/NA	Solid	6010C	312804

Metals (Continued)

Analysis Batch: 312986 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-103550-5	TP-3 (0-1.5)	Total/NA	Solid	6010C	312804
480-103550-8	TP-8 (0-1.5)	Total/NA	Solid	6010C	312804
480-103550-9	TP-1 (0-1)	Total/NA	Solid	6010C	312804
480-103550-11	TP-17 (0-1.0)	Total/NA	Solid	6010C	312804
MB 480-312804/1-A	Method Blank	Total/NA	Solid	6010C	312804
LCDSRM 480-312804/3-A	Lab Control Sample Dup	Total/NA	Solid	6010C	312804
LCSSRM 480-312804/2-A	Lab Control Sample	Total/NA	Solid	6010C	312804

Analysis Batch: 313201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-103550-1	TP-13 (0.5-2.5)	TCLP	Solid	6010C	312933
480-103550-4	TP-2 (0-1)	TCLP	Solid	6010C	312933
480-103550-6	TP-10 (0-3.0)	TCLP	Solid	6010C	312933
480-103550-7	TP-5 (0.5-1.5)	TCLP	Solid	6010C	312933
480-103550-10	TP-11 (0-0.5)	TCLP	Solid	6010C	312933
LB 480-312712/1-B	Method Blank	TCLP	Solid	6010C	312933
MB 480-312933/2-A	Method Blank	Total/NA	Solid	6010C	312933
LCS 480-312933/3-A	Lab Control Sample	Total/NA	Solid	6010C	312933
480-103550-4 MS	TP-2 (0-1)	TCLP	Solid	6010C	312933
480-103550-4 MSD	TP-2 (0-1)	TCLP	Solid	6010C	312933

Analysis Batch: 313229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-103550-1	TP-13 (0.5-2.5)	Total/NA	Solid	6010C	312970
480-103550-2	TP-14 (0-1.5)	Total/NA	Solid	6010C	312970
480-103550-4	TP-2 (0-1)	Total/NA	Solid	6010C	312970
480-103550-6	TP-10 (0-3.0)	Total/NA	Solid	6010C	312970
480-103550-7	TP-5 (0.5-1.5)	Total/NA	Solid	6010C	312970
480-103550-10	TP-11 (0-0.5)	Total/NA	Solid	6010C	312970
480-103550-12	TP-5 (0-0.5)	Total/NA	Solid	6010C	312970
480-103550-13	TP-7 (0-0.5)	Total/NA	Solid	6010C	312970
480-103550-14	TP-6 (4-4.5)	Total/NA	Solid	6010C	312970
480-103550-15	TP-15 (2.5-4.0)	Total/NA	Solid	6010C	312970
MB 480-312970/1-A	Method Blank	Total/NA	Solid	6010C	312970
LCSSRM 480-312970/2-A	Lab Control Sample	Total/NA	Solid	6010C	312970

General Chemistry

Analysis Batch: 312574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-103550-1	TP-13 (0.5-2.5)	Total/NA	Solid	Moisture	
480-103550-2	TP-14 (0-1.5)	Total/NA	Solid	Moisture	
480-103550-3	TP-15 (0-2.5)	Total/NA	Solid	Moisture	
480-103550-4	TP-2 (0-1)	Total/NA	Solid	Moisture	
480-103550-5	TP-3 (0-1.5)	Total/NA	Solid	Moisture	
480-103550-6	TP-10 (0-3.0)	Total/NA	Solid	Moisture	
480-103550-7	TP-5 (0.5-1.5)	Total/NA	Solid	Moisture	
480-103550-8	TP-8 (0-1.5)	Total/NA	Solid	Moisture	
480-103550-9	TP-1 (0-1)	Total/NA	Solid	Moisture	
480-103550-10	TP-11 (0-0.5)	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 312574 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-103550-11	TP-17 (0-1.0)	Total/NA	Solid	Moisture	
480-103550-12	TP-5 (0-0.5)	Total/NA	Solid	Moisture	
480-103550-13	TP-7 (0-0.5)	Total/NA	Solid	Moisture	
480-103550-14	TP-6 (4-4.5)	Total/NA	Solid	Moisture	
480-103550-15	TP-15 (2.5-4.0)	Total/NA	Solid	Moisture	

Client Sample ID: TP-13 (0.5-2.5)

Lab Sample ID: 480-103550-1

Date Collected: 07/21/16 13:15

Matrix: Solid

Date Received: 07/22/16 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			312712	07/25/16 08:58	JLS	TAL BUF
TCLP	Prep	3010A			312933	07/26/16 12:05	BAE	TAL BUF
TCLP	Analysis	6010C		1	313201	07/27/16 12:05	AMH	TAL BUF
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:06	CSW	TAL BUF

