Phase II Environmental Investigation Report

Spill No. 1505941

784-790 Center Street and an Unaddressed Parcel on Onondaga Street
Lewiston, New York

September 2015 0136-015-002

Prepared For:

Ellicott Development Company

Prepared By:

TurnKey Environmental Restoration, LLC

2558 Hamburg Turnpike, Suite 300, Buffalo, New York | phone: (716) 856-0635 | fax: (716) 856-0583

PHASE II ENVIRONMENTAL INVESTIGATION REPORT

Spill No. 1505941

784-790 Center Street and an Unaddressed Parcel on Onondaga Street
Lewiston, New York

September 2015 0136-015-002

Prepared for:

Ellicott Development Company

PHASE II ENVIRONMENTAL INVESTIGATION REPORT

Spill No. 1505941

784-790 Center Street and an Unaddressed Parcel on Onondaga Street

Lewiston, New York

Table of Contents

LIST OF TABLES

LIST OF FIGURES

APPENDICES

1.0 INTRODUCTION

At your request, TurnKey Environmental Restoration, LLC (TurnKey) performed a Phase II Environmental Investigation at 784-790 Center Street and an unaddressed parcel on Onondaga Street in Lewiston, Niagara County, New York (the Site, see Figures 1 and 2).

1.1 Site Description and Current Site Use

The Site is located in a moderately developed commercial and residential area of Lewiston, New York and includes two tax parcels, 101.11-1-37.1 and 101.11-1-59 (referred to herein as Parcels 1 and 2, respectively). The Site, totaling approximately four (4) acres, is bordered by Onondaga Street to the north, Center Street to the south, North 8th Street to the east, and commercial and residential properties to the west.

Parcel 1 is developed with two commercial buildings (see Figure 2); Building 1 is currently used by Smith Brothers Pizza as a restaurant/pizzeria and Building 2 is vacant. Parcel 2 is currently vacant/undeveloped land. Information relative to historic Site use is provided below.

1.2 Site History

Based on historical research completed for the Site, including reviews of historical sources such as Sanborn maps, Building 1 was used as an automotive repair operation with a gasoline station and underground storage tanks (USTs) from at least 1961 through at least 1987. Based on historic Sanborn maps, previous gasoline stations pre-dated construction of Building 1 and were identified on-Site from at least 1923 through at least 1940. Numerous tanks were identified in connection with Parcel 1 and proper closure documentation is apparently unavailable. It should further be noted that TurnKey observed the presence of three vent pipes at the northwest corner of Building 1; such are possibly associated with USTs remaining in-place.

Building 2, constructed in 1936, has mainly been utilized commercially and was first utilized as an automotive repair operation. An undated photograph on a historic property record card showed that Building 2 had been converted to multi-tenant commercial and included a tenant named Manhattan Cleaners, an apparent dry cleaner.

An additional property record card identified a structure containing a residence, a repair garage and an associated junk yard at Parcel 1 in at least 1931. This structure was demolished in 1978. Disturbances believed to be associated with a former junk yard appear on Parcels 1 and 2 on historic aerial photographs.

Additional environmental concerns identified for the Site include railroad tracks along 8th Street from at least 1923 through at least 1940 and a former orchard in at least 1934.

Historical documents including aerials and Sanborn maps are included in Appendix A.

1.3 Scope of Work

This investigation was completed on behalf of Ellicott Development Company to assess potential environmental impacts associated with the historic use of the Site as a dry cleaner, gasoline station, automotive repair operation and junk yard. This investigation included completion of soil borings with five converted into temporary monitoring wells, soil sampling and analysis for volatile organic compounds (VOCs), polynuclear aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs) and metals.

2.0 METHODS OF INVESTIGATION

2.1 Subsurface Investigation

On August 20, 2015, TurnKey's subcontractor, Zoladz Construction Company, Inc. (Zoladz), mobilized a track-mounted Geoprobe drill rig (Model 6610 DT) equipped with a 1.5-inch diameter, 48-inch long macro-core sampler, to the Site. A total of 13 soil borings (SB-1 through SB-13) were advanced on exterior portions of the Site. The borings were completed proximate to Building 1 to assess the former gasoline station/automotive repair operations, proximate to Building 2 to assess the former dry cleaning and automotive repair operations and on central and northern portions of the Site to assess historic junk yard operations (see Figure 3).

Each boring was advanced until equipment refusal or the targeted depths were reached (see Appendix B). Boring depths ranged between approximately 7 and 22 feet below ground surface (fbgs). Continuous 4-foot sample cores were retrieved from the boring locations in clear PVC sleeves to allow for field characterization of the subsurface lithology and collection of soil samples by TurnKey's Environmental Scientist.

The physical characteristics of all exterior boreholes were classified using the ASTM D2488 Visual-Manual Procedure Description. Soils from each borehole were screened via headspace screening using a MiniRae 2000 PID. Visual and/or olfactory observations, if any, were noted. All field observations, including lithology, depths, PID scan results, etc., at each borehole location are summarized in the Soil Boring Logs provided in Appendix B. Photographs taken during the boring investigation are included in Appendix C.

It should be noted that five (5) of the soil borings were converted into one-inch diameter PVC temporary monitoring wells. However, when TurnKey returned to the Site to gauge the wells on the day subsequent to drilling/well installation on August 21, 2015, no groundwater was present within the wells. As such, no groundwater samples were collected from the Site.

2.2 Soil Sampling and Analysis

Eleven (11) soil samples from SB-2 through SB-6, SB-8 through SB-13 were transported under chain-of custody command to Test America Laboratories, Inc. (Test America) for analysis of volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), Resource Conservation and Recovery Act (RCRA) Metals and/or polychlorinated biphenyls (PCBs), via United States Environmental Protection Agency (USEPA) Methods 8260, 8270, 6010, and 8082, respectively. All samples were collected in laboratory provided sample bottles and were cooled to 4^0 C prior to transport.

3.0 INVESTIGATION FINDINGS

A summary of the qualitative soil screening and soil sample results from the soil boring investigation are presented in Tables 1 and 2, respectively. Compounds that were analyzed for and detected above their respective laboratory reporting limit are listed on the Table 2 with their associated results. Table 2 also presents the 6NYCRR Part 375 and Commissioner's Policy/Soil Cleanup Guidance (CP-51) soil cleanup objectives (SCOs) for comparison purposes. The soil sample results are discussed below.

3.1 Qualitative Soil Screening

As summarized on Table 1, an elevated PID reading of 1,080 parts per million (ppm) and olfactory evidence of impact (petroleum-like odors) were observed at SB-2 (18 to 19 foot interval) completed south of Building 2.

The remaining borings did not exhibit elevated PID readings or olfactory/visual concerns.

3.2 Possible Remaining UST

A soil boring was advanced proximate to an asphalt depression, a suspected remaining tank location west of Building 1, and equipment refusal was encountered at approximately 3 fbgs, a depth common for the top of a tank. Vibrations from the drill rig were noted on the vent pipes remaining along the exterior wall of Building 1. This suggests that abandoned tank(s) may remain on-site.

3.3 Soil Analytical Results

As shown on Table 2, four VOCs (benzene, toluene, ethylbenzene and total xylenes, collectively BTEX) were detected at concentrations above their respective CP-51 and Part 375 Unrestricted Use SCOs in the soil sample collected from the contamination at SB-2 (18 to 19 foot interval). The VOCs identified are indicative of a petroleum release to the environment.

PAHs were detected in one (1) of the eight (8) soil samples submitted for PAH analysis. Specifically, six PAHs (benzo(a)anthrancene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, and indeno(1,2,3-cd)pyrene) were detected at concentrations above their respective CP-51 and Part 375 Unrestricted and/or Commercial SCOs at SB-4 (0-4 foot interval) completed west of Building 1, proximate to a possible UST area. The elevated PAHs in this area may be indicative of a release from a petroleum UST.

PCBs (specifically, aroclor 1260) exceeded the Part 375 Commercial Use SCO in one (1) of the seven (7) soil samples submitted for PCB analysis. A PCB concentration of 1.4 mg/kg, which exceeds the Commercial SCO of 1 mg/kg, was identified at SB-11 (0-4') completed in the former junk yard.

Regarding metals, lead and/or mercury were identified at concentrations above Unrestricted and/or Commercial SCOs in soil samples collected across the Site. Of note, lead significantly exceeded the Commercial SCO of 1,000 mg/kg with concentrations of 5,340 and 2,080 noted at SB-8 (north of Building 2) and SB-11 (former junk yard), respectively. The sample from SB-11 also exhibited barium, cadmium and chromium above Unrestricted and/or Commercial SCOs. The elevated metal concentrations identified are believed to be associated with fill material noted across the Site and/or historic operations.

The laboratory analytical report is included in Appendix D.

3.4 NYSDEC Spill

Due to the field evidence of impact along with analytical results that suggest the presence of petroleum-impacted soils, as required by law, the New York State Department of Environmental Conservation (NYSDEC) was notified and Spill No. 1505941 was assigned to the Site. Mr. Sal Calandra is reportedly assigned as the Spill Engineer.

3.5 Site Geology/Hydrogeology

The overburden geology over the majority of the Site in the upper 8 to 12 fbgs is generally described as fill material consisting of sand, gravel and clay with brick, concrete and wood fragments. The fill material appears to be overlying native clay soils with various amounts of sand and gravel to depths of at least 16 to 22 fbgs. Equipment refusal was encountered between approximately 7 and 22 fbgs across the Site.

Groundwater was not encountered during the intrusive drilling work nor was it present in temporary monitoring wells installed during the investigation.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this investigation, TurnKey offers the following conclusions and recommendations:

- On-Site soils appear to be impacted with VOCs, PAHs, metals and PCBs reasonably attributed to historic on-Site operations and the presence of fill materials observed across the Site.
- Field observations (olfactory evidence of impact and a PID reading over 1,000 ppm) and analytical results suggest the presence of petroleum contamination on-Site.
- Abandoned USTs may remain on-Site.
- NYSDEC Spill No. 1505941 was issued for the Site.
- Due to the nature of historic operations, the potential for additional areas of environmental impact exist on-Site, especially in areas of the former junk yard.
- TurnKey understands that Ellicott Development Company would like to address the contamination at the Site and is considering redevelopment of the Site. Consideration should be given to applying to the New York Brownfield Cleanup Program (NY BCP), which offers remediation and redevelopment tax credits, as well as release of certain environmental liabilities.

5.0 LIMITATIONS

This report has been prepared for the exclusive use of Ellicott Development Company. The contents of this report are limited to information available at the time of the site investigation activities and to data referenced herein, and assume all referenced information sources to be true and accurate. The findings herein may be relied upon only at the discretion of Ellicott Development Company. Use of or reliance upon this report or its findings by any other person or entity is prohibited without written permission of TurnKey Environmental Restoration, LLC.

TABLES

TABLE 1

QUALITATIVE SOIL SCREENING SUMMARY
PHASE II ENVIRONMENTAL INVESTIGATION
784-790 CENTER STREET AND AN UNADDRESSED PARCEL ON ONONDAGA STREET
LEWISTON, NEW YORK

SAMPLE LOCATION	Highest PID Reading (ppm)	Highest PID Sample Interval (fbgs)	NOTES
SB-1	0	NA	Fill material observed (0 to 4 fbgs)
SB-2	1080	18 to 19	Strong petroleum like odor (18 to 19 fbgs)
SB-3	0	NA	Fill material observed (0 to 7 fbgs)
SB-4	0	NA	Fill material observed (0 to 8 fbgs)
SB-5	0	NA	Fill material observed (0 to 4 and 8 to 16 fbgs)
SB-6	0	NA	Fill material observed (0 to 8 fbgs)
SB-7	0	NA	No fill observed.
SB-8	0	NA	Fill material observed (0 to 4 fbgs)
SB-9	0	NA	Fill material observed (0 to 4 fbgs)
SB-10	0	NA	Fill material observed (0 to 8 fbgs)
SB-11	0	NA	Fill material observed (0 to 4 fbgs)
SB-12	0	NA	Fill material observed (0 to 4 fbgs)
SB-13	0	NA	Fill material observed (0 to 8 fbgs)

Notes:

fbgs = feet below ground surface

ppm = parts per million

NA = Not applicable

TABLE 2

SOIL ANALYTICAL SUMMARY

784-790 CENTER STREET AND AN UNADDRESSED PARCEL OFF ONONDAGA STREET

LEWISTON, NY

PARAMETER[1]	CP-51 SCO's[2]	Unrestricted Use SCO's[3]	Commercial Use SCO's[4]	SAMPLE LOCATION (DEPTH)										
				SB-2 (18-19')	SB-3 (4-7')	SB-4 (0-4')	SB-5 (12-16')	SB-6 (8-12')	SB-8 (0-4')	SB-9 (0-4')	SB-10 (0-8')	SB-11 (0-4')	SB-12 (0-4')	SB-13 (4-8')
				08/20/2015										
				Former Dry Cleaner	Former Gasoline Service Station	Former Gasoline Service Station	Former Gasoline Service Station	Former Gasoline Service Station	Former Dry Cleaner	Former Dry Cleaner	Former Junk Yard	Former Junk Yard	Former Junk Yard	Former Junk Yard
Volatile Organic Compounds (VOCs) - mg/Kg [4]														
2-Hexanone	--	--	--	22	--	--	--	--	--	--	--	--	--	--
4-methyl-2-pentanone (MIBK)	--	--	--	9.7	--	--	--	--	--	--	--	--	--	--
Benzene	**0.06**	**0.06**	**44**	**0.84 J**	--	--	--	--	--	--	--	--	--	--
Cyclohexane	--	--	--	39	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	**1**	**1**	**390**	**52**	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene (Cumene)	--	--	--	7.3	--	--	--	--	--	--	--	--	--	--
Methylcyclohexane	--	--	--	97	--	--	--	--	--	--	--	--	--	--
Toluene	**0.7**	**0.7**	**500**	**2.8**	--	--	--	--	--	--	--	--	--	--
Total Xylenes	**0.26**	**0.26**	**500**	**250 - DL**	--	--	--	--	--	--	--	--	--	--
Semi-Volatile Organic Compounds (SVOCs) - mg/Kg [4]														
Acenaphthene	**20**	**20**	**500**	--	ND	0.97 J	ND	ND	--	--	ND	ND	ND	ND
Anthracene	**100**	**100**	**500**	--	ND	5	ND	ND	--	--	ND	ND	ND	ND
Benzo(a)anthracene	**1**	**1**	**5.6**	--	ND	**9.1**	ND	ND	--	--	ND	ND	ND	ND
Benzo(a)pyrene	**1**	**1**	**1**	--	ND	**6.9**	ND	ND	--	--	ND	ND	ND	ND
Benzo(b)fluoranthene	**1**	**1**	**5.6**	--	ND	**9**	ND	ND	--	--	ND	ND	ND	ND
Benzo(ghi)perylene	**100**	**100**	**500**	--	ND	5.5	ND	ND	--	--	ND	ND	ND	ND
Benzo(k)fluoranthene	**0.8**	**0.8**	**56**	--	ND	**4.1**	ND	ND	--	--	ND	ND	ND	ND
Chrysene	**1**	**1**	**56**	--	ND	**8.4**	ND	ND	--	--	ND	ND	ND	ND
Fluoranthene	**100**	**100**	**500**	--	ND	27	ND	ND	--	--	ND	ND	ND	ND
Fluorene	**30**	**30**	**500**	--	ND	1.4 J	ND	ND	--	--	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	**0.5**	**0.5**	**5.6**	--	ND	**4.6**	ND	ND	--	--	ND	ND	ND	ND
Phenanthrene	**100**	**100**	**500**	--	ND	22	ND	ND	--	--	ND	ND	ND	ND
Pyrene	**100**	**100**	**500**	--	ND	20	ND	ND	--	--	ND	ND	ND	ND
Total PCBs - mg/Kg [4]														
Aroclor 1260	--	**0.1**	**1**	--	--	ND	ND	ND	--	--	ND	1.4	ND	ND
Total PCBs	--	**0.1**	**1**	--	--	ND	ND	ND	--	--	ND	1.4	ND	ND
Total Metals - mg/Kg														
Arsenic	--	**13**	**16**	--	4	3.4	3.5	3.3	12.2	6.8	4.1	12.5	5.8	2.8
Barium	--	**350**	**400**	--	72.6	132	55.9	44.2	144	120 F1	119	582	61.5	102
Cadmium	--	**2.5**	**9.3**	--	0.52	1.2	0.28	0.61	7.3	0.42	0.41	17	4.9	0.29
Chromium	--	**30**	**1500**	--	15.1	9.4	8.2	7.8	27.3	10.3	18.2	36	14.1	11.3
Lead	--	**63**	**1000**	--	31.1	105	9.1	19.7	5340	79.8 F1	23	2080	24.3	53.4
Mercury	--	**0.18**	**2.8**	--	0.034	0.26	ND	ND	0.21	0.31	0.033	0.16	0.05	0.57

Notes:

1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
2. Values per NYSDEC CP-51 Soil Cleanup Objectives (SCOs).
3. Values per Part 375 Unrestricted Use SCOs.
4. Values per Part 375 Commercial SCOs.
4. Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparisons to SCOs

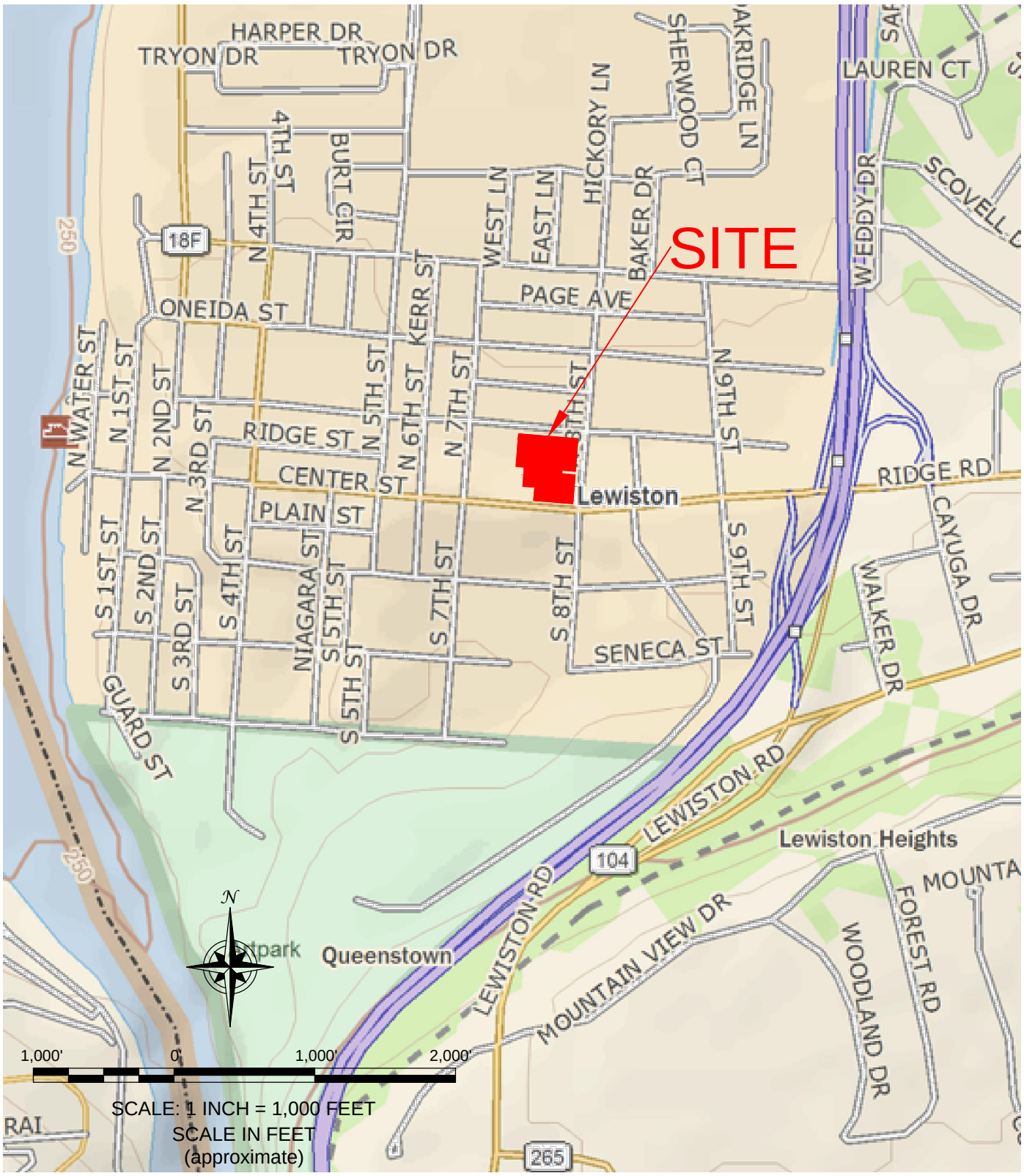
Definitions:

ND = Parameter not detected above laboratory detection limit.
"--" = No value available for the parameter. Or parameter not analyzed for.
J = Estimated value; result is less than the sample quantitation limit but greater than zero.
DL = Indicates a dilution.
F1 = MS and/or MSD Recovery is outside acceptance limits.

