

APPENDIX A
SOIL BORING & TEST PIT LOGS

**31 TONAWANDA STREET
SITE NO. C915299**

**2014 PANAMERICAN ENVIRONMENTAL
PHASE II ENVIRONMENTAL
SITE ASSESSMENT REPORT**

Table 1
31 TONAWANDA STREET SITES PHASE II ESA SOIL DESCRIPTION

April 2014

| BORINGS | BH-1 | BH-2 | BH-3 | BH-4 | BH-5 | BH-6 |
|---------------------------|---|---|--|--|--|---|
| Total Depth | 15 feet | 8 feet | 8 feet | 8 feet | 16 feet | 5 feet |
| General Geology | 0-0.5 – cement, sand 0.5-2 ft – dark brown silty clay 2-4 ft – light brown silty clay 4-6 ft – grey-brown silty clay - moist 6-8 ft – light brown silty clay 8-11 ft – dark brown silty, sandy clay 11-13 - black silty clay 12-15 – greenish brown silty clay PID - background | 0-0.5 ft –asphalt /black coal 0.5-3 ft –silty sand with gravel fill 3-4 ft – brown-red silty clay 4-6 ft – brown silty clay 6-8 ft- brown silty clay with blackchert/gravel 8-10 ft- brown silty clay – moist-wet 11-12 ft- dark brown silty clay PID - Background | 0-0.5 ft –asphalt over cement and gravel 0.5-1 ft –black sandy gravel fill 1-4 ft – brown silty clay moist 4-8 ft- light brown silty clay PID - Background Sample: 1 soil sample from 0.5-1 foot interval – did not have analyzed | 0-0.5 ft –asphalt over cement and gravel 0.5-2 ft –light brown-red silty clay 2-4 ft – brown-grey silty clay moist 4-8 ft- brown-red silty clay - stiff PID - Background | 0-0.5 – black gravelly, sandy, silt fill 0.5-3 ft – silty clay with brick 3-4 ft – black sandy silt fill with sandstone 4-6 ft – dark sand – possibly foundry sand 6-7 ft – red-brown silty clay 7-8 ft – black gravelly silt - wet 8-12 – red-black silty, gravelly sand. Odor 12-16 – black silty clay – wet, with sheen and odor PID – 50-400ppm at 8-16 feet 1 soil sample from 9-12 interval | 0-0.5 ft –silt fill and stone 0.5-4 ft - brown-red silty clay 4-5 ft –brown-red silty clay 5 foot refusal - cement PID - Background |
| PID Readings (ppm) | No readings above background | No readings above background | No readings above background | No readings above background | 400ppm at 8-12 feet 60ppm at 12-16 feet | No readings above background |
| Odor | No odor noticed | No odor noticed | No odor noticed | No odor noticed | Strong but indistinguishable odor | No odor noticed |

Table 1 continued
31 TONAWANDA STREET SITES PHASE II ESA SOIL DESCRIPTION

| BORINGS | BH-7 | BH-8 | BH-9 | BH-10 |
|---------------------------|---|--|--|--|
| Total Depth | 12 feet | 9.5 feet | 12 feet | 12 feet |
| General Geology | 0-0.5 – silt fill 0.5-5 ft – red-brown silty clay 5-6 ft – black sand possibly foundry sand 6-7 ft – cement 7-9 ft – red (rust)-black sandy gravelly silt fill 9-11 – black silty clay 11-12 – black sandy, silty clay – very slight undistinguishable odor PID – background 1 soil sample from 9-12 interval | 0-0.5 – asphalt and gravel 0.5-1 ft – sandy silt fill 1-3.5 ft – red-brown clay 3.5-5 ft – dark brown sand 5-7.5 ft – red-black sandy gravelly silt fill with slag 7.5-8 – brick, stone 8-9.5 – silty clay – black at 9.5 PID – background 1 soil sample at 5-8 feet | 0-3 ft – silty, sandy clay fill 3-3.5 ft – brick 3.5-4 ft – sandy silty fill with wood, stone 4-8 ft – clay intermixed with sand and stone. Brick at 8 feet 8-10 ft – sandy, silty clay with stone; moist 10-12 – silty grey clay; moist PID – background | 0-.5 ft – cement floor .5-5 ft – sand, stone, slag fill with some clay 5-6 ft – red-brown clay; tight 6-8 ft – brown-grey silty clay 8-10 ft – red-brown clay 10-12 ft – light grey clay PID – background 1 soil sample at 3-5 feet – did not analyze |
| PID Readings (ppm) | No readings above background | No readings above background | No readings above background | No readings above background |
| Odor | very slight undistinguishable odor at 9-12 feet | No odor noticed | No odor noticed | No odor noticed |