Client Sample ID: TP-13 (0.5-2.5)

Lab Sample ID: 480-103550-1

Date Collected: 07/21/16 13:15

Matrix: Solid

Date Received: 07/22/16 11:50

Percent Solids: 91.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312970	07/26/16 14:29	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	313229	07/27/16 13:39	AMH	TAL BUF

Client Sample ID: TP-14 (0-1.5)

Lab Sample ID: 480-103550-2

Date Collected: 07/21/16 13:21

Matrix: Solid

Date Received: 07/22/16 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Client Sample ID: TP-14 (0-1.5)

Lab Sample ID: 480-103550-2

Date Collected: 07/21/16 13:21

Matrix: Solid

Date Received: 07/22/16 11:50

Percent Solids: 94.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312970	07/26/16 14:29	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	313229	07/27/16 13:43	AMH	TAL BUF

Client Sample ID: TP-15 (0-2.5)

Lab Sample ID: 480-103550-3

Date Collected: 07/21/16 13:55

Matrix: Solid

Date Received: 07/22/16 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Client Sample ID: TP-15 (0-2.5)

Lab Sample ID: 480-103550-3

Date Collected: 07/21/16 13:55

Matrix: Solid

Date Received: 07/22/16 11:50

Percent Solids: 92.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312804	07/25/16 16:35	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	312986	07/26/16 13:48	AMH	TAL BUF

Client Sample ID: TP-2 (0-1)
Date Collected: 07/21/16 09:53
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			312712	07/25/16 08:58	JLS	TAL BUF
TCLP	Prep	3010A			312933	07/26/16 12:05	BAE	TAL BUF
TCLP	Analysis	6010C		1	313201	07/27/16 12:09	AMH	TAL BUF
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Client Sample ID: TP-2 (0-1)
Date Collected: 07/21/16 09:53
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-4
Matrix: Solid
Percent Solids: 95.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312970	07/26/16 14:29	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	313229	07/27/16 13:47	AMH	TAL BUF

Client Sample ID: TP-3 (0-1.5)
Date Collected: 07/21/16 10:03
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-5
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Client Sample ID: TP-3 (0-1.5)
Date Collected: 07/21/16 10:03
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-5
Matrix: Solid
Percent Solids: 69.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312804	07/25/16 16:35	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	312986	07/26/16 13:51	AMH	TAL BUF

Client Sample ID: TP-10 (0-3.0)
Date Collected: 07/21/16 12:44
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			312712	07/25/16 08:58	JLS	TAL BUF
TCLP	Prep	3010A			312933	07/26/16 12:05	BAE	TAL BUF
TCLP	Analysis	6010C		1	313201	07/27/16 12:27	AMH	TAL BUF
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Client Sample ID: TP-10 (0-3.0)

Lab Sample ID: 480-103550-6
Date Collected: 07/21/16 12:44
Matrix: Solid
Date Received: 07/22/16 11:50
Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312970	07/26/16 14:29	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	313229	07/27/16 13:50	AMH	TAL BUF

Client Sample ID: TP-5 (0.5-1.5)

Lab Sample ID: 480-103550-7
Date Collected: 07/21/16 10:41
Matrix: Solid
Date Received: 07/22/16 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			312712	07/25/16 08:58	JLS	TAL BUF
TCLP	Prep	3010A			312933	07/26/16 12:05	BAE	TAL BUF
TCLP	Analysis	6010C		1	313201	07/27/16 12:31	AMH	TAL BUF
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Client Sample ID: TP-5 (0.5-1.5)

Lab Sample ID: 480-103550-7
Date Collected: 07/21/16 10:41
Matrix: Solid
Date Received: 07/22/16 11:50
Percent Solids: 94.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312970	07/26/16 14:29	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	313229	07/27/16 13:54	AMH	TAL BUF

Client Sample ID: TP-8 (0-1.5)

Lab Sample ID: 480-103550-8
Date Collected: 07/21/16 12:28
Matrix: Solid
Date Received: 07/22/16 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Client Sample ID: TP-8 (0-1.5)

Lab Sample ID: 480-103550-8
Date Collected: 07/21/16 12:28
Matrix: Solid
Date Received: 07/22/16 11:50
Percent Solids: 95.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312804	07/25/16 16:35	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	312986	07/26/16 13:54	AMH	TAL BUF

Client Sample ID: TP-1 (0-1)

Lab Sample ID: 480-103550-9
Date Collected: 07/21/16 09:38
Matrix: Solid
Date Received: 07/22/16 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Client Sample ID: TP-1 (0-1)