Bold	= Result exceeds CP-51 SCOs.
Bold	= Result exceeds Unrestricted use SCOs.
Bold	= Result exceeds Commercial use SCOs.

FIGURES

FIGURE 1



TurnKey Environmental Restoration, LLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

PROJECT NO.: 0136-012-007

DATE: SEPTEMBER 2015

DRAFTED BY: JGT / KRR

SITE LOCATION AND VICINITY MAP

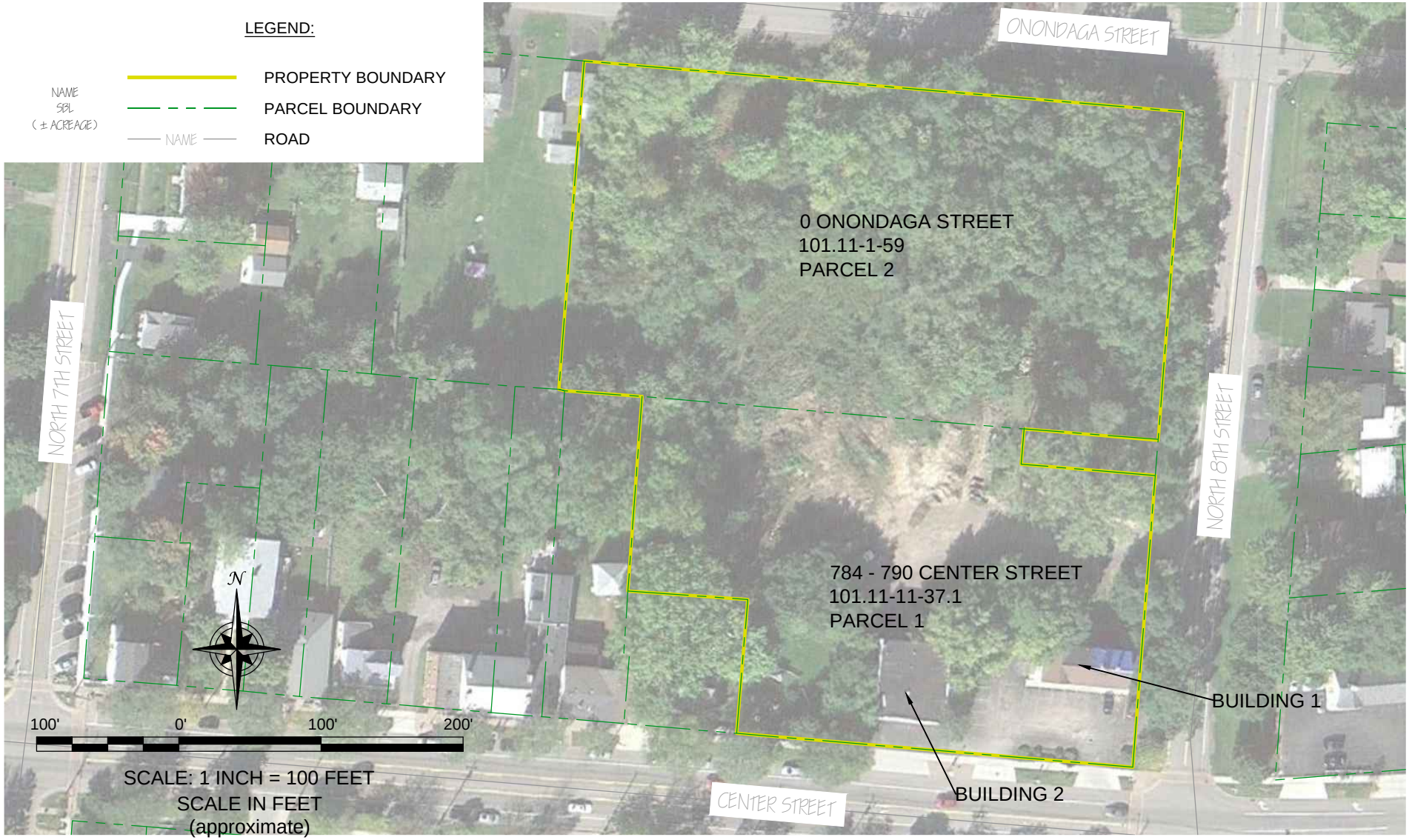
PHASE II ENVIRONMENTAL INVESTIGATION REPORT

784 - 790 CENTER STREET & 0 ONONDAGA STREET SITE

LEWISTON, NEW YORK

PREPARED FOR

ELLICOTT DEVELOPMENT COMPANY



TurnKey Environmental Restoration, LLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

PROJECT NO.: 0136-012-007

DATE: SEPTEMBER 2015

DRAFTED BY: JGT / KRR

SITE PLAN (AERIAL)

PHASE II ENVIRONMENTAL INVESTIGATION REPORT

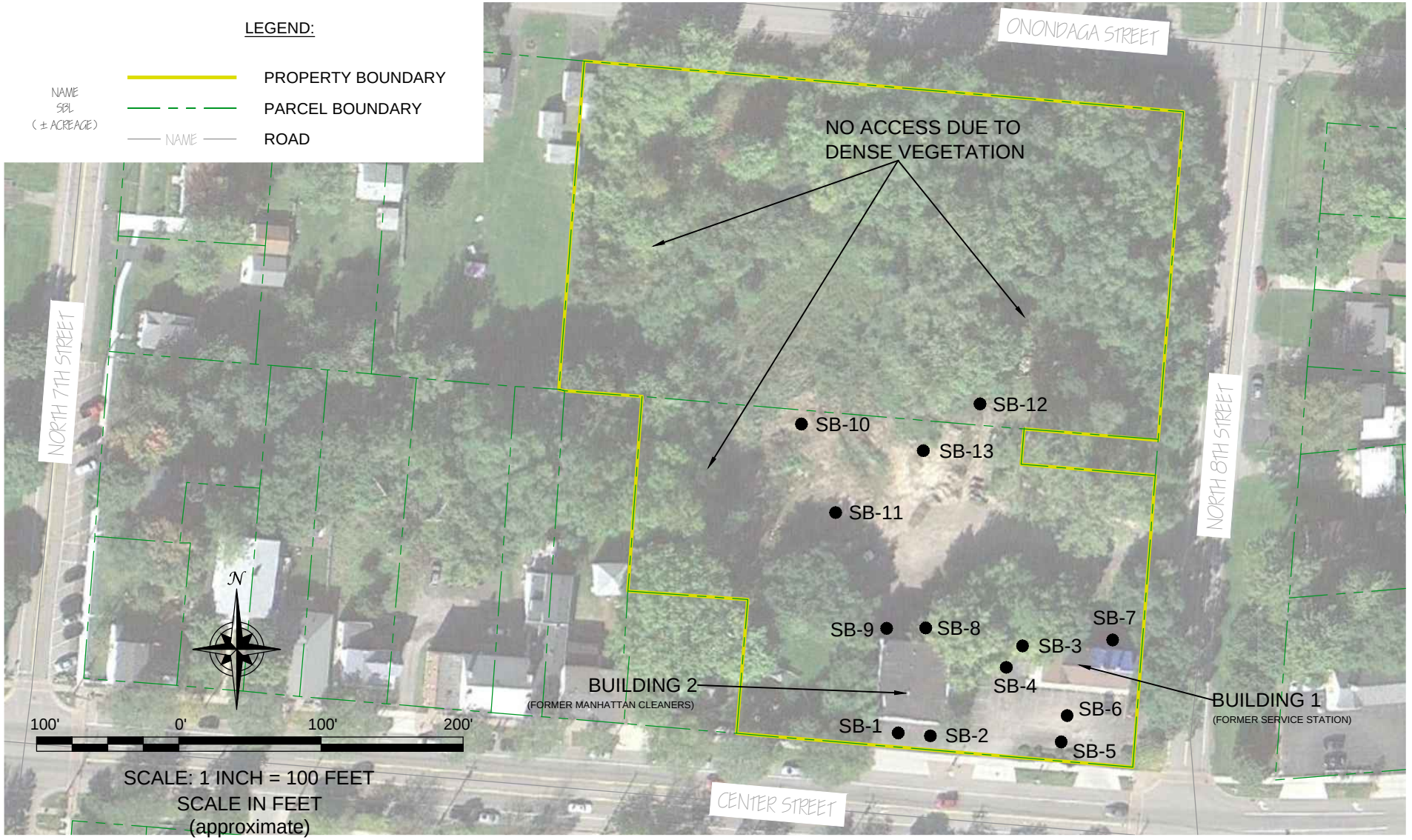
784 - 790 CENTER STREET & 0 ONONDAGA STREET SITE

LEWISTON, NEW YORK

PREPARED FOR

ELLICOTT DEVELOPMENT COMPANY

FIGURE 2



TurnKey Environmental Restoration, LLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

PROJECT NO.: 0136-012-007

DATE: SEPTEMBER 2015

DRAFTED BY: JGT / KRR

INVESTIGATION LOCATIONS

PHASE II ENVIRONMENTAL INVESTIGATION REPORT

784 - 790 CENTER STREET & 0 ONONDAGA STREET SITE

LEWISTON, NEW YORK

PREPARED FOR

ELLICOTT DEVELOPMENT COMPANY

FIGURE 3

APPENDIX A

HISTORICAL DOCUMENTS
(AERIAL PHOTOGRAPHS AND SANBORN MAPS)

1934


10/1934
Fairchild Pl
N 5th St
N 6th St
N 7th St
Onondaga St
N 8th St
Smith St
Center St
18F
S 6th St
S 7th St
S 8th St
Portage Rd
Area of the Site
image NASA
© 2012 Google
Google earth
Imagery Date: 7/1/1934
1995
43°10'23.36" N 79°02'11.55" W elev 362 ft
Eye alt 2475 ft


Area of the Site
INQUIRY #: 3409972.5
YEAR: 1963
= 500'
N


Area of the Site
INQUIRY #: 3409972.5
YEAR: 1970
= 1000'
N


Area of the Site
INQUIRY #: 3409972.5
YEAR: 1972
= 500'
N


Area of the Site
INQUIRY #: 3409972.5
YEAR: 1985
= 1000'
N


INQUIRY #: 3409972.5
YEAR: 1995
= 500'
N

1995


3/1995
Fairchild Pl
N 5th St
N 6th St
N 7th St
Onondaga St
N 8th St
Smith St
Center St
18F
S 6th St
S 7th St
S 8th St
Portage Rd
© 2012 Google
Image U.S. Geological Survey
Google earth
Imagery Date: 3/27/1995
1995
43°10'29.64" N 79°02'27.79" W elev 350 ft
Eye alt 2475 ft

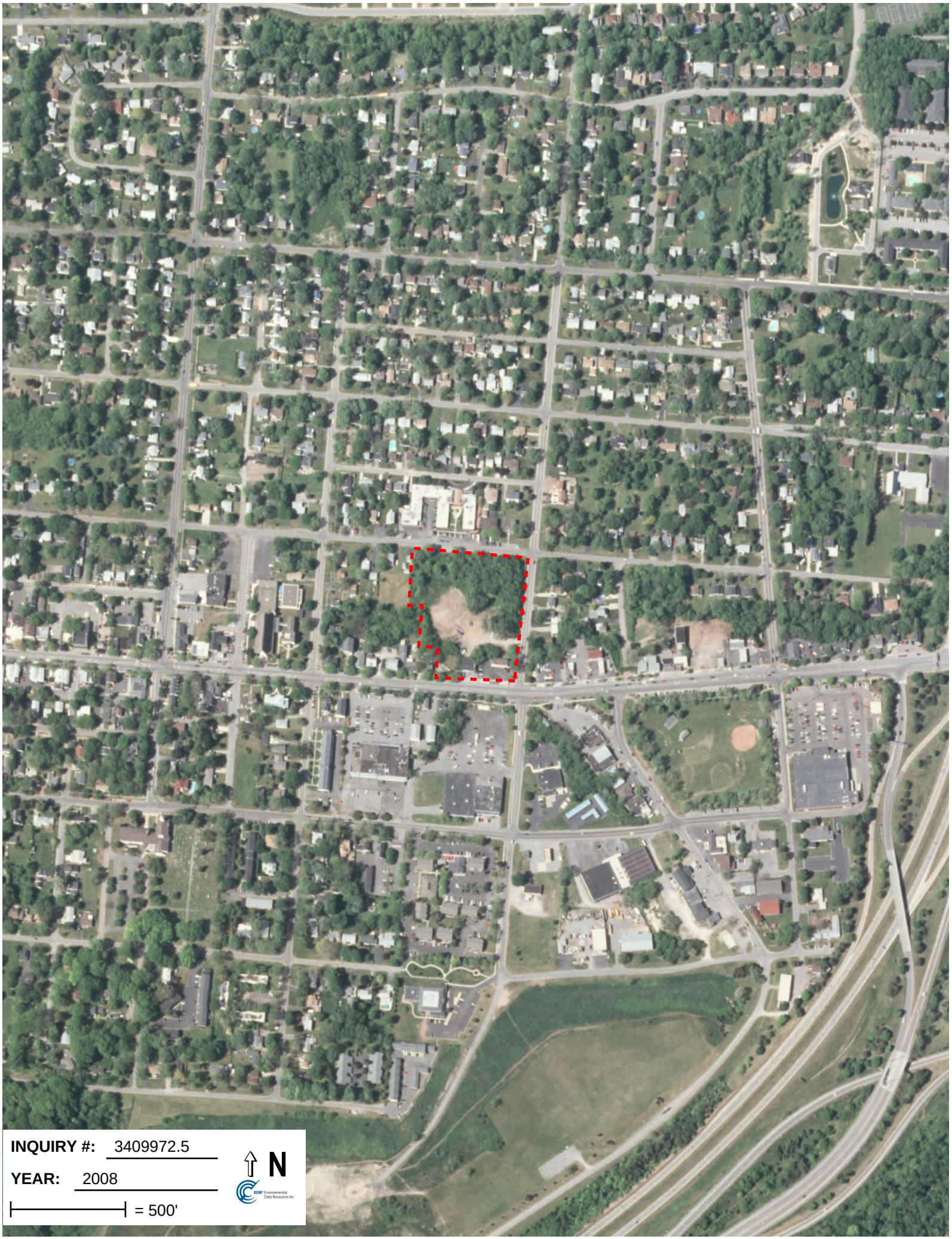
2002


4/2002
Fairchild Pl
N 5th St
N 6th St
N 7th St
Onondaga St
N 8th St
Smith St
Center St
18F
S 6th St
S 7th St
S 8th St
Portage Rd
© 2012 Google
Image © 2012 New York GIS
Google earth
Imagery Date: 3/31/2002
1995
43°10'23.36" N 79°02'11.55" W elev 362 ft
Eye alt 2475 ft


INQUIRY #: 3409972.5
YEAR: 2006
= 500'
N

2006

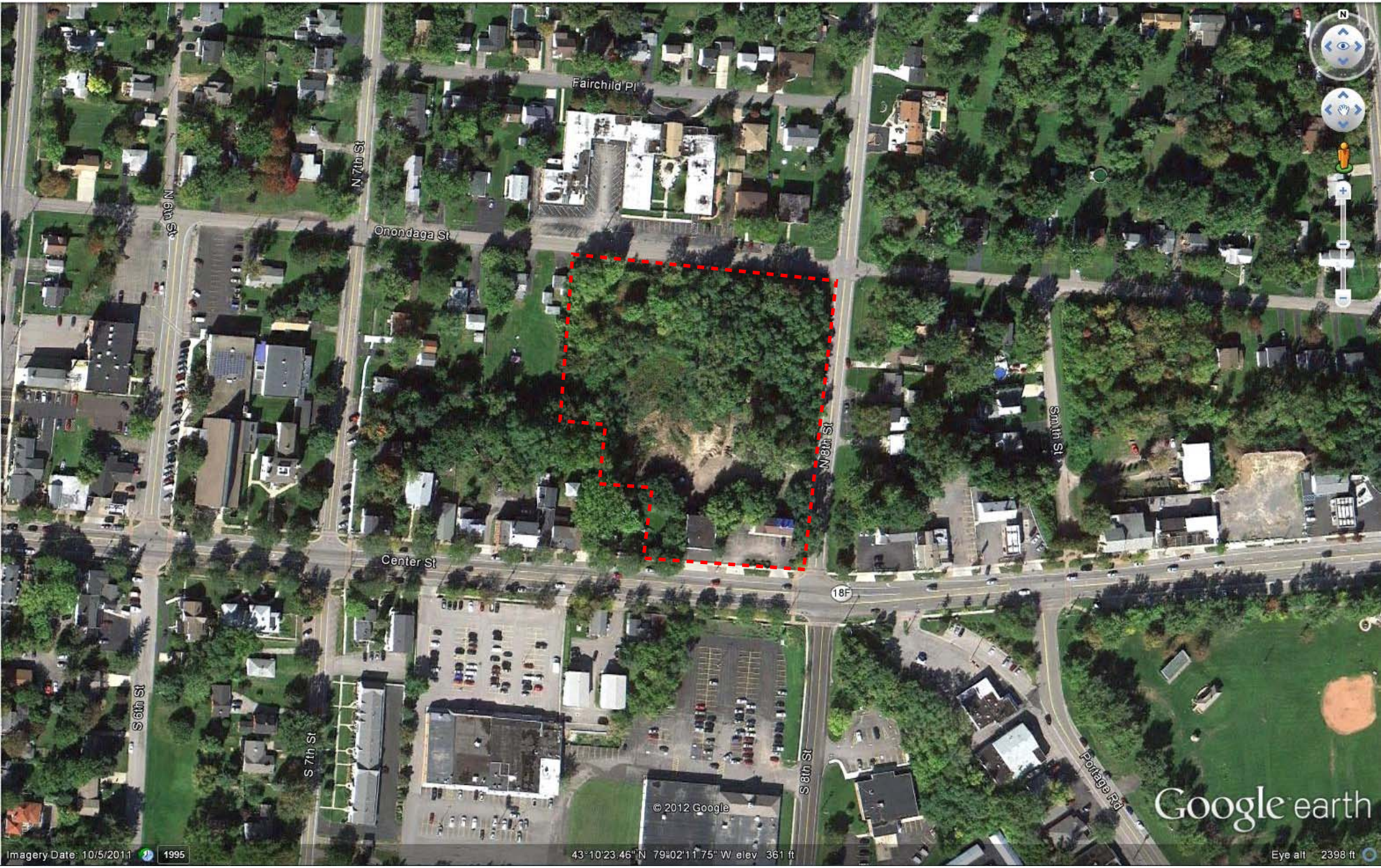

4/2006
1994
2011
Fairchild Pl
N 5th St
N 6th St
N 7th St
Onondaga St
N 8th St
Smith St
Center St
18F
S 6th St
S 7th St
S 8th St
Portage Rd
© 2012 Google
Image © 2012 First Base Solutions
Google earth
Imagery Date: 4/19/2006
1995
43°10'30.68" N 79°02'28.08" W elev 354 ft
Eye alt 2475 ft