Lab Sample ID: 480-103550-9
Date Collected: 07/21/16 09:38
Matrix: Solid
Date Received: 07/22/16 11:50
Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312804	07/25/16 16:35	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	312986	07/26/16 13:58	AMH	TAL BUF

Client Sample ID: TP-11 (0-0.5)

Lab Sample ID: 480-103550-10
Date Collected: 07/21/16 12:55
Matrix: Solid
Date Received: 07/22/16 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			312712	07/25/16 08:58	JLS	TAL BUF
TCLP	Prep	3010A			312933	07/26/16 12:05	BAE	TAL BUF
TCLP	Analysis	6010C		1	313201	07/27/16 12:35	AMH	TAL BUF
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Client Sample ID: TP-11 (0-0.5)

Lab Sample ID: 480-103550-10
Date Collected: 07/21/16 12:55
Matrix: Solid
Date Received: 07/22/16 11:50
Percent Solids: 95.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312970	07/26/16 14:29	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	313229	07/27/16 13:58	AMH	TAL BUF

Client Sample ID: TP-17 (0-1.0)

Lab Sample ID: 480-103550-11
Date Collected: 07/21/16 14:20
Matrix: Solid
Date Received: 07/22/16 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Client Sample ID: TP-17 (0-1.0)

Lab Sample ID: 480-103550-11
Date Collected: 07/21/16 14:20
Matrix: Solid
Date Received: 07/22/16 11:50
Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312804	07/25/16 16:35	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	312986	07/26/16 14:01	AMH	TAL BUF

Client Sample ID: TP-5 (0-0.5)

Lab Sample ID: 480-103550-12
Date Collected: 07/21/16 11:47
Matrix: Solid
Date Received: 07/22/16 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Client Sample ID: TP-5 (0-0.5)

Lab Sample ID: 480-103550-12
Date Collected: 07/21/16 11:47
Matrix: Solid
Date Received: 07/22/16 11:50
Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312970	07/26/16 14:29	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	313229	07/27/16 14:01	AMH	TAL BUF

Client Sample ID: TP-7 (0-0.5)

Lab Sample ID: 480-103550-13
Date Collected: 07/21/16 11:57
Matrix: Solid
Date Received: 07/22/16 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Client Sample ID: TP-7 (0-0.5)

Lab Sample ID: 480-103550-13
Date Collected: 07/21/16 11:57
Matrix: Solid
Date Received: 07/22/16 11:50
Percent Solids: 95.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312970	07/26/16 14:29	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	313229	07/27/16 14:16	AMH	TAL BUF

Client Sample ID: TP-6 (4-4.5)

Lab Sample ID: 480-103550-14
Date Collected: 07/21/16 10:54
Matrix: Solid
Date Received: 07/22/16 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Client Sample ID: TP-6 (4-4.5)

Lab Sample ID: 480-103550-14
Date Collected: 07/21/16 10:54
Matrix: Solid
Date Received: 07/22/16 11:50
Percent Solids: 85.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312970	07/26/16 14:29	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	313229	07/27/16 14:19	AMH	TAL BUF

Client Sample ID: TP-15 (2.5-4.0)

Lab Sample ID: 480-103550-15
Date Collected: 07/21/16 13:53
Matrix: Solid
Date Received: 07/22/16 11:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	312574	07/23/16 05:07	CSW	TAL BUF

Lab Chronicle

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Client Sample ID: TP-15 (2.5-4.0)
Date Collected: 07/21/16 13:53
Date Received: 07/22/16 11:50

Lab Sample ID: 480-103550-15
Matrix: Solid
Percent Solids: 85.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			312970	07/26/16 14:29	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	313229	07/27/16 14:23	AMH	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Method	Method Description	Protocol	Laboratory
6010C	Metals (ICP)	SW846	TAL BUF
Moisture	Percent Moisture	EPA	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: Benchmark Env. Eng. & Science, PLLC
Project/Site: Benchmark - Lead/TCLP Lead analysis