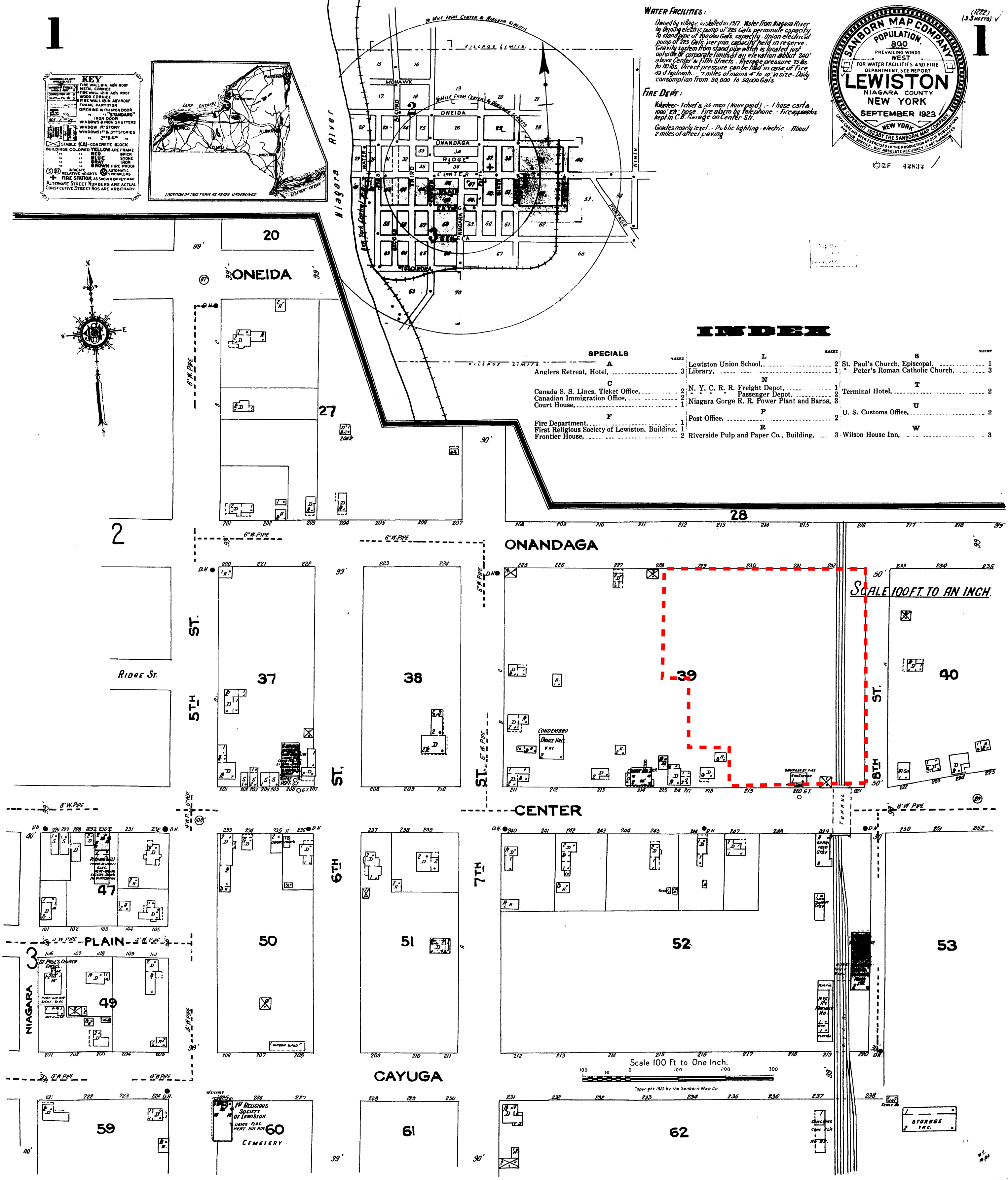

INQUIRY #: 3409972.5
YEAR: 2008
= 500'
N

2009

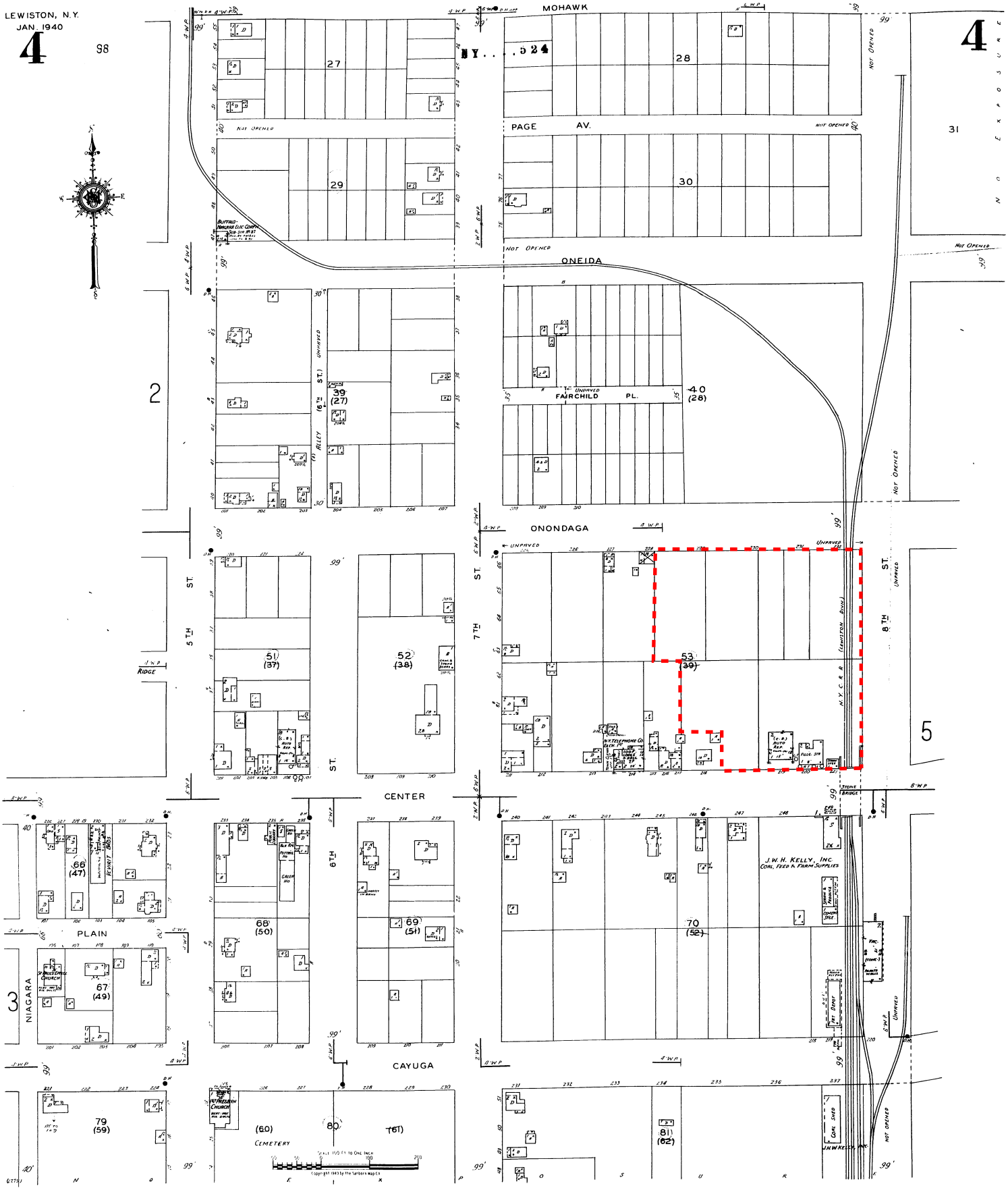

7/2009
Fairchild Pl
N 5th St
N 6th St
N 7th St
Onondaga St
N 8th St
Smith St
Center St
18F
S 6th St
S 7th St
S 8th St
Portage Rd
© 2012 Google
Image U.S. Geological Survey
Google earth
Imagery Date: 10/6/2008
1995
43°10'29.85" N 79°02'26.89" W elev 348 ft
Eye alt 2475 ft

2011


Fairchild Pl
N 6th St
N 7th St
Onondaga St
N 8th St
Smith St
Center St
18F
S 6th St
S 7th St
S 8th St
Portage Rd
© 2012 Google
Google earth
Imagery Date: 10/5/2011
1995
43°10'23.46" N 79°02'11.75" W elev 361 ft
Eye alt 2398 ft


1
WATER FACILITIES:
Owned by village, installed in 1917. Water from Niagara River by Deming electric pump of 225 Gals. per minute capacity to stand pipe of 200,000 Gals. capacity. Union electrical pump of 225 Gals. per min. capacity held in reserve. Gravity system from stand pipe which is located just outside of corporate limits at an elevation about 240' above Center & Fifth Streets. Average pressure 75 lbs. to 110 lbs. Direct pressure can be had in case of fire. 43 d. hydrants. - 7 miles of mains 4" to 10" in size. Daily consumption from 30,000 to 50,000 Gal's
FIRE DEP'T:
Volunteer:- 1 chief & 35 men (None paid). - 1 hose cart & 1000' 2½" hose. Fire alarm by telephone. - Fire apparatus kept in C.B. Garage on Center Str.
Grades nearly level. - Public lighting: electric. About 2 miles of street paving
SANBORN MAP COMPANY
POPULATION 800
PREVAILING WINDS WEST
FOR WATER FACILITIES AND FIRE DEPARTMENT SEE REPORT
LEWISTON
NIAGARA COUNTY
NEW YORK
SEPTEMBER 1923
COPYRIGHT 1923 BY THE SANBORN MAP COMPANY
(1222) (3 SHEETS)
KEY
LOCATION OF THIS TOWN AS ABOVE UNDERLINED
INDEX
SPECIALS
A
Anglers Retreat, Hotel, 3
C
Canada S. S. Lines, Ticket Office, 2
Canadian Immigration Office, 2
Court House, 1
F
Fire Department, 1
First Religious Society of Lewiston, Building, 1
Frontier House, 2
L
Lewiston Union School, 2
Library, 1
N
N. Y. C. R. R. Freight Depot, 1
Passenger Depot, 2
Niagara Gorge R. R. Power Plant and Barns, 3
P
Post Office, 2
R
Riverside Pulp and Paper Co., Building, 3
S
St. Paul's Church, Episcopal, 1
" Peter's Roman Catholic Church, 3
T
Terminal Hotel, 2
U
U. S. Customs Office, 2
W
Wilson House Inn, 3
Niagara River
ONEIDA
ONANDAGA
CENTER
PLAIN
CAYUGA
RIDGE ST.
5TH ST.
6TH ST.
7TH ST.
8TH ST.
NIAGARA
SCALE 100 FT. TO AN INCH.
Scale 100 Ft to One Inch.
ST. PAUL'S CHURCH EPISCL.
1ST RELIGIOUS SOCIETY OF LEWISTON
CEMETERY
CONDEMNED DANCE HALL
STORAGE
TUNNEL
20
27
28
37
38
39
40
47
49
50
51
52
53
59
60
61
62

1923


LEWISTON, N.Y.
JAN. 1940
4
98
MOHAWK
PAGE AV.
ONEIDA
ONONDAGA
CENTER
CAYUGA
PLAIN
NIAGARA
RIDGE
5TH ST.
6TH ST.
7TH ST.
8TH ST.
FAIRCHILD PL.
NOT OPENED
UNPAVED
27
28
29
30
31
39 (27)
40 (28)
51 (37)
52 (38)
53 (39)
66 (47)
67 (49)
68 (50)
69 (51)
70 (52)
79 (59)
(60) CEMETERY
80
(61)
(62)
J.W.H. KELLY, INC.
COAL, FEED & FARM SUPPLIES
N.Y.C.R.R.
STONE BRIDGE
1940

APPENDIX B

SOIL BORING LOGS

Project No: 0136-015-002

Borehole Number: SB-1

Project: 790 Center Street Site

A.K.A.: NA

Client: Ellicott Development Company

Logged By: JSM

Site Location: 784-790 Center Street, Lewiston, NY

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs (ppm, 0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Lean Clay with Some Sand and Gravel*** Brown, moist, mostly medium plastic fine grains, some medium sand and fine angular gravel (non-native)	S1		2		0.0		
	-4.0								
	4.0	***Clay*** Brown, moist, medium plasticity fine grains with medium sand	S2		2		0.0		
5.0	-8.0								
	8.0	***No Recovery*** No Recovery	S3		0		0.0		
10.0	-12.0								
	12.0	***Lean Clay with sand*** Brown, moist, mostly medium plastic fine grains with trace fine grain sand	S4		0.5		0.0		
	-14.0								
	14.0	End of Borehole							*equipment refusal at 14 fbgs*
15.0									
20.0									

Drilled By: Zoladz Construction
Drill Rig Type: Geoprobe 6610 DT
Drill Method: Hydraulically Driven Percussion System with 4' macrocore
Comments: NA
Drill Date(s): August 20, 2015

Hole Size: 2"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 1 of 13

Project No: 0136-015-002

Borehole Number: SB-2

Project: 790 Center Street Site

A.K.A.: TMW-1

Client: Ellicott Development Company

Logged By: JSM

Site Location: 784-790 Center Street, Lewiston, NY

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 1000 / 2000)	Lab Sample	Well Completion Details or Remarks
-1.0	0.0	Ground Surface							
	0.0	***Asphalt*** Asphalt and subbase							
		Poorly Graded Gravel with Clay and Sand Gray/white, moist, mostly coarse angular gravel, some fine sand, few medium plasticity fines (non-native)	S1	NA	2				
4.0	-4.0 4.0	***Lean Clay*** brown, moist, medium plasticity fines, trace coarse subrounded gravel stiff	S2	NA	2		0.0		
9.0	-8.0 8.0	Same as above	S3	NA	2		0.0		
14.0	-12.0 12.0	***Sandy Lean Clay*** Brown, moist, mostly medium plasticity fines, some medium sand, trace fine subrounded gravel, stiff, massive	S4	NA	2		0.0		
	-16.0 16.0	As above, mostly low plasticity fines, no sand or gravel	S5	NA	2		0.0		
19.0	-18.0 18.0 -19.0 19.0	As above, gray, soft, strong petroleum-like odor (18-19 fbgs)	S6	NA	0.75		0.0 1080.0	Sample	refusal at 19 fbgs

Well Completion Details: *Bentonite Seal*; *Sch. 40 PVC Riser*; *Sand Filter Pack*; *Sch. 40 PVC Screen (0.010- inch) (8.0-18.0 fbgs)*

Drilled By: Zoladz Construction
Drill Rig Type: Geoprobe 6610 DT
Drill Method: Hydraulically driven percussion system
Comments: strong petroleum-like odor 18-19 fbgs
Drill Date(s): August 20, 2015

Hole Size: 2"
Stick-up: NA
Datum: Mean Sean Level

Sheet: 2 of 13

Project No: 0136-015-002

Borehole Number: SB-3

Project: 790 Center Street Site

A.K.A.: NA

Client: Ellicott Development Company

Logged By: JSM

Site Location: 784-790 Center Street, Lewiston, NY

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Organic Material*** organic material							
		Poorly graded Sand with Gravel Brown/black, moist, mostly fine grain loose sand, with some fine angular gravel and trace low plasticity fine grains (non-native)	S1	NA	0.75		0.0		
5.0			S2	NA	1		0.0	SAMPLE SUBMITTED	
	-7.0 7.0	End of Borehole							*refusal at 7fbgs*
10.0									
15.0									
20.0									

Drilled By: Zoladz Construction
Drill Rig Type: Geoprobe 6610 DT
Drill Method: Hydraulically Driven Percussion with 4" macrocore
Comments: NA
Drill Date(s): August 20, 2015

Hole Size: 4"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 3 of 13

Project No: 0136-015-002

Borehole Number: SB-4

Project: 790 Center Street Site

A.K.A.: NA

Client: Ellicott Development Company

Logged By: JSM

Site Location: 784-790 Center Street, Lewiston, NY

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs (ppm, 0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Well Graded Sand with Gravel*** Black, moist, mostly fine grain sand with some fine angular gravel (non-native)	S1	NA	2		0.0	SAMPLE SUBMITTED	
5.0			S2	NA	2		0.0		
	-8.0 8.0	***Gravelly Lean Clay with Sand*** Brown, moist, low plasticity, stiff fine grains with some white coarse angular gravel and some fine grain sand (non-native)	S3	NA	2		0.0		
10.0	-12.0 12.0	***Lean Clay with Sand*** Brown, moist, medium plasticity, stiff, fine grains with some fine grain sand	S4	NA	0.16		0.0		
15.0	-15.0 15.0	End of Borehole							*refusal at 15 fbgs*
20.0									

Drilled By: Zoladz Construction
Drill Rig Type: Geoprobe 6610 DT
Drill Method: Hydraullically Driven Percussion with 4' macrocore
Comments: NA
Drill Date(s): August 20, 2015

Hole Size: 4"
Stick-up: NA
Datum: Mean Sea Level

Project No: 0136-015-002

Borehole Number: SB-5

Project: 790 Center Street Site

A.K.A.: NA

Client: Ellicott Development Company

Logged By: JSM

Site Location: 784-790 Center Street, Lewiston, NY

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Asphalt*** Asphalt and subbase							
		Lean Clay with Sand Brown, moist, mostly low plasticity, stiff fine grains with some brick debris, few fine grain sand and trace fine angular gravel (non-native)	S1	NA	2		0.0		
	-4.0 4.0	***Gravelly Lean Clay*** Brown, moist, mostly stiff, low plasticity fine grains with some fine subrounded gravel	S2	NA	2		0.0		
5.0	-8.0 8.0	***Gravelly Lean Clay*** Brown, moist, mostly low plasticity, stiff fine grains with some fine subrounded gravel and few fine grain sand	S3	NA	2		0.0		
10.0			S4	NA	2		0.0	SAMPLE SUBMITTED	
15.0	-16.0 16.0	***Lean Clay*** Brown, moist, low plasticity, stiff fine grain	S5	NA	2		0.0		
20.0	-20.0 20.0								

Drilled By: Zoladz Construction
Drill Rig Type: Geoprobe 6610 DT
Drill Method: Hydraulically Driven Percussion with 4' macrocore
Comments: NA
Drill Date(s): August 20, 2015

Hole Size: 4"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 5 of 13

Project No: 0136-015-002

Borehole Number: SB-6

Project: 790 Center Street Site

A.K.A.: TMW-2

Client: Ellicott Development Company

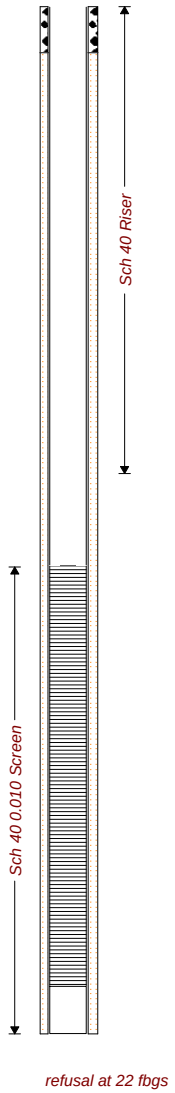
Logged By: JSM

Site Location: 784-790 Center Street, Lewiston, NY

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Asphalt*** Asphalt and subbase							
		Lean Clay with Sand Brown, moist, low platicity, stiff fine grains with some brick debris, few fine grain sand and trace fine subrounded gravel (non-native)	S1	NA	2		0.0		
5.0			S2	NA	2		0.0		
10.0			S3	NA	2		0.0	SAMPLE SUBMITTED	
	-12.0 12.0	***Lean Clay with Gravel*** Brown/red, moist, low plasticity, stiff fine grains with few fine grain angular gravel	S4	NA	2		0.0		
15.0	-16.0 16.0	***Lean Clay*** Brown/gray, moist, medium plasticity fine grains	S5	NA	2		0.0		
20.0	-20.0 20.0	As above but with few fine rounded gravel and trace fine sand	S6	NA	2		0.0		
	-22.0 22.0	End of Borehole							
25.0									



Drilled By: Zoladz Construction
Drill Rig Type: Geoprobe 6610 DT
Drill Method: Hydraulically Driven Percussion with 4' macrocore
Comments: NA
Drill Date(s): August 20, 2015

Hole Size: 4"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 6 of 13

Project No: 0136-015-002

Borehole Number: SB-7

Project: 790 Center Street Site

A.K.A.: TMW-3

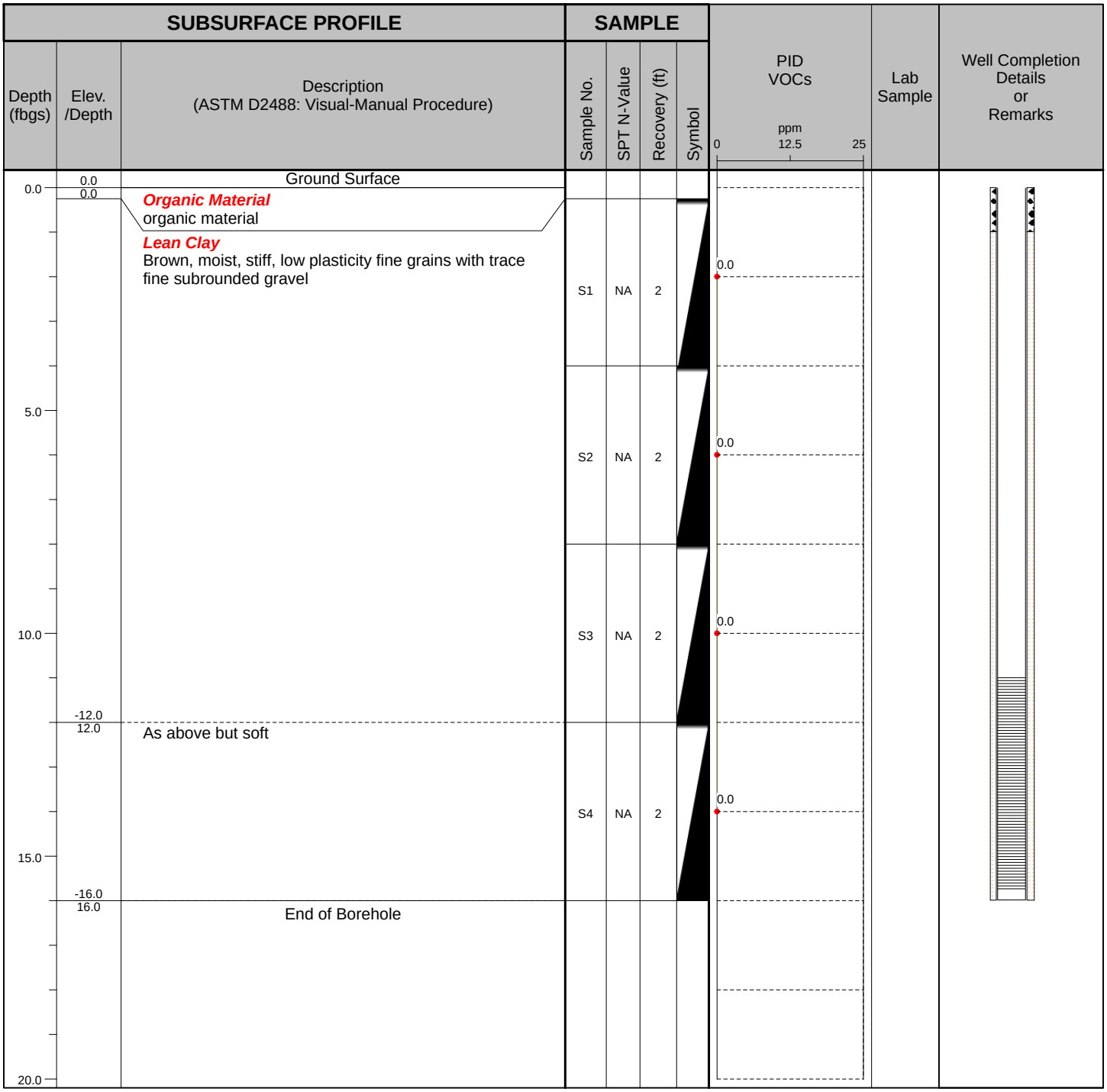
Client: Ellicott Development Company

Logged By: JSM

Site Location: 784-790 Center Street, Lewiston, NY

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635



Drilled By: Zoladz Construction
Drill Rig Type: Geoprobe 6610 DT
Drill Method: Hydraulically Driven Percussion with 4' macrocore
Comments: NA
Drill Date(s): August 20, 2015

Hole Size: 4"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 7 of 13

Project No: 0136-015-002

Borehole Number: SB-8

Project: 790 Center Street Site

A.K.A.: TMW-4

Client: Ellicott Development Company

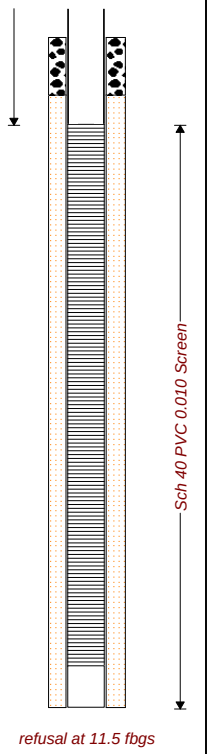
Logged By: JSM

Site Location: 784-790 Center Street, Lewiston, NY

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Organic Material*** organic material							
		Sandy Lean Clay Brown, moist, low plasticity stiff fine grains with some fine sand (non-native)	S1	NA	2		0.0	SAMPLE SUBMITTED	
	-4.0 4.0	***Lean Clay*** Brown, moist, stiff, low plasticity fine grains	S2	NA	3		0.0		
5.0									
	-8.0 8.0	As above but soft	S3	NA	3.5		0.0		
10.0									
	-11.5 11.5	End of Borehole							
15.0									



Drilled By: Zoladz Construction
Drill Rig Type: Geoprobe 6610 DT
Drill Method: Hydraulically Driven Percussion with 4' macrocore
Comments: NA
Drill Date(s): August 20, 2015

Hole Size: 4"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 8 of 13

Project No: 0136-015-002

Borehole Number: SB-9

Project: 790 Center Street Site

A.K.A.: TMW-5

Client: Ellicott Development Company

Logged By: JSM

Site Location: 784-790 Center Street, Lewiston, NY

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
-3.0									
	0.0	Ground Surface							
	0.0	***Asphalt*** Asphalt and subbase							
		Clayey Sand Brown, moist, fine grain sand with some low plasticity stiff fine grains and few concrete and asphalt debris (non-native)	S1	NA	2		0.0	SAMPLE SUBMITTED	
2.0	-4.0								
	4.0	***Lean Clay with Sand*** Brown, moist, stiff low plasticity fine grains with some fine grain sand	S2	NA	2		0.0		
7.0	-7.8								
	7.8	End of Borehole							*refusal at 7.75 fbgs*
12.0									
17.0									

Drilled By: Zoladz Construction
Drill Rig Type: Geoprobe 6610 DT
Drill Method: Hydraulically Driven Percussion with 4' macrocore
Comments: NA
Drill Date(s): August 20, 2015

Hole Size: 4"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 9 of 13

Project No: 0136-015-002

Borehole Number: SB-10

Project: 790 Center Street Site

A.K.A.: NA

Client: Ellicott Development Company

Logged By: JSM

Site Location: 784-790 Center Street, Lewiston, NY

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Organic Material*** organic matter ***Lean Clay*** Brown, moist, mostly low plasticity, stiff fine grains with some brick debris and trace fine, subrounded gravel (non-native)	S1	NA	2		0.0		
	-4.0 4.0	***Well graded Gravel with Clay*** Gray, moist, mostly pea stone, with some stiff low plasticity fine grains and wood debris (non-native)	S2	NA	.5		0.0	SAMPLE SUBMITTED	
5.0									
	-8.0 8.0	No Recovery	S3	NA	0				
10.0			S4	NA	0				
	-15.0 15.0	End of Borehole							*refusal at 15 fbgs*
15.0									
20.0									

Drilled By: Zoladz Construction
Drill Rig Type: Geoprobe 6610 DT
Drill Method: Hydraulically Driven Percussion with 4' macrocore
Comments: NA
Drill Date(s): August 20, 2015

Hole Size: 4"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 10 of 13

Project No: 0136-015-002

Borehole Number: SB-11

Project: 790 Center Street Site

A.K.A.: NA

Client: Ellicott Development Company

Logged By: JSM

Site Location: 784-790 Center Street, Lewiston, NY

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs (ppm, 0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Gravel Paving*** Gray, moist, angular fine gravel paving (non-native)							
		Fill with Lean Clay Brown/black, moist, mostly medium plasticity, stiff fine grains with some brick debris, trace fine grain sand and trace fine, subrounded gravel	S1	NA	2		0.0	SAMPLE SUBMITTED	
	-4.0								
	4.0	***Sandy Lean Clay*** Brown, moist, low plasticity, stiff fine grains with few fine grain sand							
5.0			S2	NA	2		0.0		
	-8.0								
	8.0	As above, but without sand							
10.0			S3	NA	3		0.0		
	-11.0								
	11.0	End of Borehole							*refusal at 11 fbgs*
15.0									
20.0									

Drilled By: Zoladz Construction
Drill Rig Type: Geoprobe 6610 DT
Drill Method: Hydraulically Driven Percussion with 4' macrocore
Comments: NA
Drill Date(s): August 20, 2015

Hole Size: 4"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 11 of 13

Project No: 0136-015-002

Borehole Number: SB-12

Project: 790 Center Street Site

A.K.A.: NA

Client: Ellicott Development Company

Logged By: JSM

Site Location: 784-790 Center Street, Lewiston, NY

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 / 12.5 / 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Organic Material*** Organic material							
		Gravelly Lean Clay with Sand Brown/black, moist, mostly medium plasticity, stiff grains with some fine grain subrounded gravel and few fine grain sand (non-native)	S1	NA	2		0.0	SAMPLE SUBMITTED	
	-4.0 4.0	***Lean Clay with Sand*** Brown, moist, mostly stiff, low plasticity, fine grains with some fine grain sand	S2	NA	2		0.0		
5.0			S3	NA	2		0.0		
10.0	-11.5 11.5	End of Borehole							*refusal at 11.5 fbgs*
15.0									
20.0									

Drilled By: Zoladz Construction
Drill Rig Type: Geoprobe 6610 DT
Drill Method: Hydraulically Driven Percussion with 4' macrocore
Comments: NA
Drill Date(s): August 20, 2015

Hole Size: 4"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 12 of 13

Project No: 0136-015-002

Borehole Number: SB-13

Project: 790 Center Street Site

A.K.A.: NA

Client: Ellicott Development Company

Logged By: JSM

Site Location: 784-790 Center Street, Lewiston, NY

Checked By: BWM

TurnKey Environmental Restoration, LLC
2558 Hamburg Turnpike, Suite 300
Buffalo, NY 14218
(716) 856-0635

SUBSURFACE PROFILE			SAMPLE						
Depth (fbgs)	Elev. /Depth	Description (ASTM D2488: Visual-Manual Procedure)	Sample No.	SPT N-Value	Recovery (ft)	Symbol	PID VOCs ppm (0 – 12.5 – 25)	Lab Sample	Well Completion Details or Remarks
0.0	0.0	Ground Surface							
	0.0	***Sandy Lean Clay with Gravel*** Brown, moist, mostly stiff, low plasticity fine grains with some fine grain sand and few fine, subrounded gravel (non-native)	S1	NA	2		0.0		
5.0			S2	NA	2		0.0	SAMPLE SUBMITTED	
	-8.0 8.0	***Lean Clay*** Brown, moist, low plasticity, stiff fine grains	S3	NA	2		0.0		
10.0	-12.0 12.0	End of Borehole							
15.0									
20.0									

Drilled By: Zoladz Construction
Drill Rig Type: Geoprobe 6610 DT
Drill Method: Hydraulically Driven Percussion with 4' macrocore
Comments: NA
Drill Date(s): August 20, 2015

Hole Size: 4"
Stick-up: NA
Datum: Mean Sea Level

Sheet: 13 of 13

APPENDIX C

PHOTO LOG

SITE PHOTOGRAPHS

Photo 1:

Photo 2:

Photo 3:

Photo 4:

Photo 1: View of the approximate location of SBs -1 and -2 south of the former dry cleaning building.

Photo 2: View of the sample interval exhibited elevated PID readings and olfactory evidence of impact.

Photo 3: View of approximate location of SBs -8 and -9 north of the former dry cleaning building.

Photo 4: View of the approximate location of SBs -3 and -4 west of the former gasoline station building and proximate to a suspected tank location.

SITE PHOTOGRAPHS

Photo 5:

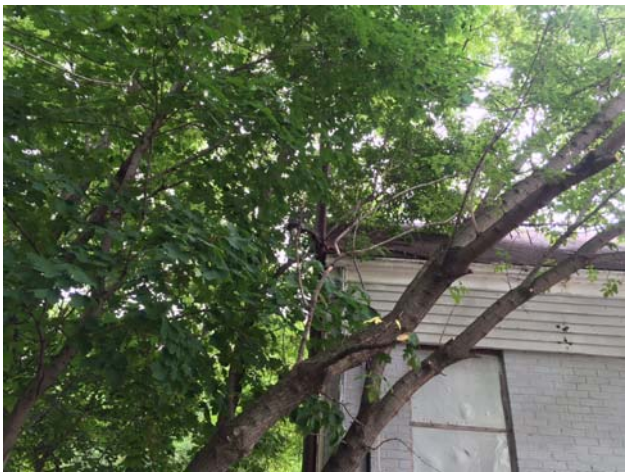


Photo 6:

Photo 7:

Photo 8:

Photo 5: View of the three remaining vent pipes at the northwest corner of the former gasoline station building.

Photo 6: View of the approximate locations of SBs -10 and -11 to assess the former junk yard.

Photo 7: View of a suspect pile of debris and approximate location of SB-12.

Photo 8: View of approximate location of SB-7 north of the former gasoline station building.

APPENDIX D

LABORATORY ANALYTICAL 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: 480-86051-1
Client Project/Site: Benchmark - 790 Center St. site

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

Attn: Bryan Mayback

Joseph V. Giacomazza

Authorized for release by:
8/27/2015 12:24:05 PM
Joe Giacomazza, Project Management Assistant II
joe.giacomazza@testamericainc.com

Designee for

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

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Qualifiers

GC/MS 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.

GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
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)

Job ID: 480-86051-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-86051-1

Receipt
The samples were received on 8/21/2015 11:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.8º C.

GC/MS VOA
Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: SB-2 (18-19) (480-86051-1). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following samples were analyzed medium level and diluted to bring the concentration of target analytes within the calibration range: SB-2 (18-19) (480-86051-1). Elevated reporting limits (RLs) are provided.

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: The following sample was diluted due to abundance of target analytes: SB-4 (0-4) (480-86051-3). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

Method(s) 8270D: The following samples were diluted due to the nature of the sample matrix; samples diluted based on color and viscosity : SB-3 (4-7) (480-86051-2), SB-11 (0-4) (480-86051-7), (480-86051-A-2-D MS) and (480-86051-A-2-E MSD). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

Method(s) 8270D: The following samples were diluted due to color: SB-5 (12-16) (480-86051-4), SB-6 (8-12) (480-86051-5), SB-10 (0-8) (480-86051-6), SB-12 (0-4) (480-86051-8) and SB-13 (4-8) (480-86051-9). Elevated reporting limits (RL) are provided.

Method(s) 8270D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 480-260090 and analytical batch 480-260318 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8270D: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 480-260090 and analytical batch 480-260318 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

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

GC Semi VOA
Method(s) 8082A: The following sample contains PCB-1268: SB-11 (0-4) (480-86051-7), though this component is not a target analyte. The pattern is found and noted for future reference.

Method(s) 8082A: The following sample contains PCB-1262: SB-11 (0-4) (480-86051-7), though this component is not a target analyte. The pattern has been quantified and is being reported as PCB-1260.

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.

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 - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Client Sample ID: SB-2 (18-19) — Lab Sample ID: 480-86051-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Hexanone	22000		6400	2600	ug/Kg	10	☼	8260C	Total/NA
4-Methyl-2-pentanone (MIBK)	9700		6400	410	ug/Kg	10	☼	8260C	Total/NA
Benzene	840	J	1300	240	ug/Kg	10	☼	8260C	Total/NA
Cyclohexane	39000		1300	280	ug/Kg	10	☼	8260C	Total/NA
Ethylbenzene	52000		1300	370	ug/Kg	10	☼	8260C	Total/NA
Isopropylbenzene	7300		1300	190	ug/Kg	10	☼	8260C	Total/NA
Methylcyclohexane	97000		1300	600	ug/Kg	10	☼	8260C	Total/NA
Toluene	2800		1300	340	ug/Kg	10	☼	8260C	Total/NA
Xylenes, Total - DL	250000		5100	1400	ug/Kg	20	☼	8260C	Total/NA

Client Sample ID: SB-3 (4-7) — Lab Sample ID: 480-86051-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.0		2.3		mg/Kg	1	☼	6010C	Total/NA
Barium	72.6		0.58		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.52		0.23		mg/Kg	1	☼	6010C	Total/NA
Chromium	15.1		0.58		mg/Kg	1	☼	6010C	Total/NA
Lead	31.1		1.2		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.034		0.020		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-4 (0-4) — Lab Sample ID: 480-86051-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	970	J	3500	520	ug/Kg	20	☼	8270D	Total/NA
Anthracene	5000		3500	870	ug/Kg	20	☼	8270D	Total/NA
Benzo[a]anthracene	9100		3500	350	ug/Kg	20	☼	8270D	Total/NA
Benzo[a]pyrene	6900		3500	520	ug/Kg	20	☼	8270D	Total/NA
Benzo[b]fluoranthene	9000		3500	560	ug/Kg	20	☼	8270D	Total/NA
Benzo[g,h,i]perylene	5500		3500	370	ug/Kg	20	☼	8270D	Total/NA
Benzo[k]fluoranthene	4100		3500	460	ug/Kg	20	☼	8270D	Total/NA
Chrysene	8400		3500	790	ug/Kg	20	☼	8270D	Total/NA
Fluoranthene	27000		3500	370	ug/Kg	20	☼	8270D	Total/NA
Fluorene	1400	J	3500	420	ug/Kg	20	☼	8270D	Total/NA
Indeno[1,2,3-cd]pyrene	4600		3500	440	ug/Kg	20	☼	8270D	Total/NA
Pyrene	20000		3500	420	ug/Kg	20	☼	8270D	Total/NA
Phenanthrene	22000		3500	520	ug/Kg	20	☼	8270D	Total/NA
Arsenic	3.4		2.3		mg/Kg	1	☼	6010C	Total/NA
Barium	132		0.56		mg/Kg	1	☼	6010C	Total/NA
Cadmium	1.2		0.23		mg/Kg	1	☼	6010C	Total/NA
Chromium	9.4		0.56		mg/Kg	1	☼	6010C	Total/NA
Lead	105		1.1		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.26		0.021		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-5 (12-16) — Lab Sample ID: 480-86051-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.5		2.0		mg/Kg	1	☼	6010C	Total/NA
Barium	55.9		0.51		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.28		0.20		mg/Kg	1	☼	6010C	Total/NA
Chromium	8.2		0.51		mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample ID: SB-5 (12-16) (Continued) — Lab Sample ID: 480-86051-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	9.1		1.0		mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SB-6 (8-12) — Lab Sample ID: 480-86051-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.3		2.1		mg/Kg	1	☼	6010C	Total/NA
Barium	44.2		0.53		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.61		0.21		mg/Kg	1	☼	6010C	Total/NA
Chromium	7.8		0.53		mg/Kg	1	☼	6010C	Total/NA
Lead	19.7		1.1		mg/Kg	1	☼	6010C	Total/NA

Client Sample ID: SB-10 (0-8) — Lab Sample ID: 480-86051-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.1		2.2		mg/Kg	1	☼	6010C	Total/NA
Barium	119		0.54		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.41		0.22		mg/Kg	1	☼	6010C	Total/NA
Chromium	18.2		0.54		mg/Kg	1	☼	6010C	Total/NA
Lead	23.0		1.1		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.033		0.021		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-11 (0-4) — Lab Sample ID: 480-86051-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1260	1400		280	130	ug/Kg	1	☼	8082A	Total/NA
Arsenic	12.5		2.3		mg/Kg	1	☼	6010C	Total/NA
Barium	582		0.58		mg/Kg	1	☼	6010C	Total/NA
Cadmium	17.0		0.23		mg/Kg	1	☼	6010C	Total/NA
Chromium	36.0		0.58		mg/Kg	1	☼	6010C	Total/NA
Lead	2080		1.2		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.16		0.023		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-12 (0-4) — Lab Sample ID: 480-86051-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.8		2.4		mg/Kg	1	☼	6010C	Total/NA
Barium	61.5		0.60		mg/Kg	1	☼	6010C	Total/NA
Cadmium	4.9		0.24		mg/Kg	1	☼	6010C	Total/NA
Chromium	14.1		0.60		mg/Kg	1	☼	6010C	Total/NA
Lead	24.3		1.2		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.050		0.021		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-13 (4-8) — Lab Sample ID: 480-86051-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.8		2.5		mg/Kg	1	☼	6010C	Total/NA
Barium	102		0.61		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.29		0.25		mg/Kg	1	☼	6010C	Total/NA
Chromium	11.3		0.61		mg/Kg	1	☼	6010C	Total/NA
Lead	53.4		1.2		mg/Kg	1	☼	6010C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Client Sample ID: SB-13 (4-8) (Continued) — Lab Sample ID: 480-86051-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.57		0.024		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-8 (0-4) — Lab Sample ID: 480-86051-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	12.2		2.4		mg/Kg	1	☼	6010C	Total/NA
Barium	144		0.59		mg/Kg	1	☼	6010C	Total/NA
Cadmium	7.3		0.24		mg/Kg	1	☼	6010C	Total/NA
Chromium	27.3		0.59		mg/Kg	1	☼	6010C	Total/NA
Lead	5340		1.2		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.21		0.022		mg/Kg	1	☼	7471B	Total/NA

Client Sample ID: SB-9 (0-4) — Lab Sample ID: 480-86051-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	6.8		2.3		mg/Kg	1	☼	6010C	Total/NA
Barium	120	F1	0.59		mg/Kg	1	☼	6010C	Total/NA
Cadmium	0.42		0.23		mg/Kg	1	☼	6010C	Total/NA
Chromium	10.3		0.59		mg/Kg	1	☼	6010C	Total/NA
Lead	79.8	F1	1.2		mg/Kg	1	☼	6010C	Total/NA
Mercury	0.31		0.021		mg/Kg	1	☼	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: SB-2 (18-19)