TestAmerica Job ID: 480-103550-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-103550-1	TP-13 (0.5-2.5)	Solid	07/21/16 13:15	07/22/16 11:50
480-103550-2	TP-14 (0-1.5)	Solid	07/21/16 13:21	07/22/16 11:50
480-103550-3	TP-15 (0-2.5)	Solid	07/21/16 13:55	07/22/16 11:50
480-103550-4	TP-2 (0-1)	Solid	07/21/16 09:53	07/22/16 11:50
480-103550-5	TP-3 (0-1.5)	Solid	07/21/16 10:03	07/22/16 11:50
480-103550-6	TP-10 (0-3.0)	Solid	07/21/16 12:44	07/22/16 11:50
480-103550-7	TP-5 (0.5-1.5)	Solid	07/21/16 10:41	07/22/16 11:50
480-103550-8	TP-8 (0-1.5)	Solid	07/21/16 12:28	07/22/16 11:50
480-103550-9	TP-1 (0-1)	Solid	07/21/16 09:38	07/22/16 11:50
480-103550-10	TP-11 (0-0.5)	Solid	07/21/16 12:55	07/22/16 11:50
480-103550-11	TP-17 (0-1.0)	Solid	07/21/16 14:20	07/22/16 11:50
480-103550-12	TP-5 (0-0.5)	Solid	07/21/16 11:47	07/22/16 11:50
480-103550-13	TP-7 (0-0.5)	Solid	07/21/16 11:57	07/22/16 11:50
480-103550-14	TP-6 (4-4.5)	Solid	07/21/16 10:54	07/22/16 11:50
480-103550-15	TP-15 (2.5-4.0)	Solid	07/21/16 13:53	07/22/16 11:50

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Temperature on Receipt ______

Drinking Water? Yes ☐ No ☐

TAL-4124 (1007)

Client	Benchmark Eng
Project Manager	Tom Forbes
Date	7/22/16
Chain of Custody Number	284230
Address	2558 Hamburg Turnpike
Telephone Number (Area Code)/Fax Number	(716) 856-0599
Lab Number	
Page	1 of 2
City	Lackawanna
State	NY
Zip Code	14218
Site Contact	T. Behrendt
Lab Contact	B. Fischer
Project Name and Location (State)	0381-016-001
Carrier/Waybill Number	
Contract/Purchase Order/Quote No.	

Analysis (Attach list if more space is needed)

Special Instructions/ Conditions of Receipt

480-103550 Chain of Custody

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Matrix: Aqueous	Matrix: Sed.	Matrix: Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	T. Pb	TCLP Pb
TP-13 (0.5-2.5)	7/21/16	1315				X	X						X	X
TP-14 (0-1.5)		1321				X	X						X	X
TP-15 (0-2.5)		1355				X	X						X	
TP-2 (0-1)		953				X	X						X	X
TP-3 (0-1.5)		1003				X	X						X	
TP-10 (0-3.0)		1244				X	X						X	X
TP-5 (0.5-1.5)		1041				X	X						X	X
TP-8 (0-1.5)		1228				X	X						X	
TP-1 (0-1)		938				X	X						X	
TP-11 (0-0.5)		1255				X	X						X	X
TP-17 (0-1.0)		1420				X	X						X	
TP-5 (0-0.5)	↓	1147				X	X						X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other 3 DAY

QC Requirements (Specify) STANDARD

	Signature	Date	Time		Signature	Date	Time
1. Relinquished By	[signature]	7/22/16	745	1. Received By	[signature]	7/22/16	0935
2. Relinquished By	[signature]	7/22/16	1150	2. Received By	[signature] TA	07/22/16	1150
3. Relinquished By				3. Received By			

Comments Temp 4.8 #1

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Temperature on Receipt ______

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Benchmark Eng	Tom Forbes	7/22/16	284231
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	
2558 Hamburg Turnpike	(716) 856-0599		Page 2 of 2

City	State	Zip Code	Site Contact	Lab Contact	Analysis (Attach list if more space is needed)
Lackawanna	NY	14218	B. Fischer	T. Behnardt	

Project Name and Location (State): 0381-016-001

Carrier/Waybill Number:

Contract/Purchase Order/Quote No.:

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	T. Pb	Special Instructions/ Conditions of Receipt
TP-7 (0-0.5)	7/21/16	1157				X		X						X	
TP-6 (4-4.5)	↓	1054				X		X						X	
TP-15 (2.5-4.0)	↓	1353				X		X						X	

Matrix: Air, Aqueous, Sed., Soil — Containers & Preservatives: Unpres., H2SO4, HNO3, HCl, NaOH, ZnAc/NaOH

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ______ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other 3DAY

QC Requirements (Specify) STANDARD

	Date	Time		Date	Time
1. Relinquished By [signature]	7/22/16	745	1. Received By [signature]	7/22/16	0935
2. Relinquished By [signature]	7/22/16	1150	2. Received By [signature] TA	07/22/16	1150
3. Relinquished By			3. Received By		

Comments: Temp 4.8 #

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Benchmark Env. Eng. & Science, PLLC

Job Number: 480-103550-1

Login Number: 103550
List Number: 1
Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	BENCHMARK
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	