Date Collected: 08/20/15 09:45
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-1

Matrix: Solid
Percent Solids: 82.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1300	350	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
1,1,2,2-Tetrachloroethane	ND		1300	210	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
1,1,2-Trichloroethane	ND		1300	270	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1300	640	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
1,1-Dichloroethane	ND		1300	400	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
1,1-Dichloroethene	ND		1300	440	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
1,2,4-Trichlorobenzene	ND		1300	490	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
1,2-Dibromo-3-Chloropropane	ND		1300	640	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
1,2-Dichlorobenzene	ND		1300	330	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
1,2-Dichloroethane	ND		1300	520	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
1,2-Dichloropropane	ND		1300	210	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
1,3-Dichlorobenzene	ND		1300	340	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
1,4-Dichlorobenzene	ND		1300	180	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
2-Butanone (MEK)	ND		6400	3800	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
2-Hexanone	**22000**		6400	2600	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
4-Methyl-2-pentanone (MIBK)	**9700**		6400	410	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Acetone	ND		6400	5300	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Benzene	**840**	**J**	1300	240	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Bromodichloromethane	ND		1300	260	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Bromoform	ND		1300	640	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Bromomethane	ND		1300	280	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Carbon disulfide	ND		1300	580	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Carbon tetrachloride	ND		1300	330	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Chlorobenzene	ND		1300	170	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Dibromochloromethane	ND		1300	620	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Chloroethane	ND		1300	270	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Chloroform	ND		1300	880	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Chloromethane	ND		1300	300	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
cis-1,2-Dichloroethene	ND		1300	350	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
cis-1,3-Dichloropropene	ND		1300	310	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Cyclohexane	**39000**		1300	280	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Dichlorodifluoromethane	ND		1300	560	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Ethylbenzene	**52000**		1300	370	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
1,2-Dibromoethane	ND		1300	220	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Isopropylbenzene	**7300**		1300	190	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Methyl acetate	ND		1300	610	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Methyl tert-butyl ether	ND		1300	480	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Methylcyclohexane	**97000**		1300	600	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Methylene Chloride	ND		1300	250	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Styrene	ND		1300	310	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Tetrachloroethene	ND		1300	170	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Toluene	**2800**		1300	340	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
trans-1,2-Dichloroethene	ND		1300	300	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
trans-1,3-Dichloropropene	ND		1300	130	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Trichloroethene	ND		1300	360	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Trichlorofluoromethane	ND		1300	600	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10
Vinyl chloride	ND		1300	430	ug/Kg	☼	08/24/15 16:27	08/25/15 04:56	10

Client Sample ID: SB-2 (18-19)
Date Collected: 08/20/15 09:45
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-1
Matrix: Solid
Percent Solids: 82.5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		50 - 149	08/24/15 16:27	08/25/15 04:56	10
1,2-Dichloroethane-d4 (Surr)	71		53 - 146	08/24/15 16:27	08/25/15 04:56	10
4-Bromofluorobenzene (Surr)	105		49 - 148	08/24/15 16:27	08/25/15 04:56	10
Dibromofluoromethane (Surr)	61		60 - 140	08/24/15 16:27	08/25/15 04:56	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Xylenes, Total	250000		5100	1400	ug/Kg	☼	08/24/15 16:27	08/25/15 13:04	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	87		50 - 149	08/24/15 16:27	08/25/15 13:04	20
1,2-Dichloroethane-d4 (Surr)	95		53 - 146	08/24/15 16:27	08/25/15 13:04	20
4-Bromofluorobenzene (Surr)	92		49 - 148	08/24/15 16:27	08/25/15 13:04	20
Dibromofluoromethane (Surr)	91		60 - 140	08/24/15 16:27	08/25/15 13:04	20

Client Sample ID: SB-3 (4-7)

Date Collected: 08/20/15 10:20
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-2

Matrix: Solid
Percent Solids: 92.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1800	260	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Acenaphthylene	ND		1800	230	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Anthracene	ND		1800	440	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Benzo[a]anthracene	ND		1800	180	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Benzo[a]pyrene	ND	F2 F1	1800	260	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Benzo[b]fluoranthene	ND	F2 F1	1800	280	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Benzo[g,h,i]perylene	ND		1800	190	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Benzo[k]fluoranthene	ND		1800	230	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Chrysene	ND	F2	1800	400	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Dibenz(a,h)anthracene	ND		1800	320	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Fluoranthene	ND	F2	1800	190	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Fluorene	ND		1800	210	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Indeno[1,2,3-cd]pyrene	ND	F2	1800	220	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Naphthalene	ND		1800	230	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Pyrene	ND		1800	210	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10
Phenanthrene	ND		1800	260	ug/Kg	☼	08/24/15 10:47	08/25/15 19:23	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*76*		*39 - 146*	*08/24/15 10:47*	*08/25/15 19:23*	*10*
2-Fluorobiphenyl	*68*		*37 - 120*	*08/24/15 10:47*	*08/25/15 19:23*	*10*
2-Fluorophenol (Surr)	*80*		*18 - 120*	*08/24/15 10:47*	*08/25/15 19:23*	*10*
Phenol-d5 (Surr)	*70*		*11 - 120*	*08/24/15 10:47*	*08/25/15 19:23*	*10*
p-Terphenyl-d14 (Surr)	*70*		*65 - 153*	*08/24/15 10:47*	*08/25/15 19:23*	*10*
Nitrobenzene-d5 (Surr)	*62*		*34 - 132*	*08/24/15 10:47*	*08/25/15 19:23*	*10*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.0**		2.3		mg/Kg	☼	08/24/15 10:02	08/25/15 14:58	1
Barium	**72.6**		0.58		mg/Kg	☼	08/24/15 10:02	08/25/15 14:58	1
Cadmium	**0.52**		0.23		mg/Kg	☼	08/24/15 10:02	08/25/15 14:58	1
Chromium	**15.1**		0.58		mg/Kg	☼	08/24/15 10:02	08/25/15 14:58	1
Lead	**31.1**		1.2		mg/Kg	☼	08/24/15 10:02	08/25/15 14:58	1
Selenium	ND		4.6		mg/Kg	☼	08/24/15 10:02	08/25/15 14:58	1
Silver	ND		0.70		mg/Kg	☼	08/24/15 10:02	08/25/15 14:58	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.034**		0.020		mg/Kg	☼	08/24/15 09:25	08/24/15 14:39	1

Client Sample ID: SB-4 (0-4)

Date Collected: 08/20/15 10:45
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-3

Matrix: Solid
Percent Solids: 93.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**970**	**J**	3500	520	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Acenaphthylene	ND		3500	460	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Anthracene	**5000**		3500	870	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Benzo[a]anthracene	**9100**		3500	350	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Benzo[a]pyrene	**6900**		3500	520	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Benzo[b]fluoranthene	**9000**		3500	560	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Benzo[g,h,i]perylene	**5500**		3500	370	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Benzo[k]fluoranthene	**4100**		3500	460	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Chrysene	**8400**		3500	790	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Dibenz(a,h)anthracene	ND		3500	620	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Fluoranthene	**27000**		3500	370	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Fluorene	**1400**	**J**	3500	420	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Indeno[1,2,3-cd]pyrene	**4600**		3500	440	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Naphthalene	ND		3500	460	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Pyrene	**20000**		3500	420	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20
Phenanthrene	**22000**		3500	520	ug/Kg	☼	08/24/15 10:47	08/25/15 19:50	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*64*		*39 - 146*	*08/24/15 10:47*	*08/25/15 19:50*	*20*
2-Fluorobiphenyl	*54*		*37 - 120*	*08/24/15 10:47*	*08/25/15 19:50*	*20*
2-Fluorophenol (Surr)	*72*		*18 - 120*	*08/24/15 10:47*	*08/25/15 19:50*	*20*
Phenol-d5 (Surr)	*72*		*11 - 120*	*08/24/15 10:47*	*08/25/15 19:50*	*20*
p-Terphenyl-d14 (Surr)	*67*		*65 - 153*	*08/24/15 10:47*	*08/25/15 19:50*	*20*
Nitrobenzene-d5 (Surr)	*55*		*34 - 132*	*08/24/15 10:47*	*08/25/15 19:50*	*20*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		240	48	ug/Kg	☼	08/22/15 14:44	08/24/15 16:34	1
PCB-1221	ND		240	48	ug/Kg	☼	08/22/15 14:44	08/24/15 16:34	1
PCB-1232	ND		240	48	ug/Kg	☼	08/22/15 14:44	08/24/15 16:34	1
PCB-1242	ND		240	48	ug/Kg	☼	08/22/15 14:44	08/24/15 16:34	1
PCB-1248	ND		240	48	ug/Kg	☼	08/22/15 14:44	08/24/15 16:34	1
PCB-1254	ND		240	110	ug/Kg	☼	08/22/15 14:44	08/24/15 16:34	1
PCB-1260	ND		240	110	ug/Kg	☼	08/22/15 14:44	08/24/15 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*106*		*65 - 174*	*08/22/15 14:44*	*08/24/15 16:34*	*1*
Tetrachloro-m-xylene	*108*		*60 - 154*	*08/22/15 14:44*	*08/24/15 16:34*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.4**		2.3		mg/Kg	☼	08/24/15 10:02	08/25/15 15:02	1
Barium	**132**		0.56		mg/Kg	☼	08/24/15 10:02	08/25/15 15:02	1
Cadmium	**1.2**		0.23		mg/Kg	☼	08/24/15 10:02	08/25/15 15:02	1
Chromium	**9.4**		0.56		mg/Kg	☼	08/24/15 10:02	08/25/15 15:02	1
Lead	**105**		1.1		mg/Kg	☼	08/24/15 10:02	08/25/15 15:02	1
Selenium	ND		4.5		mg/Kg	☼	08/24/15 10:02	08/25/15 15:02	1
Silver	ND		0.68		mg/Kg	☼	08/24/15 10:02	08/25/15 15:02	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Client Sample ID: SB-4 (0-4)
Date Collected: 08/20/15 10:45
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-3
Matrix: Solid
Percent Solids: 93.7

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.26		0.021		mg/Kg	☼	08/24/15 09:25	08/24/15 14:41	1

Client Sample ID: SB-5 (12-16)

Date Collected: 08/20/15 11:00
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-4

Matrix: Solid
Percent Solids: 93.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		890	130	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Acenaphthylene	ND		890	110	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Anthracene	ND		890	220	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Benzo[a]anthracene	ND		890	89	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Benzo[a]pyrene	ND		890	130	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Benzo[b]fluoranthene	ND		890	140	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Benzo[g,h,i]perylene	ND		890	94	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Benzo[k]fluoranthene	ND		890	110	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Chrysene	ND		890	200	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Dibenz(a,h)anthracene	ND		890	160	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Fluoranthene	ND		890	94	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Fluorene	ND		890	100	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Indeno[1,2,3-cd]pyrene	ND		890	110	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Naphthalene	ND		890	110	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Pyrene	ND		890	100	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5
Phenanthrene	ND		890	130	ug/Kg	☼	08/24/15 10:47	08/25/15 20:16	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*73*		*39 - 146*	*08/24/15 10:47*	*08/25/15 20:16*	*5*
2-Fluorobiphenyl	*65*		*37 - 120*	*08/24/15 10:47*	*08/25/15 20:16*	*5*
2-Fluorophenol (Surr)	*73*		*18 - 120*	*08/24/15 10:47*	*08/25/15 20:16*	*5*
Phenol-d5 (Surr)	*71*		*11 - 120*	*08/24/15 10:47*	*08/25/15 20:16*	*5*
p-Terphenyl-d14 (Surr)	*75*		*65 - 153*	*08/24/15 10:47*	*08/25/15 20:16*	*5*
Nitrobenzene-d5 (Surr)	*59*		*34 - 132*	*08/24/15 10:47*	*08/25/15 20:16*	*5*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.5**		2.0		mg/Kg	☼	08/24/15 10:02	08/25/15 15:05	1
Barium	**55.9**		0.51		mg/Kg	☼	08/24/15 10:02	08/25/15 15:05	1
Cadmium	**0.28**		0.20		mg/Kg	☼	08/24/15 10:02	08/25/15 15:05	1
Chromium	**8.2**		0.51		mg/Kg	☼	08/24/15 10:02	08/25/15 15:05	1
Lead	**9.1**		1.0		mg/Kg	☼	08/24/15 10:02	08/25/15 15:05	1
Selenium	ND		4.1		mg/Kg	☼	08/24/15 10:02	08/25/15 15:05	1
Silver	ND		0.61		mg/Kg	☼	08/24/15 10:02	08/25/15 15:05	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.020		mg/Kg	☼	08/24/15 09:25	08/24/15 14:43	1

Client Sample ID: SB-6 (8-12)

Date Collected: 08/20/15 11:35
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-5

Matrix: Solid
Percent Solids: 91.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		920	130	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Acenaphthylene	ND		920	120	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Anthracene	ND		920	230	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Benzo[a]anthracene	ND		920	92	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Benzo[a]pyrene	ND		920	130	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Benzo[b]fluoranthene	ND		920	150	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Benzo[g,h,i]perylene	ND		920	97	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Benzo[k]fluoranthene	ND		920	120	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Chrysene	ND		920	200	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Dibenz(a,h)anthracene	ND		920	160	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Fluoranthene	ND		920	97	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Fluorene	ND		920	110	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Indeno[1,2,3-cd]pyrene	ND		920	110	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Naphthalene	ND		920	120	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Pyrene	ND		920	110	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5
Phenanthrene	ND		920	130	ug/Kg	☼	08/24/15 10:47	08/25/15 20:43	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*83*		*39 - 146*	*08/24/15 10:47*	*08/25/15 20:43*	*5*
2-Fluorobiphenyl	*77*		*37 - 120*	*08/24/15 10:47*	*08/25/15 20:43*	*5*
2-Fluorophenol (Surr)	*82*		*18 - 120*	*08/24/15 10:47*	*08/25/15 20:43*	*5*
Phenol-d5 (Surr)	*81*		*11 - 120*	*08/24/15 10:47*	*08/25/15 20:43*	*5*
p-Terphenyl-d14 (Surr)	*81*		*65 - 153*	*08/24/15 10:47*	*08/25/15 20:43*	*5*
Nitrobenzene-d5 (Surr)	*70*		*34 - 132*	*08/24/15 10:47*	*08/25/15 20:43*	*5*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		250	49	ug/Kg	☼	08/22/15 14:44	08/24/15 16:50	1
PCB-1221	ND		250	49	ug/Kg	☼	08/22/15 14:44	08/24/15 16:50	1
PCB-1232	ND		250	49	ug/Kg	☼	08/22/15 14:44	08/24/15 16:50	1
PCB-1242	ND		250	49	ug/Kg	☼	08/22/15 14:44	08/24/15 16:50	1
PCB-1248	ND		250	49	ug/Kg	☼	08/22/15 14:44	08/24/15 16:50	1
PCB-1254	ND		250	120	ug/Kg	☼	08/22/15 14:44	08/24/15 16:50	1
PCB-1260	ND		250	120	ug/Kg	☼	08/22/15 14:44	08/24/15 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*104*		*65 - 174*	*08/22/15 14:44*	*08/24/15 16:50*	*1*
Tetrachloro-m-xylene	*106*		*60 - 154*	*08/22/15 14:44*	*08/24/15 16:50*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.3**		2.1		mg/Kg	☼	08/24/15 10:02	08/25/15 15:08	1
Barium	**44.2**		0.53		mg/Kg	☼	08/24/15 10:02	08/25/15 15:08	1
Cadmium	**0.61**		0.21		mg/Kg	☼	08/24/15 10:02	08/25/15 15:08	1
Chromium	**7.8**		0.53		mg/Kg	☼	08/24/15 10:02	08/25/15 15:08	1
Lead	**19.7**		1.1		mg/Kg	☼	08/24/15 10:02	08/25/15 15:08	1
Selenium	ND		4.3		mg/Kg	☼	08/24/15 10:02	08/25/15 15:08	1
Silver	ND		0.64		mg/Kg	☼	08/24/15 10:02	08/25/15 15:08	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Client Sample ID: SB-6 (8-12)
Date Collected: 08/20/15 11:35
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-5
Matrix: Solid
Percent Solids: 91.4

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.022		mg/Kg	☼	08/24/15 09:25	08/24/15 14:45	1

Client Sample ID: SB-10 (0-8)

Date Collected: 08/20/15 14:35
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-6

Matrix: Solid
Percent Solids: 91.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		900	130	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Acenaphthylene	ND		900	120	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Anthracene	ND		900	220	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Benzo[a]anthracene	ND		900	90	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Benzo[a]pyrene	ND		900	130	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Benzo[b]fluoranthene	ND		900	140	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Benzo[g,h,i]perylene	ND		900	95	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Benzo[k]fluoranthene	ND		900	120	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Chrysene	ND		900	200	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Dibenz(a,h)anthracene	ND		900	160	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Fluoranthene	ND		900	95	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Fluorene	ND		900	110	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Indeno[1,2,3-cd]pyrene	ND		900	110	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Naphthalene	ND		900	120	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Pyrene	ND		900	110	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5
Phenanthrene	ND		900	130	ug/Kg	☼	08/24/15 10:47	08/25/15 21:09	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*79*		*39 - 146*	*08/24/15 10:47*	*08/25/15 21:09*	*5*
2-Fluorobiphenyl	*72*		*37 - 120*	*08/24/15 10:47*	*08/25/15 21:09*	*5*
2-Fluorophenol (Surr)	*78*		*18 - 120*	*08/24/15 10:47*	*08/25/15 21:09*	*5*
Phenol-d5 (Surr)	*84*		*11 - 120*	*08/24/15 10:47*	*08/25/15 21:09*	*5*
p-Terphenyl-d14 (Surr)	*85*		*65 - 153*	*08/24/15 10:47*	*08/25/15 21:09*	*5*
Nitrobenzene-d5 (Surr)	*70*		*34 - 132*	*08/24/15 10:47*	*08/25/15 21:09*	*5*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		200	39	ug/Kg	☼	08/22/15 14:44	08/24/15 17:38	1
PCB-1221	ND		200	39	ug/Kg	☼	08/22/15 14:44	08/24/15 17:38	1
PCB-1232	ND		200	39	ug/Kg	☼	08/22/15 14:44	08/24/15 17:38	1
PCB-1242	ND		200	39	ug/Kg	☼	08/22/15 14:44	08/24/15 17:38	1
PCB-1248	ND		200	39	ug/Kg	☼	08/22/15 14:44	08/24/15 17:38	1
PCB-1254	ND		200	93	ug/Kg	☼	08/22/15 14:44	08/24/15 17:38	1
PCB-1260	ND		200	93	ug/Kg	☼	08/22/15 14:44	08/24/15 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*106*		*65 - 174*	*08/22/15 14:44*	*08/24/15 17:38*	*1*
Tetrachloro-m-xylene	*107*		*60 - 154*	*08/22/15 14:44*	*08/24/15 17:38*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.1**		2.2		mg/Kg	☼	08/24/15 10:02	08/25/15 15:12	1
Barium	**119**		0.54		mg/Kg	☼	08/24/15 10:02	08/25/15 15:12	1
Cadmium	**0.41**		0.22		mg/Kg	☼	08/24/15 10:02	08/25/15 15:12	1
Chromium	**18.2**		0.54		mg/Kg	☼	08/24/15 10:02	08/25/15 15:12	1
Lead	**23.0**		1.1		mg/Kg	☼	08/24/15 10:02	08/25/15 15:12	1
Selenium	ND		4.3		mg/Kg	☼	08/24/15 10:02	08/25/15 15:12	1
Silver	ND		0.65		mg/Kg	☼	08/24/15 10:02	08/25/15 15:12	1

Client Sample Results

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Client Sample ID: SB-10 (0-8)
Date Collected: 08/20/15 14:35
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-6
Matrix: Solid
Percent Solids: 91.9

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.033		0.021		mg/Kg	☼	08/24/15 09:25	08/24/15 14:47	1

Client Sample ID: SB-11 (0-4)
Date Collected: 08/20/15 15:00
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-7
Matrix: Solid
Percent Solids: 86.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		1900	290	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Acenaphthylene	ND		1900	250	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Anthracene	ND		1900	480	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Benzo[a]anthracene	ND		1900	190	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Benzo[a]pyrene	ND		1900	290	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Benzo[b]fluoranthene	ND		1900	310	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Benzo[g,h,i]perylene	ND		1900	210	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Benzo[k]fluoranthene	ND		1900	250	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Chrysene	ND		1900	430	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Dibenz(a,h)anthracene	ND		1900	340	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Fluoranthene	ND		1900	210	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Fluorene	ND		1900	230	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Indeno[1,2,3-cd]pyrene	ND		1900	240	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Naphthalene	ND		1900	250	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Pyrene	ND		1900	230	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10
Phenanthrene	ND		1900	290	ug/Kg	☼	08/24/15 10:47	08/25/15 21:35	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*74*		*39 - 146*	*08/24/15 10:47*	*08/25/15 21:35*	*10*
2-Fluorobiphenyl	*63*		*37 - 120*	*08/24/15 10:47*	*08/25/15 21:35*	*10*
2-Fluorophenol (Surr)	*70*		*18 - 120*	*08/24/15 10:47*	*08/25/15 21:35*	*10*
Phenol-d5 (Surr)	*75*		*11 - 120*	*08/24/15 10:47*	*08/25/15 21:35*	*10*
p-Terphenyl-d14 (Surr)	*62*	*X*	*65 - 153*	*08/24/15 10:47*	*08/25/15 21:35*	*10*
Nitrobenzene-d5 (Surr)	*55*		*34 - 132*	*08/24/15 10:47*	*08/25/15 21:35*	*10*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		280	56	ug/Kg	☼	08/22/15 14:44	08/24/15 17:54	1
PCB-1221	ND		280	56	ug/Kg	☼	08/22/15 14:44	08/24/15 17:54	1
PCB-1232	ND		280	56	ug/Kg	☼	08/22/15 14:44	08/24/15 17:54	1
PCB-1242	ND		280	56	ug/Kg	☼	08/22/15 14:44	08/24/15 17:54	1
PCB-1248	ND		280	56	ug/Kg	☼	08/22/15 14:44	08/24/15 17:54	1
PCB-1254	ND		280	130	ug/Kg	☼	08/22/15 14:44	08/24/15 17:54	1
PCB-1260	**1400**		280	130	ug/Kg	☼	08/22/15 14:44	08/24/15 17:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*104*		*65 - 174*	*08/22/15 14:44*	*08/24/15 17:54*	*1*
Tetrachloro-m-xylene	*102*		*60 - 154*	*08/22/15 14:44*	*08/24/15 17:54*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**12.5**		2.3		mg/Kg	☼	08/24/15 10:02	08/25/15 15:15	1
Barium	**582**		0.58		mg/Kg	☼	08/24/15 10:02	08/25/15 15:15	1
Cadmium	**17.0**		0.23		mg/Kg	☼	08/24/15 10:02	08/25/15 15:15	1
Chromium	**36.0**		0.58		mg/Kg	☼	08/24/15 10:02	08/25/15 15:15	1
Lead	**2080**		1.2		mg/Kg	☼	08/24/15 10:02	08/25/15 15:15	1
Selenium	ND		4.7		mg/Kg	☼	08/24/15 10:02	08/25/15 15:15	1
Silver	ND		0.70		mg/Kg	☼	08/24/15 10:02	08/25/15 15:15	1

Client Sample Results

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Client Sample ID: SB-11 (0-4)
Date Collected: 08/20/15 15:00
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-7
Matrix: Solid
Percent Solids: 86.6

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.16		0.023		mg/Kg	☼	08/24/15 09:25	08/24/15 14:49	1

Client Sample ID: SB-12 (0-4)

Date Collected: 08/20/15 15:30
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-8

Matrix: Solid
Percent Solids: 89.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		940	140	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Acenaphthylene	ND		940	120	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Anthracene	ND		940	230	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Benzo[a]anthracene	ND		940	94	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Benzo[a]pyrene	ND		940	140	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Benzo[b]fluoranthene	ND		940	150	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Benzo[g,h,i]perylene	ND		940	99	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Benzo[k]fluoranthene	ND		940	120	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Chrysene	ND		940	210	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Dibenz(a,h)anthracene	ND		940	170	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Fluoranthene	ND		940	99	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Fluorene	ND		940	110	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Indeno[1,2,3-cd]pyrene	ND		940	120	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Naphthalene	ND		940	120	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Pyrene	ND		940	110	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5
Phenanthrene	ND		940	140	ug/Kg	☼	08/24/15 10:47	08/25/15 22:02	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*59*		*39 - 146*	*08/24/15 10:47*	*08/25/15 22:02*	*5*
2-Fluorobiphenyl	*59*		*37 - 120*	*08/24/15 10:47*	*08/25/15 22:02*	*5*
2-Fluorophenol (Surr)	*66*		*18 - 120*	*08/24/15 10:47*	*08/25/15 22:02*	*5*
Phenol-d5 (Surr)	*61*		*11 - 120*	*08/24/15 10:47*	*08/25/15 22:02*	*5*
p-Terphenyl-d14 (Surr)	*57*	*X*	*65 - 153*	*08/24/15 10:47*	*08/25/15 22:02*	*5*
Nitrobenzene-d5 (Surr)	*58*		*34 - 132*	*08/24/15 10:47*	*08/25/15 22:02*	*5*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		240	47	ug/Kg	☼	08/22/15 14:44	08/24/15 18:10	1
PCB-1221	ND		240	47	ug/Kg	☼	08/22/15 14:44	08/24/15 18:10	1
PCB-1232	ND		240	47	ug/Kg	☼	08/22/15 14:44	08/24/15 18:10	1
PCB-1242	ND		240	47	ug/Kg	☼	08/22/15 14:44	08/24/15 18:10	1
PCB-1248	ND		240	47	ug/Kg	☼	08/22/15 14:44	08/24/15 18:10	1
PCB-1254	ND		240	110	ug/Kg	☼	08/22/15 14:44	08/24/15 18:10	1
PCB-1260	ND		240	110	ug/Kg	☼	08/22/15 14:44	08/24/15 18:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*106*		*65 - 174*	*08/22/15 14:44*	*08/24/15 18:10*	*1*
Tetrachloro-m-xylene	*104*		*60 - 154*	*08/22/15 14:44*	*08/24/15 18:10*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**5.8**		2.4		mg/Kg	☼	08/24/15 10:02	08/25/15 15:18	1
Barium	**61.5**		0.60		mg/Kg	☼	08/24/15 10:02	08/25/15 15:18	1
Cadmium	**4.9**		0.24		mg/Kg	☼	08/24/15 10:02	08/25/15 15:18	1
Chromium	**14.1**		0.60		mg/Kg	☼	08/24/15 10:02	08/25/15 15:18	1
Lead	**24.3**		1.2		mg/Kg	☼	08/24/15 10:02	08/25/15 15:18	1
Selenium	ND		4.8		mg/Kg	☼	08/24/15 10:02	08/25/15 15:18	1
Silver	ND		0.72		mg/Kg	☼	08/24/15 10:02	08/25/15 15:18	1

Client Sample Results

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Client Sample ID: SB-12 (0-4)
Date Collected: 08/20/15 15:30
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-8
Matrix: Solid
Percent Solids: 89.1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.050		0.021		mg/Kg	☼	08/24/15 09:25	08/24/15 14:51	1

Client Sample ID: SB-13 (4-8)

Date Collected: 08/20/15 15:55
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-9

Matrix: Solid
Percent Solids: 86.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		780	110	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Acenaphthylene	ND		780	100	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Anthracene	ND		780	190	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Benzo[a]anthracene	ND		780	78	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Benzo[a]pyrene	ND		780	110	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Benzo[b]fluoranthene	ND		780	120	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Benzo[g,h,i]perylene	ND		780	83	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Benzo[k]fluoranthene	ND		780	100	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Chrysene	ND		780	170	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Dibenz(a,h)anthracene	ND		780	140	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Fluoranthene	ND		780	83	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Fluorene	ND		780	92	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Indeno[1,2,3-cd]pyrene	ND		780	96	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Naphthalene	ND		780	100	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Pyrene	ND		780	92	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4
Phenanthrene	ND		780	110	ug/Kg	☼	08/24/15 10:47	08/25/15 22:28	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*79*		*39 - 146*	*08/24/15 10:47*	*08/25/15 22:28*	*4*
2-Fluorobiphenyl	*79*		*37 - 120*	*08/24/15 10:47*	*08/25/15 22:28*	*4*
2-Fluorophenol (Surr)	*77*		*18 - 120*	*08/24/15 10:47*	*08/25/15 22:28*	*4*
Phenol-d5 (Surr)	*82*		*11 - 120*	*08/24/15 10:47*	*08/25/15 22:28*	*4*
p-Terphenyl-d14 (Surr)	*83*		*65 - 153*	*08/24/15 10:47*	*08/25/15 22:28*	*4*
Nitrobenzene-d5 (Surr)	*69*		*34 - 132*	*08/24/15 10:47*	*08/25/15 22:28*	*4*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		240	46	ug/Kg	☼	08/22/15 14:44	08/24/15 18:26	1
PCB-1221	ND		240	46	ug/Kg	☼	08/22/15 14:44	08/24/15 18:26	1
PCB-1232	ND		240	46	ug/Kg	☼	08/22/15 14:44	08/24/15 18:26	1
PCB-1242	ND		240	46	ug/Kg	☼	08/22/15 14:44	08/24/15 18:26	1
PCB-1248	ND		240	46	ug/Kg	☼	08/22/15 14:44	08/24/15 18:26	1
PCB-1254	ND		240	110	ug/Kg	☼	08/22/15 14:44	08/24/15 18:26	1
PCB-1260	ND		240	110	ug/Kg	☼	08/22/15 14:44	08/24/15 18:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*105*		*65 - 174*	*08/22/15 14:44*	*08/24/15 18:26*	*1*
Tetrachloro-m-xylene	*108*		*60 - 154*	*08/22/15 14:44*	*08/24/15 18:26*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**2.8**		2.5		mg/Kg	☼	08/24/15 10:02	08/25/15 15:22	1
Barium	**102**		0.61		mg/Kg	☼	08/24/15 10:02	08/25/15 15:22	1
Cadmium	**0.29**		0.25		mg/Kg	☼	08/24/15 10:02	08/25/15 15:22	1
Chromium	**11.3**		0.61		mg/Kg	☼	08/24/15 10:02	08/25/15 15:22	1
Lead	**53.4**		1.2		mg/Kg	☼	08/24/15 10:02	08/25/15 15:22	1
Selenium	ND		4.9		mg/Kg	☼	08/24/15 10:02	08/25/15 15:22	1
Silver	ND		0.74		mg/Kg	☼	08/24/15 10:02	08/25/15 15:22	1

Client Sample Results

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Client Sample ID: SB-13 (4-8)
Date Collected: 08/20/15 15:55
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-9
Matrix: Solid
Percent Solids: 86.1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.57		0.024		mg/Kg	☼	08/24/15 09:25	08/24/15 14:58	1

Client Sample ID: SB-8 (0-4)
Date Collected: 08/20/15 13:40
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-10
Matrix: Solid
Percent Solids: 87.7

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**12.2**		2.4		mg/Kg	☼	08/24/15 10:02	08/25/15 15:35	1
Barium	**144**		0.59		mg/Kg	☼	08/24/15 10:02	08/25/15 15:35	1
Cadmium	**7.3**		0.24		mg/Kg	☼	08/24/15 10:02	08/25/15 15:35	1
Chromium	**27.3**		0.59		mg/Kg	☼	08/24/15 10:02	08/25/15 15:35	1
Lead	**5340**		1.2		mg/Kg	☼	08/24/15 10:02	08/25/15 15:35	1
Selenium	ND		4.7		mg/Kg	☼	08/24/15 10:02	08/25/15 15:35	1
Silver	ND		0.71		mg/Kg	☼	08/24/15 10:02	08/25/15 15:35	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.21**		0.022		mg/Kg	☼	08/24/15 09:25	08/24/15 15:00	1

Client Sample ID: SB-9 (0-4)
Date Collected: 08/20/15 14:35
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-11
Matrix: Solid
Percent Solids: 86.5

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**6.8**		2.3		mg/Kg	☼	08/24/15 10:02	08/25/15 15:38	1
Barium	**120**	**F1**	0.59		mg/Kg	☼	08/24/15 10:02	08/25/15 15:38	1
Cadmium	**0.42**		0.23		mg/Kg	☼	08/24/15 10:02	08/25/15 15:38	1
Chromium	**10.3**		0.59		mg/Kg	☼	08/24/15 10:02	08/25/15 15:38	1
Lead	**79.8**	**F1**	1.2		mg/Kg	☼	08/24/15 10:02	08/25/15 15:38	1
Selenium	ND		4.7		mg/Kg	☼	08/24/15 10:02	08/25/15 15:38	1
Silver	ND		0.70		mg/Kg	☼	08/24/15 10:02	08/25/15 15:38	1

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.31**		0.021		mg/Kg	☼	08/24/15 09:25	08/24/15 15:02	1

Surrogate Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	12DCE	BFB	DBFM
Lab Sample ID	Client Sample ID	(50-149)	(53-146)	(49-148)	(60-140)
480-86051-1	SB-2 (18-19)	93	71	105	61
480-86051-1 - DL	SB-2 (18-19)	87	95	92	91
LCS 480-260158/1-A	Lab Control Sample	100	90	109	91
MB 480-260158/2-A	Method Blank	104	101	107	95
MB 480-260172/6	Method Blank	101	98	105	102

Surrogate Legend

TOL = Toluene-d8 (Surr)
12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (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)
480-86051-2	SB-3 (4-7)	76	68	80	70	70	62
480-86051-2 MS	SB-3 (4-7)	82	71	73	74	75	71
480-86051-2 MSD	SB-3 (4-7)	74	61	68	65	64 X	68
480-86051-3	SB-4 (0-4)	64	54	72	72	67	55
480-86051-4	SB-5 (12-16)	73	65	73	71	75	59
480-86051-5	SB-6 (8-12)	83	77	82	81	81	70
480-86051-6	SB-10 (0-8)	79	72	78	84	85	70
480-86051-7	SB-11 (0-4)	74	63	70	75	62 X	55
480-86051-8	SB-12 (0-4)	59	59	66	61	57 X	58
480-86051-9	SB-13 (4-8)	79	79	77	82	83	69
LCS 480-260090/2-A	Lab Control Sample	76	76	71	68	87	71
MB 480-260090/1-A	Method Blank	68	69	66	63	82	59

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)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB1	TCX1
Lab Sample ID	Client Sample ID	(65-174)	(60-154)
480-86051-3	SB-4 (0-4)	106	108
480-86051-5	SB-6 (8-12)	104	106
480-86051-6	SB-10 (0-8)	106	107
480-86051-7	SB-11 (0-4)	104	102
480-86051-8	SB-12 (0-4)	106	104

Surrogate Summary

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

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

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	DCB1 (65-174)	TCX1 (60-154)								
480-86051-9	SB-13 (4-8)	105	108								
LCS 480-259983/2-A	Lab Control Sample	120	125								
MB 480-259983/1-A	Method Blank	105	106								

Surrogate Legend

DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

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

Lab Sample ID: MB 480-260158/2-A
Matrix: Solid
Analysis Batch: 260172

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 260158

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		97	27	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
1,1,2,2-Tetrachloroethane	ND		97	16	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
1,1,2-Trichloroethane	ND		97	20	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		97	48	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
1,1-Dichloroethane	ND		97	30	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
1,1-Dichloroethene	ND		97	33	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
1,2,4-Trichlorobenzene	ND		97	37	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
1,2-Dibromo-3-Chloropropane	ND		97	48	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
1,2-Dichlorobenzene	ND		97	25	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
1,2-Dichloroethane	ND		97	39	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
1,2-Dichloropropane	ND		97	16	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
1,3-Dichlorobenzene	ND		97	26	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
1,4-Dichlorobenzene	ND		97	14	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
2-Butanone (MEK)	ND		480	290	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
2-Hexanone	ND		480	200	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
4-Methyl-2-pentanone (MIBK)	ND		480	31	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Acetone	ND		480	400	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Benzene	ND		97	18	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Bromodichloromethane	ND		97	19	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Bromoform	ND		97	48	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Bromomethane	ND		97	21	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Carbon disulfide	ND		97	44	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Carbon tetrachloride	ND		97	25	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Chlorobenzene	ND		97	13	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Dibromochloromethane	ND		97	47	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Chloroethane	ND		97	20	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Chloroform	ND		97	66	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Chloromethane	ND		97	23	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
cis-1,2-Dichloroethene	ND		97	27	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
cis-1,3-Dichloropropene	ND		97	23	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Cyclohexane	ND		97	21	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Dichlorodifluoromethane	ND		97	42	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Ethylbenzene	ND		97	28	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
1,2-Dibromoethane	ND		97	17	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Isopropylbenzene	ND		97	14	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Methyl acetate	ND		97	46	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Methyl tert-butyl ether	ND		97	36	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Methylcyclohexane	ND		97	45	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Methylene Chloride	47.8	J	97	19	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Styrene	ND		97	23	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Tetrachloroethene	ND		97	13	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Toluene	ND		97	26	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
trans-1,2-Dichloroethene	ND		97	23	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
trans-1,3-Dichloropropene	ND		97	9.5	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Trichloroethene	ND		97	27	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Trichlorofluoromethane	ND		97	45	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Vinyl chloride	ND		97	32	ug/Kg		08/24/15 16:27	08/24/15 21:26	1
Xylenes, Total	ND		190	53	ug/Kg		08/24/15 16:27	08/24/15 21:26	1

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

Lab Sample ID: MB 480-260158/2-A
Matrix: Solid
Analysis Batch: 260172

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 260158

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*104*		*50 - 149*	*08/24/15 16:27*	*08/24/15 21:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*53 - 146*	*08/24/15 16:27*	*08/24/15 21:26*	*1*
4-Bromofluorobenzene (Surr)	*107*		*49 - 148*	*08/24/15 16:27*	*08/24/15 21:26*	*1*
Dibromofluoromethane (Surr)	*95*		*60 - 140*	*08/24/15 16:27*	*08/24/15 21:26*	*1*

Lab Sample ID: LCS 480-260158/1-A
Matrix: Solid
Analysis Batch: 260172

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 260158

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	2400	2270		ug/Kg		94	78 - 121
1,1-Dichloroethene	2400	2310		ug/Kg		96	48 - 133
1,2-Dichlorobenzene	2400	2590		ug/Kg		108	78 - 125
1,2-Dichloroethane	2400	2130		ug/Kg		88	74 - 127
Benzene	2400	2280		ug/Kg		95	77 - 125
Chlorobenzene	2400	2450		ug/Kg		102	76 - 126
cis-1,2-Dichloroethene	2400	2280		ug/Kg		95	79 - 124
Ethylbenzene	2400	2470		ug/Kg		103	78 - 124
Methyl tert-butyl ether	2400	2210		ug/Kg		92	67 - 137
Tetrachloroethene	2400	2570		ug/Kg		107	73 - 133
Toluene	2400	2430		ug/Kg		101	75 - 124
trans-1,2-Dichloroethene	2400	2360		ug/Kg		98	74 - 129
Trichloroethene	2400	2280		ug/Kg		95	75 - 131

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	*100*		*50 - 149*
1,2-Dichloroethane-d4 (Surr)	*90*		*53 - 146*
4-Bromofluorobenzene (Surr)	*109*		*49 - 148*
Dibromofluoromethane (Surr)	*91*		*60 - 140*

Lab Sample ID: MB 480-260172/6
Matrix: Solid
Analysis Batch: 260172

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	0.28	ug/Kg			08/24/15 21:03	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.16	ug/Kg			08/24/15 21:03	1
1,1,2-Trichloroethane	ND		1.0	0.21	ug/Kg			08/24/15 21:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.50	ug/Kg			08/24/15 21:03	1
1,1-Dichloroethane	ND		1.0	0.31	ug/Kg			08/24/15 21:03	1
1,1-Dichloroethene	ND		1.0	0.35	ug/Kg			08/24/15 21:03	1
1,2,4-Trichlorobenzene	ND		1.0	0.38	ug/Kg			08/24/15 21:03	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/Kg			08/24/15 21:03	1
1,2-Dichlorobenzene	ND		1.0	0.26	ug/Kg			08/24/15 21:03	1
1,2-Dichloroethane	ND		1.0	0.41	ug/Kg			08/24/15 21:03	1
1,2-Dichloropropane	ND		1.0	0.16	ug/Kg			08/24/15 21:03	1
1,3-Dichlorobenzene	ND		1.0	0.27	ug/Kg			08/24/15 21:03	1
1,4-Dichlorobenzene	ND		1.0	0.14	ug/Kg			08/24/15 21:03	1

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

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

Lab Sample ID: MB 480-260172/6
Matrix: Solid
Analysis Batch: 260172

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		5.0	3.0	ug/Kg			08/24/15 21:03	1
2-Hexanone	ND		5.0	2.1	ug/Kg			08/24/15 21:03	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.32	ug/Kg			08/24/15 21:03	1
Acetone	ND		5.0	4.1	ug/Kg			08/24/15 21:03	1
Benzene	ND		1.0	0.19	ug/Kg			08/24/15 21:03	1
Bromodichloromethane	ND		1.0	0.20	ug/Kg			08/24/15 21:03	1
Bromoform	ND		1.0	0.50	ug/Kg			08/24/15 21:03	1
Bromomethane	ND		1.0	0.22	ug/Kg			08/24/15 21:03	1
Carbon disulfide	ND		1.0	0.46	ug/Kg			08/24/15 21:03	1
Carbon tetrachloride	ND		1.0	0.26	ug/Kg			08/24/15 21:03	1
Chlorobenzene	ND		1.0	0.13	ug/Kg			08/24/15 21:03	1
Dibromochloromethane	ND		1.0	0.48	ug/Kg			08/24/15 21:03	1
Chloroethane	ND		1.0	0.21	ug/Kg			08/24/15 21:03	1
Chloroform	ND		1.0	0.69	ug/Kg			08/24/15 21:03	1
Chloromethane	ND		1.0	0.24	ug/Kg			08/24/15 21:03	1
cis-1,2-Dichloroethene	ND		1.0	0.28	ug/Kg			08/24/15 21:03	1
cis-1,3-Dichloropropene	ND		1.0	0.24	ug/Kg			08/24/15 21:03	1
Cyclohexane	ND		1.0	0.22	ug/Kg			08/24/15 21:03	1
Dichlorodifluoromethane	ND		1.0	0.44	ug/Kg			08/24/15 21:03	1
Ethylbenzene	ND		1.0	0.29	ug/Kg			08/24/15 21:03	1
1,2-Dibromoethane	ND		1.0	0.18	ug/Kg			08/24/15 21:03	1
Isopropylbenzene	ND		1.0	0.15	ug/Kg			08/24/15 21:03	1
Methyl acetate	ND		1.0	0.48	ug/Kg			08/24/15 21:03	1
Methyl tert-butyl ether	ND		1.0	0.38	ug/Kg			08/24/15 21:03	1
Methylcyclohexane	ND		1.0	0.47	ug/Kg			08/24/15 21:03	1
Methylene Chloride	0.210	J	1.0	0.20	ug/Kg			08/24/15 21:03	1
Styrene	ND		1.0	0.24	ug/Kg			08/24/15 21:03	1
Tetrachloroethene	ND		1.0	0.13	ug/Kg			08/24/15 21:03	1
Toluene	ND		1.0	0.27	ug/Kg			08/24/15 21:03	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/Kg			08/24/15 21:03	1
trans-1,3-Dichloropropene	ND		1.0	0.098	ug/Kg			08/24/15 21:03	1
Trichloroethene	ND		1.0	0.28	ug/Kg			08/24/15 21:03	1
Trichlorofluoromethane	ND		1.0	0.47	ug/Kg			08/24/15 21:03	1
Vinyl chloride	ND		1.0	0.34	ug/Kg			08/24/15 21:03	1
Xylenes, Total	ND		2.0	0.55	ug/Kg			08/24/15 21:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*50 - 149*		*08/24/15 21:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*53 - 146*		*08/24/15 21:03*	*1*
4-Bromofluorobenzene (Surr)	*105*		*49 - 148*		*08/24/15 21:03*	*1*
Dibromofluoromethane (Surr)	*102*		*60 - 140*		*08/24/15 21:03*	*1*

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

Lab Sample ID: MB 480-260090/1-A
Matrix: Solid
Analysis Batch: 260318

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 260090

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		170	25	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Acenaphthylene	ND		170	22	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Anthracene	ND		170	41	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Benzo[a]anthracene	ND		170	17	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Benzo[a]pyrene	ND		170	25	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Benzo[b]fluoranthene	ND		170	27	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Benzo[g,h,i]perylene	ND		170	18	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Benzo[k]fluoranthene	ND		170	22	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Chrysene	ND		170	38	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Dibenz(a,h)anthracene	ND		170	30	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Fluoranthene	ND		170	18	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Fluorene	ND		170	20	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Indeno[1,2,3-cd]pyrene	ND		170	21	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Naphthalene	ND		170	22	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Pyrene	ND		170	20	ug/Kg		08/24/15 10:47	08/25/15 17:38	1
Phenanthrene	ND		170	25	ug/Kg		08/24/15 10:47	08/25/15 17:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*68*		*39 - 146*	*08/24/15 10:47*	*08/25/15 17:38*	*1*
2-Fluorobiphenyl	*69*		*37 - 120*	*08/24/15 10:47*	*08/25/15 17:38*	*1*
2-Fluorophenol (Surr)	*66*		*18 - 120*	*08/24/15 10:47*	*08/25/15 17:38*	*1*
Phenol-d5 (Surr)	*63*		*11 - 120*	*08/24/15 10:47*	*08/25/15 17:38*	*1*
p-Terphenyl-d14 (Surr)	*82*		*65 - 153*	*08/24/15 10:47*	*08/25/15 17:38*	*1*
Nitrobenzene-d5 (Surr)	*59*		*34 - 132*	*08/24/15 10:47*	*08/25/15 17:38*	*1*

Lab Sample ID: LCS 480-260090/2-A
Matrix: Solid
Analysis Batch: 260318

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 260090

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	1650	1240		ug/Kg		75	53 - 120
Acenaphthylene	1650	1250		ug/Kg		75	58 - 121
Anthracene	1650	1260		ug/Kg		76	62 - 129
Benzo[a]anthracene	1650	1270		ug/Kg		77	65 - 133
Benzo[a]pyrene	1650	1280		ug/Kg		77	64 - 127
Benzo[b]fluoranthene	1650	1310		ug/Kg		79	64 - 135
Benzo[g,h,i]perylene	1650	1400		ug/Kg		85	50 - 152
Benzo[k]fluoranthene	1650	1320		ug/Kg		80	58 - 138
Chrysene	1650	1280		ug/Kg		78	64 - 131
Dibenz(a,h)anthracene	1650	1290		ug/Kg		78	54 - 148
Fluoranthene	1650	1200		ug/Kg		72	62 - 131
Fluorene	1650	1200		ug/Kg		73	63 - 126
Indeno[1,2,3-cd]pyrene	1650	1310		ug/Kg		79	56 - 149
Naphthalene	1650	1140		ug/Kg		69	46 - 120
Pyrene	1650	1480		ug/Kg		90	51 - 133
Phenanthrene	1650	1270		ug/Kg		77	60 - 130

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

Lab Sample ID: LCS 480-260090/2-A
Matrix: Solid
Analysis Batch: 260318

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 260090

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*76*		*39 - 146*
2-Fluorobiphenyl	*76*		*37 - 120*
2-Fluorophenol (Surr)	*71*		*18 - 120*
Phenol-d5 (Surr)	*68*		*11 - 120*
p-Terphenyl-d14 (Surr)	*87*		*65 - 153*
Nitrobenzene-d5 (Surr)	*71*		*34 - 132*

Lab Sample ID: 480-86051-2 MS
Matrix: Solid
Analysis Batch: 260318

Client Sample ID: SB-3 (4-7)
Prep Type: Total/NA
Prep Batch: 260090

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	ND		1750	1280	J	ug/Kg	☼	73	53 - 120
Acenaphthylene	ND		1750	1280	J	ug/Kg	☼	73	58 - 121
Anthracene	ND		1750	1300	J	ug/Kg	☼	74	62 - 129
Benzo[a]anthracene	ND		1750	1390	J	ug/Kg	☼	79	65 - 133
Benzo[a]pyrene	ND	F2 F1	1750	1340	J	ug/Kg	☼	77	64 - 127
Benzo[b]fluoranthene	ND	F2 F1	1750	1300	J	ug/Kg	☼	74	64 - 135
Benzo[g,h,i]perylene	ND		1750	1410	J	ug/Kg	☼	80	50 - 152
Benzo[k]fluoranthene	ND		1750	1210	J	ug/Kg	☼	69	58 - 138
Chrysene	ND	F2	1750	1410	J	ug/Kg	☼	80	64 - 131
Dibenz(a,h)anthracene	ND		1750	1380	J	ug/Kg	☼	79	54 - 148
Fluoranthene	ND	F2	1750	1410	J	ug/Kg	☼	81	62 - 131
Fluorene	ND		1750	1360	J	ug/Kg	☼	78	63 - 126
Indeno[1,2,3-cd]pyrene	ND	F2	1750	1330	J	ug/Kg	☼	76	56 - 149
Naphthalene	ND		1750	1190	J	ug/Kg	☼	68	46 - 120
Pyrene	ND		1750	1430	J	ug/Kg	☼	81	51 - 133
Phenanthrene	ND		1750	1410	J	ug/Kg	☼	80	60 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*82*		*39 - 146*
2-Fluorobiphenyl	*71*		*37 - 120*
2-Fluorophenol (Surr)	*73*		*18 - 120*
Phenol-d5 (Surr)	*74*		*11 - 120*
p-Terphenyl-d14 (Surr)	*75*		*65 - 153*
Nitrobenzene-d5 (Surr)	*71*		*34 - 132*

Lab Sample ID: 480-86051-2 MSD
Matrix: Solid
Analysis Batch: 260318

Client Sample ID: SB-3 (4-7)
Prep Type: Total/NA
Prep Batch: 260090

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	ND		1760	1140	J	ug/Kg	☼	65	53 - 120	12	35
Acenaphthylene	ND		1760	1120	J	ug/Kg	☼	64	58 - 121	13	18
Anthracene	ND		1760	1120	J	ug/Kg	☼	64	62 - 129	15	15
Benzo[a]anthracene	ND		1760	1230	J	ug/Kg	☼	70	65 - 133	12	15
Benzo[a]pyrene	ND	F2 F1	1760	1070	J F1 F2	ug/Kg	☼	61	64 - 127	23	15
Benzo[b]fluoranthene	ND	F2 F1	1760	1030	J F1 F2	ug/Kg	☼	59	64 - 135	24	15

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

Lab Sample ID: 480-86051-2 MSD
Matrix: Solid
Analysis Batch: 260318

Client Sample ID: SB-3 (4-7)
Prep Type: Total/NA
Prep Batch: 260090

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[g,h,i]perylene	ND		1760	1250	J	ug/Kg	☼	71	50 - 152	12	15
Benzo[k]fluoranthene	ND		1760	1080	J	ug/Kg	☼	62	58 - 138	11	22
Chrysene	ND	F2	1760	1200	J F2	ug/Kg	☼	69	64 - 131	16	15
Dibenz(a,h)anthracene	ND		1760	1200	J	ug/Kg	☼	68	54 - 148	14	15
Fluoranthene	ND	F2	1760	1180	J F2	ug/Kg	☼	67	62 - 131	18	15
Fluorene	ND		1760	1170	J	ug/Kg	☼	67	63 - 126	15	15
Indeno[1,2,3-cd]pyrene	ND	F2	1760	1130	J F2	ug/Kg	☼	64	56 - 149	16	15
Naphthalene	ND		1760	1120	J	ug/Kg	☼	64	46 - 120	6	29
Pyrene	ND		1760	1120	J	ug/Kg	☼	64	51 - 133	24	35
Phenanthrene	ND		1760	1390	J	ug/Kg	☼	79	60 - 130	1	15

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*74*		*39 - 146*
2-Fluorobiphenyl	*61*		*37 - 120*
2-Fluorophenol (Surr)	*68*		*18 - 120*
Phenol-d5 (Surr)	*65*		*11 - 120*
p-Terphenyl-d14 (Surr)	*64*	*X*	*65 - 153*
Nitrobenzene-d5 (Surr)	*68*		*34 - 132*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 480-259983/1-A
Matrix: Solid
Analysis Batch: 260088

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 259983

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		220	43	ug/Kg		08/22/15 14:44	08/24/15 11:16	1
PCB-1221	ND		220	43	ug/Kg		08/22/15 14:44	08/24/15 11:16	1
PCB-1232	ND		220	43	ug/Kg		08/22/15 14:44	08/24/15 11:16	1
PCB-1242	ND		220	43	ug/Kg		08/22/15 14:44	08/24/15 11:16	1
PCB-1248	ND		220	43	ug/Kg		08/22/15 14:44	08/24/15 11:16	1
PCB-1254	ND		220	100	ug/Kg		08/22/15 14:44	08/24/15 11:16	1
PCB-1260	ND		220	100	ug/Kg		08/22/15 14:44	08/24/15 11:16	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*105*		*65 - 174*	*08/22/15 14:44*	*08/24/15 11:16*	*1*
Tetrachloro-m-xylene	*106*		*60 - 154*	*08/22/15 14:44*	*08/24/15 11:16*	*1*

Lab Sample ID: LCS 480-259983/2-A
Matrix: Solid
Analysis Batch: 260088

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259983

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	2300	2680		ug/Kg		116	51 - 185
PCB-1260	2300	3030		ug/Kg		131	61 - 184

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 480-259983/2-A
Matrix: Solid
Analysis Batch: 260088

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 259983

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*120*		*65 - 174*
Tetrachloro-m-xylene	*125*		*60 - 154*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-260041/1-A
Matrix: Solid
Analysis Batch: 260413

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 260041

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		2.0		mg/Kg		08/24/15 10:02	08/25/15 14:17	1
Barium	ND		0.50		mg/Kg		08/24/15 10:02	08/25/15 14:17	1
Cadmium	ND		0.20		mg/Kg		08/24/15 10:02	08/25/15 14:17	1
Chromium	ND		0.50		mg/Kg		08/24/15 10:02	08/25/15 14:17	1
Lead	ND		1.0		mg/Kg		08/24/15 10:02	08/25/15 14:17	1
Selenium	ND		4.0		mg/Kg		08/24/15 10:02	08/25/15 14:17	1
Silver	ND		0.60		mg/Kg		08/24/15 10:02	08/25/15 14:17	1

Lab Sample ID: LCSSRM 480-260041/2-A
Matrix: Solid
Analysis Batch: 260413

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 260041

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	113	105.4		mg/Kg		93.2	69.7 - 142.5
Barium	155	145.1		mg/Kg		93.6	72.9 - 127.1
Cadmium	67.5	63.86		mg/Kg		94.6	73.2 - 126.8
Chromium	164	158.9		mg/Kg		96.9	70.7 - 129.9
Lead	90.1	92.70		mg/Kg		102.9	70.1 - 129.9
Selenium	156	145.9		mg/Kg		93.5	67.3 - 132.1
Silver	52.6	48.94		mg/Kg		93.0	66.7 - 133.5

Lab Sample ID: 480-86051-11 MS
Matrix: Solid
Analysis Batch: 260413

Client Sample ID: SB-9 (0-4)
Prep Type: Total/NA
Prep Batch: 260041

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	6.8		47.7	51.55		mg/Kg	☼	94	75 - 125
Barium	120	F1	47.7	171.4		mg/Kg	☼	107	75 - 125
Cadmium	0.42		47.7	44.10		mg/Kg	☼	92	75 - 125
Chromium	10.3		47.7	58.96		mg/Kg	☼	102	75 - 125
Lead	79.8	F1	47.7	150.5	F1	mg/Kg	☼	148	75 - 125
Selenium	ND		47.7	44.66		mg/Kg	☼	92	75 - 125
Silver	ND		11.9	10.91		mg/Kg	☼	92	75 - 125

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

Lab Sample ID: 480-86051-11 MSD
Matrix: Solid
Analysis Batch: 260413

Client Sample ID: SB-9 (0-4)
Prep Type: Total/NA
Prep Batch: 260041

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	6.8		45.7	48.76		mg/Kg	☼	92	75 - 125	6	20
Barium	120	F1	45.7	146.4	F1	mg/Kg	☼	57	75 - 125	16	20
Cadmium	0.42		45.7	42.34		mg/Kg	☼	92	75 - 125	4	20
Chromium	10.3		45.7	55.37		mg/Kg	☼	99	75 - 125	6	20
Lead	79.8	F1	45.7	131.6		mg/Kg	☼	113	75 - 125	13	20
Selenium	ND		45.7	42.60		mg/Kg	☼	92	75 - 125	5	20
Silver	ND		11.4	10.54		mg/Kg	☼	92	75 - 125	3	20

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 480-260021/1-A
Matrix: Solid
Analysis Batch: 260260

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 260021

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.019		mg/Kg		08/24/15 09:25	08/24/15 14:07	1

Lab Sample ID: LCSSRM 480-260021/2-A
Matrix: Solid
Analysis Batch: 260260

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 260021

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			8.37	10.04		mg/Kg		120.0	51.3 - 148.1		

GC/MS VOA

Prep Batch: 260158

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-1	SB-2 (18-19)	Total/NA	Solid	5035A	
480-86051-1 - DL	SB-2 (18-19)	Total/NA	Solid	5035A	
LCS 480-260158/1-A	Lab Control Sample	Total/NA	Solid	5035A	
MB 480-260158/2-A	Method Blank	Total/NA	Solid	5035A	

Analysis Batch: 260172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-1	SB-2 (18-19)	Total/NA	Solid	8260C	260158
LCS 480-260158/1-A	Lab Control Sample	Total/NA	Solid	8260C	260158
MB 480-260158/2-A	Method Blank	Total/NA	Solid	8260C	260158
MB 480-260172/6	Method Blank	Total/NA	Solid	8260C	

Analysis Batch: 260257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-1 - DL	SB-2 (18-19)	Total/NA	Solid	8260C	260158

GC/MS Semi VOA

Prep Batch: 260090

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-2	SB-3 (4-7)	Total/NA	Solid	3550C	
480-86051-2 MS	SB-3 (4-7)	Total/NA	Solid	3550C	
480-86051-2 MSD	SB-3 (4-7)	Total/NA	Solid	3550C	
480-86051-3	SB-4 (0-4)	Total/NA	Solid	3550C	
480-86051-4	SB-5 (12-16)	Total/NA	Solid	3550C	
480-86051-5	SB-6 (8-12)	Total/NA	Solid	3550C	
480-86051-6	SB-10 (0-8)	Total/NA	Solid	3550C	
480-86051-7	SB-11 (0-4)	Total/NA	Solid	3550C	
480-86051-8	SB-12 (0-4)	Total/NA	Solid	3550C	
480-86051-9	SB-13 (4-8)	Total/NA	Solid	3550C	
LCS 480-260090/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 480-260090/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 260318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-2	SB-3 (4-7)	Total/NA	Solid	8270D	260090
480-86051-2 MS	SB-3 (4-7)	Total/NA	Solid	8270D	260090
480-86051-2 MSD	SB-3 (4-7)	Total/NA	Solid	8270D	260090
480-86051-3	SB-4 (0-4)	Total/NA	Solid	8270D	260090
480-86051-4	SB-5 (12-16)	Total/NA	Solid	8270D	260090
480-86051-5	SB-6 (8-12)	Total/NA	Solid	8270D	260090
480-86051-6	SB-10 (0-8)	Total/NA	Solid	8270D	260090
480-86051-7	SB-11 (0-4)	Total/NA	Solid	8270D	260090
480-86051-8	SB-12 (0-4)	Total/NA	Solid	8270D	260090
480-86051-9	SB-13 (4-8)	Total/NA	Solid	8270D	260090
LCS 480-260090/2-A	Lab Control Sample	Total/NA	Solid	8270D	260090
MB 480-260090/1-A	Method Blank	Total/NA	Solid	8270D	260090

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

GC Semi VOA

Prep Batch: 259983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-3	SB-4 (0-4)	Total/NA	Solid	3550C	
480-86051-5	SB-6 (8-12)	Total/NA	Solid	3550C	
480-86051-6	SB-10 (0-8)	Total/NA	Solid	3550C	
480-86051-7	SB-11 (0-4)	Total/NA	Solid	3550C	
480-86051-8	SB-12 (0-4)	Total/NA	Solid	3550C	
480-86051-9	SB-13 (4-8)	Total/NA	Solid	3550C	
LCS 480-259983/2-A	Lab Control Sample	Total/NA	Solid	3550C	
MB 480-259983/1-A	Method Blank	Total/NA	Solid	3550C	

Analysis Batch: 260088

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-3	SB-4 (0-4)	Total/NA	Solid	8082A	259983
480-86051-5	SB-6 (8-12)	Total/NA	Solid	8082A	259983
480-86051-6	SB-10 (0-8)	Total/NA	Solid	8082A	259983
480-86051-7	SB-11 (0-4)	Total/NA	Solid	8082A	259983
480-86051-8	SB-12 (0-4)	Total/NA	Solid	8082A	259983
480-86051-9	SB-13 (4-8)	Total/NA	Solid	8082A	259983
LCS 480-259983/2-A	Lab Control Sample	Total/NA	Solid	8082A	259983
MB 480-259983/1-A	Method Blank	Total/NA	Solid	8082A	259983

Metals

Prep Batch: 260021

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-2	SB-3 (4-7)	Total/NA	Solid	7471B	
480-86051-3	SB-4 (0-4)	Total/NA	Solid	7471B	
480-86051-4	SB-5 (12-16)	Total/NA	Solid	7471B	
480-86051-5	SB-6 (8-12)	Total/NA	Solid	7471B	
480-86051-6	SB-10 (0-8)	Total/NA	Solid	7471B	
480-86051-7	SB-11 (0-4)	Total/NA	Solid	7471B	
480-86051-8	SB-12 (0-4)	Total/NA	Solid	7471B	
480-86051-9	SB-13 (4-8)	Total/NA	Solid	7471B	
480-86051-10	SB-8 (0-4)	Total/NA	Solid	7471B	
480-86051-11	SB-9 (0-4)	Total/NA	Solid	7471B	
LCSSRM 480-260021/2-A	Lab Control Sample	Total/NA	Solid	7471B	
MB 480-260021/1-A	Method Blank	Total/NA	Solid	7471B	

Prep Batch: 260041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-2	SB-3 (4-7)	Total/NA	Solid	3050B	
480-86051-3	SB-4 (0-4)	Total/NA	Solid	3050B	
480-86051-4	SB-5 (12-16)	Total/NA	Solid	3050B	
480-86051-5	SB-6 (8-12)	Total/NA	Solid	3050B	
480-86051-6	SB-10 (0-8)	Total/NA	Solid	3050B	
480-86051-7	SB-11 (0-4)	Total/NA	Solid	3050B	
480-86051-8	SB-12 (0-4)	Total/NA	Solid	3050B	
480-86051-9	SB-13 (4-8)	Total/NA	Solid	3050B	
480-86051-10	SB-8 (0-4)	Total/NA	Solid	3050B	
480-86051-11	SB-9 (0-4)	Total/NA	Solid	3050B	
480-86051-11 MS	SB-9 (0-4)	Total/NA	Solid	3050B	

Metals (Continued)

Prep Batch: 260041 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-11 MSD	SB-9 (0-4)	Total/NA	Solid	3050B	
LCSSRM 480-260041/2-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 480-260041/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 260260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-2	SB-3 (4-7)	Total/NA	Solid	7471B	260021
480-86051-3	SB-4 (0-4)	Total/NA	Solid	7471B	260021
480-86051-4	SB-5 (12-16)	Total/NA	Solid	7471B	260021
480-86051-5	SB-6 (8-12)	Total/NA	Solid	7471B	260021
480-86051-6	SB-10 (0-8)	Total/NA	Solid	7471B	260021
480-86051-7	SB-11 (0-4)	Total/NA	Solid	7471B	260021
480-86051-8	SB-12 (0-4)	Total/NA	Solid	7471B	260021
480-86051-9	SB-13 (4-8)	Total/NA	Solid	7471B	260021
480-86051-10	SB-8 (0-4)	Total/NA	Solid	7471B	260021
480-86051-11	SB-9 (0-4)	Total/NA	Solid	7471B	260021
LCSSRM 480-260021/2-A	Lab Control Sample	Total/NA	Solid	7471B	260021
MB 480-260021/1-A	Method Blank	Total/NA	Solid	7471B	260021

Analysis Batch: 260413

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-2	SB-3 (4-7)	Total/NA	Solid	6010C	260041
480-86051-3	SB-4 (0-4)	Total/NA	Solid	6010C	260041
480-86051-4	SB-5 (12-16)	Total/NA	Solid	6010C	260041
480-86051-5	SB-6 (8-12)	Total/NA	Solid	6010C	260041
480-86051-6	SB-10 (0-8)	Total/NA	Solid	6010C	260041
480-86051-7	SB-11 (0-4)	Total/NA	Solid	6010C	260041
480-86051-8	SB-12 (0-4)	Total/NA	Solid	6010C	260041
480-86051-9	SB-13 (4-8)	Total/NA	Solid	6010C	260041
480-86051-10	SB-8 (0-4)	Total/NA	Solid	6010C	260041
480-86051-11	SB-9 (0-4)	Total/NA	Solid	6010C	260041
480-86051-11 MS	SB-9 (0-4)	Total/NA	Solid	6010C	260041
480-86051-11 MSD	SB-9 (0-4)	Total/NA	Solid	6010C	260041
LCSSRM 480-260041/2-A	Lab Control Sample	Total/NA	Solid	6010C	260041
MB 480-260041/1-A	Method Blank	Total/NA	Solid	6010C	260041

General Chemistry

Analysis Batch: 259941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-2	SB-3 (4-7)	Total/NA	Solid	Moisture	
480-86051-3	SB-4 (0-4)	Total/NA	Solid	Moisture	
480-86051-4	SB-5 (12-16)	Total/NA	Solid	Moisture	
480-86051-5	SB-6 (8-12)	Total/NA	Solid	Moisture	
480-86051-6	SB-10 (0-8)	Total/NA	Solid	Moisture	
480-86051-7	SB-11 (0-4)	Total/NA	Solid	Moisture	
480-86051-8	SB-12 (0-4)	Total/NA	Solid	Moisture	
480-86051-9	SB-13 (4-8)	Total/NA	Solid	Moisture	
480-86051-10	SB-8 (0-4)	Total/NA	Solid	Moisture	
480-86051-11	SB-9 (0-4)	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 260162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86051-1	SB-2 (18-19)	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Client Sample ID: SB-2 (18-19)
Date Collected: 08/20/15 09:45
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	260162	08/24/15 16:56	NQN	TAL BUF

Client Sample ID: SB-2 (18-19)
Date Collected: 08/20/15 09:45
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-1
Matrix: Solid
Percent Solids: 82.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035A			260158	08/24/15 16:27	NQN	TAL BUF
Total/NA	Analysis	8260C		10	260172	08/25/15 04:56	LJF	TAL BUF
Total/NA	Prep	5035A	DL		260158	08/24/15 16:27	NQN	TAL BUF
Total/NA	Analysis	8260C	DL	20	260257	08/25/15 13:04	LJF	TAL BUF

Client Sample ID: SB-3 (4-7)
Date Collected: 08/20/15 10:20
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	259941	08/21/15 20:13	CMK	TAL BUF

Client Sample ID: SB-3 (4-7)
Date Collected: 08/20/15 10:20
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-2
Matrix: Solid
Percent Solids: 92.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			260090	08/24/15 10:47	CAM	TAL BUF
Total/NA	Analysis	8270D		10	260318	08/25/15 19:23	DMR	TAL BUF
Total/NA	Prep	3050B			260041	08/24/15 10:02	TAS	TAL BUF
Total/NA	Analysis	6010C		1	260413	08/25/15 14:58	AMH	TAL BUF
Total/NA	Prep	7471B			260021	08/24/15 09:25	TAS	TAL BUF
Total/NA	Analysis	7471B		1	260260	08/24/15 14:39	TAS	TAL BUF

Client Sample ID: SB-4 (0-4)
Date Collected: 08/20/15 10:45
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	259941	08/21/15 20:13	CMK	TAL BUF

Client Sample ID: SB-4 (0-4)

Lab Sample ID: 480-86051-3
Date Collected: 08/20/15 10:45
Matrix: Solid
Date Received: 08/21/15 11:15
Percent Solids: 93.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			260090	08/24/15 10:47	CAM	TAL BUF
Total/NA	Analysis	8270D		20	260318	08/25/15 19:50	DMR	TAL BUF
Total/NA	Prep	3550C			259983	08/22/15 14:44	RMZ	TAL BUF
Total/NA	Analysis	8082A		1	260088	08/24/15 16:34	KS	TAL BUF
Total/NA	Prep	3050B			260041	08/24/15 10:02	TAS	TAL BUF
Total/NA	Analysis	6010C		1	260413	08/25/15 15:02	AMH	TAL BUF
Total/NA	Prep	7471B			260021	08/24/15 09:25	TAS	TAL BUF
Total/NA	Analysis	7471B		1	260260	08/24/15 14:41	TAS	TAL BUF

Client Sample ID: SB-5 (12-16)

Lab Sample ID: 480-86051-4
Date Collected: 08/20/15 11:00
Matrix: Solid
Date Received: 08/21/15 11:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	259941	08/21/15 20:13	CMK	TAL BUF

Client Sample ID: SB-5 (12-16)

Lab Sample ID: 480-86051-4
Date Collected: 08/20/15 11:00
Matrix: Solid
Date Received: 08/21/15 11:15
Percent Solids: 93.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			260090	08/24/15 10:47	CAM	TAL BUF
Total/NA	Analysis	8270D		5	260318	08/25/15 20:16	DMR	TAL BUF
Total/NA	Prep	3050B			260041	08/24/15 10:02	TAS	TAL BUF
Total/NA	Analysis	6010C		1	260413	08/25/15 15:05	AMH	TAL BUF
Total/NA	Prep	7471B			260021	08/24/15 09:25	TAS	TAL BUF
Total/NA	Analysis	7471B		1	260260	08/24/15 14:43	TAS	TAL BUF

Client Sample ID: SB-6 (8-12)

Lab Sample ID: 480-86051-5
Date Collected: 08/20/15 11:35
Matrix: Solid
Date Received: 08/21/15 11:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	259941	08/21/15 20:13	CMK	TAL BUF

Client Sample ID: SB-6 (8-12)

Lab Sample ID: 480-86051-5
Date Collected: 08/20/15 11:35
Matrix: Solid
Date Received: 08/21/15 11:15
Percent Solids: 91.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			260090	08/24/15 10:47	CAM	TAL BUF
Total/NA	Analysis	8270D		5	260318	08/25/15 20:43	DMR	TAL BUF
Total/NA	Prep	3550C			259983	08/22/15 14:44	RMZ	TAL BUF

Lab Chronicle

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Client Sample ID: SB-6 (8-12)

Lab Sample ID: 480-86051-5
Date Collected: 08/20/15 11:35
Matrix: Solid
Date Received: 08/21/15 11:15
Percent Solids: 91.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8082A		1	260088	08/24/15 16:50	KS	TAL BUF
Total/NA	Prep	3050B			260041	08/24/15 10:02	TAS	TAL BUF
Total/NA	Analysis	6010C		1	260413	08/25/15 15:08	AMH	TAL BUF
Total/NA	Prep	7471B			260021	08/24/15 09:25	TAS	TAL BUF
Total/NA	Analysis	7471B		1	260260	08/24/15 14:45	TAS	TAL BUF

Client Sample ID: SB-10 (0-8)

Lab Sample ID: 480-86051-6
Date Collected: 08/20/15 14:35
Matrix: Solid
Date Received: 08/21/15 11:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	259941	08/21/15 20:13	CMK	TAL BUF

Client Sample ID: SB-10 (0-8)

Lab Sample ID: 480-86051-6
Date Collected: 08/20/15 14:35
Matrix: Solid
Date Received: 08/21/15 11:15
Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			260090	08/24/15 10:47	CAM	TAL BUF
Total/NA	Analysis	8270D		5	260318	08/25/15 21:09	DMR	TAL BUF
Total/NA	Prep	3550C			259983	08/22/15 14:44	RMZ	TAL BUF
Total/NA	Analysis	8082A		1	260088	08/24/15 17:38	KS	TAL BUF
Total/NA	Prep	3050B			260041	08/24/15 10:02	TAS	TAL BUF
Total/NA	Analysis	6010C		1	260413	08/25/15 15:12	AMH	TAL BUF
Total/NA	Prep	7471B			260021	08/24/15 09:25	TAS	TAL BUF
Total/NA	Analysis	7471B		1	260260	08/24/15 14:47	TAS	TAL BUF

Client Sample ID: SB-11 (0-4)

Lab Sample ID: 480-86051-7
Date Collected: 08/20/15 15:00
Matrix: Solid
Date Received: 08/21/15 11:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	259941	08/21/15 20:13	CMK	TAL BUF

Client Sample ID: SB-11 (0-4)

Lab Sample ID: 480-86051-7
Date Collected: 08/20/15 15:00
Matrix: Solid
Date Received: 08/21/15 11:15
Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			260090	08/24/15 10:47	CAM	TAL BUF
Total/NA	Analysis	8270D		10	260318	08/25/15 21:35	DMR	TAL BUF
Total/NA	Prep	3550C			259983	08/22/15 14:44	RMZ	TAL BUF
Total/NA	Analysis	8082A		1	260088	08/24/15 17:54	KS	TAL BUF

Client Sample ID: SB-11 (0-4)

Lab Sample ID: 480-86051-7
Date Collected: 08/20/15 15:00
Matrix: Solid
Date Received: 08/21/15 11:15
Percent Solids: 86.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			260041	08/24/15 10:02	TAS	TAL BUF
Total/NA	Analysis	6010C		1	260413	08/25/15 15:15	AMH	TAL BUF
Total/NA	Prep	7471B			260021	08/24/15 09:25	TAS	TAL BUF
Total/NA	Analysis	7471B		1	260260	08/24/15 14:49	TAS	TAL BUF

Client Sample ID: SB-12 (0-4)

Lab Sample ID: 480-86051-8
Date Collected: 08/20/15 15:30
Matrix: Solid
Date Received: 08/21/15 11:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	259941	08/21/15 20:13	CMK	TAL BUF

Client Sample ID: SB-12 (0-4)

Lab Sample ID: 480-86051-8
Date Collected: 08/20/15 15:30
Matrix: Solid
Date Received: 08/21/15 11:15
Percent Solids: 89.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			260090	08/24/15 10:47	CAM	TAL BUF
Total/NA	Analysis	8270D		5	260318	08/25/15 22:02	DMR	TAL BUF
Total/NA	Prep	3550C			259983	08/22/15 14:44	RMZ	TAL BUF
Total/NA	Analysis	8082A		1	260088	08/24/15 18:10	KS	TAL BUF
Total/NA	Prep	3050B			260041	08/24/15 10:02	TAS	TAL BUF
Total/NA	Analysis	6010C		1	260413	08/25/15 15:18	AMH	TAL BUF
Total/NA	Prep	7471B			260021	08/24/15 09:25	TAS	TAL BUF
Total/NA	Analysis	7471B		1	260260	08/24/15 14:51	TAS	TAL BUF

Client Sample ID: SB-13 (4-8)

Lab Sample ID: 480-86051-9
Date Collected: 08/20/15 15:55
Matrix: Solid
Date Received: 08/21/15 11:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	259941	08/21/15 20:13	CMK	TAL BUF

Client Sample ID: SB-13 (4-8)

Lab Sample ID: 480-86051-9
Date Collected: 08/20/15 15:55
Matrix: Solid
Date Received: 08/21/15 11:15
Percent Solids: 86.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			260090	08/24/15 10:47	CAM	TAL BUF
Total/NA	Analysis	8270D		4	260318	08/25/15 22:28	DMR	TAL BUF
Total/NA	Prep	3550C			259983	08/22/15 14:44	RMZ	TAL BUF
Total/NA	Analysis	8082A		1	260088	08/24/15 18:26	KS	TAL BUF
Total/NA	Prep	3050B			260041	08/24/15 10:02	TAS	TAL BUF

Lab Chronicle

Client: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Client Sample ID: SB-13 (4-8)

Date Collected: 08/20/15 15:55
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-9
Matrix: Solid
Percent Solids: 86.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010C		1	260413	08/25/15 15:22	AMH	TAL BUF
Total/NA	Prep	7471B			260021	08/24/15 09:25	TAS	TAL BUF
Total/NA	Analysis	7471B		1	260260	08/24/15 14:58	TAS	TAL BUF

Client Sample ID: SB-8 (0-4)

Date Collected: 08/20/15 13:40
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	259941	08/21/15 20:13	CMK	TAL BUF

Client Sample ID: SB-8 (0-4)

Date Collected: 08/20/15 13:40
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-10
Matrix: Solid
Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			260041	08/24/15 10:02	TAS	TAL BUF
Total/NA	Analysis	6010C		1	260413	08/25/15 15:35	AMH	TAL BUF
Total/NA	Prep	7471B			260021	08/24/15 09:25	TAS	TAL BUF
Total/NA	Analysis	7471B		1	260260	08/24/15 15:00	TAS	TAL BUF

Client Sample ID: SB-9 (0-4)

Date Collected: 08/20/15 14:35
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	259941	08/21/15 20:13	CMK	TAL BUF

Client Sample ID: SB-9 (0-4)

Date Collected: 08/20/15 14:35
Date Received: 08/21/15 11:15

Lab Sample ID: 480-86051-11
Matrix: Solid
Percent Solids: 86.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			260041	08/24/15 10:02	TAS	TAL BUF
Total/NA	Analysis	6010C		1	260413	08/25/15 15:38	AMH	TAL BUF
Total/NA	Prep	7471B			260021	08/24/15 09:25	TAS	TAL BUF
Total/NA	Analysis	7471B		1	260260	08/24/15 15:02	TAS	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 - 790 Center St. site

TestAmerica Job ID: 480-86051-1

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	03-31-16

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: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL BUF
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
7471B	Mercury (CVAA)	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: Turnkey Environmental Restoration, LLC
Project/Site: Benchmark - 790 Center St. site

TestAmerica Job ID: 480-86051-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-86051-1	SB-2 (18-19)	Solid	08/20/15 09:45	08/21/15 11:15
480-86051-2	SB-3 (4-7)	Solid	08/20/15 10:20	08/21/15 11:15
480-86051-3	SB-4 (0-4)	Solid	08/20/15 10:45	08/21/15 11:15
480-86051-4	SB-5 (12-16)	Solid	08/20/15 11:00	08/21/15 11:15
480-86051-5	SB-6 (8-12)	Solid	08/20/15 11:35	08/21/15 11:15
480-86051-6	SB-10 (0-8)	Solid	08/20/15 14:35	08/21/15 11:15
480-86051-7	SB-11 (0-4)	Solid	08/20/15 15:00	08/21/15 11:15
480-86051-8	SB-12 (0-4)	Solid	08/20/15 15:30	08/21/15 11:15
480-86051-9	SB-13 (4-8)	Solid	08/20/15 15:55	08/21/15 11:15
480-86051-10	SB-8 (0-4)	Solid	08/20/15 13:40	08/21/15 11:15
480-86051-11	SB-9 (0-4)	Solid	08/20/15 14:35	08/21/15 11:15

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: Joseph Mecca	Lab PM: Fischer, Brian J	Carrier Tracking No(s):	COC No: 480-70992-18047.1
Client Contact: Bryan Mayback	Phone:	E-Mail: brian.fischer@testamericainc.com		Page: Page 1 of 2
Company: Turnkey Environmental Restoration, LLC				Job #:

Address: 2558 Hamburg Turnpike Suite 300	Due Date Requested:	Analysis Requested	Preservation Codes:
City: Lackawanna	TAT Requested (days): Standard		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 - Na2S2SO3 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)
State, Zip: NY, 14218			
Phone:	PO #: Purchase Order not required		Other:
Email: bmayback@turnkeyllc.com	WO #:		
Project Name: Benchmark - 790 Center St. site 0136-015-002	Project #: 48012484		
Site: 790 Center St Lewiston, NY	SSOW#:		

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)	8270D - CP-51 (STARS) List	8260C - (MOD) TCL list OLM04.2 + CP-51(Stars)	6010C, 7471B	8260C - (MOD) TCL list OLM04.2 + Stars	8260C - TCL list OLM04.2	8260C - (MOD) TCL list OLM04.2	8082A, 8270D	PCBs 8082	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	A	N	A	N			
SB-2 (18-19)	6/20/15	0945	G	Solid							X					
SB-3 (4-7)	6/20/15	1020	G	Solid			X		X							
SB-4 (0-4)	6/20/15	1045	G	Solid			X		X					X		
SB-5 (12-16)	6/20/15	1100	G	Solid			X		X							
SB-6 (8-12)	6/20/15	1135	G	Solid			X		X					X		
SB-10 (0-8)	6/20/15	1435	G	Solid			X		X					X		
SB-11 (0-4)	6/20/15	1500	G	~~Water~~ Solid			X		X					X		
SB-12 (0-4)	6/20/15	1530	G	~~Water~~ Solid			X		X					X		
SB-13 (4-8)	6/20/15	1555	G	Solid			X		X					X		
SB-8 (0-4)	6/20/15	1340	G	Solid					X							
SB-9 (0-4)	6/20/15	1435	G	Solid					X							

480-86051 Chain of Custody

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ 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
	8/21/15 1115	TK		8/21/15 1115	TAB of.
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.8 #1

Login Sample Receipt Checklist

Client: Turnkey Environmental Restoration, LLC

Job Number: 480-86051-1

Login Number: 86051
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.	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	tk
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	