Table 2
31 TONAWANDA STREET SITES PHASE II FOLLOW-UP

Sept 2014

| BORINGS | BH-5 | BH5-1S | BH5-2S | BH5-3S | BH5-4S |
|---------------------------|--|--|---|--|--|
| | | 10 feet south of BH-5 | 20 feet south of BH-5 | 30 feet south of BH-5 | 49 feet south of BH-5 |
| Total Depth | 16 feet | 16 feet | 12 feet | 8.2 feet | 12 feet |
| General Geology | 0-0.5 – black gravelly, sandy, silt fill 0.5-3 ft – silty clay with brick 3-4 ft – black sandy silt fill with sandstone 4-6 ft – dark sand – possibly foundry sand 6-7 ft – red-brown silty clay 7-8 ft – black gravelly silt - wet 8-12 – red-black silty, gravelly sand. Odor 12-16 – black silty clay – wet, with sheen and odor PID – 50-400ppm at 8-16 feet 1 soil sample from 9-12 interval | 0-0.5 – black gravelly, sandy, silt fill possible foundry sand 0.5-3 ft – silty soil 3-4 ft – black sandy silt possible foundry sand 4-7 ft – sand – possibly foundry sand, brick, stone 7-8 ft – fill - moist 8-12 – black silty, sand. Odor – PID - 300+ ppm 12-16 – black sandy silt – wet, with odor- PID – 160+ | 0-1 – black gravelly, sandy, silt fill possible foundry sand 1-2 ft – light brown sand 2-4 ft – fill – brick, cement, black sand 4-8 ft – fill – black sand, brick, glass, stone 8-12 – black sandy, clayey silt. Odor – PID - 126+ ppm 12-16 – no recovery – very wet | 0-0.5 – black gravelly, sandy, silt fill possible foundry sand 0.5-3 ft – fill – brick, brown silty sand, ash 3-8 ft – fill – black silty sand and brick 8.2 – refusal – wood Moved 2 feet south and refusal again at 8.2 feet – PID 6-7 ppm | 0-8 – black sandy, silt fill 8-12 – silty, gravelly sand – wet PID – 3-4ppm at 8-12 feet |
| PID Readings (ppm) | 400ppm at 8-12 feet 60ppm at 12-16 feet | 300+ ppm at 8-12 feet 160+ ppm at 12-16 feet | 126+ ppm at 8-12 feet | 6-7 ppm at refusal/wood at 8.2 feet | 3-4ppm at 8-12 feet |
| Odor | Strong but indistinguishable odor | indistinguishable odor | indistinguishable odor | No odor noticed | No odor noticed |

Table 2 continued
31 TONAWANDA STREET SITES PHASE II ESA SOIL DESCRIPTION

| BORINGS | BH5-1N | BH5-2N | BH5-3N |
|---------------------------|---|---|--|
| | 15 feet north of BH-5 | 30 feet north of BH-5 | 45 feet north of BH-5 |
| Total Depth | 9.5 feet | 16 feet | 12 feet |
| General Geology | 0-1 – black sandy silt fill – possibly foundry sand 1-3 ft – brown silty clay 3-4 ft – black sand and brick 4-7.5 ft – red-black sand and gravel 7.5-8 ft – sandy silt - moist 8-9.5 – sand and gravel – very wet 9.5 refusal Odor and elevated PID | 0-1 – black sandy silt fill – possibly foundry sand 1-3.5 ft – brown silty clay 3.5-4 ft – brown sand 4-7.5 ft – red-black sand and gravel 7.5-8 ft – sandy silt - moist 8-12 – silty sand with some clay 12-16 – no recovery PID – 1-3 ppm at 12- 16 feet 1 soil sample at 12- 16 feet | 0-1 – black sand and gravel fill – possibly foundry sand 1-4 ft – brown silty clay 4-7 ft – silty sand fill 7-8 ft – silty clay with brick, moist 8-12 – black sandy silt with clay – odor PID – 0 ppm Coal tar odor at 8-12 feet |
| PID Readings (ppm) | Elevated – high – ppm not recorded | 1-3 ppm at 12-16 feet | No readings above background |
| Odor | undistinguishable odor at 8-9 feet | slight odor noticed | Coal tar odor |

**2015 PANAMERICAN ENVIRONMENTAL
LIMITED SUB-SLAB SOIL/
SUBSURFACE ASSESSMENT REPORT**

Table 1
31 TONAWANDA STREET SITE – SUB-SLAB SOIL

March 2015

Page 1 of 1

| BORINGS | BH-5 | C-1 | C-2 | C-3 | C-4 |
|---------------------------|--|---|--|--|--|
| | Outside Phase II Soil Boring | Sub-Floor Northeast Corner of Southeast Section of Building | Sub-Floor Adjacent to Outside Door– Southeast Section of Building | Sub-Floor – West Wall of Southeast Section of Building | Sub-Floor North-Middle Section of Southeast Section of Building |
| Total Depth | 16 feet | 12 feet | 12 feet | 16 feet | 16 feet |
| General Geology | 0-0.5 – black gravelly, sandy, silt fill 0.5-3 ft – silty clay with brick 3-4 ft – black sandy silt fill with sandstone 4-6 ft – dark sand – possibly foundry sand 6-7 ft – red-brown silty clay 7-8 ft – black gravelly silt - wet 8-12 – red-black silty, gravelly sand. Odor 12-16 – black silty clay – wet, with sheen and odor PID – 50-400ppm at 8-16 feet 1 soil sample from 9-12 interval | 0-4 – black gravelly, sandy, silt fill possible foundry sand with stone, cement, brick, ash 4-8 ft – silty clay soil; odor 8-10 ft – black sandy gravel silt silt, odor 40 ppm on PID 10-12 – black sandy silty clay – wet, with odor- PID –20 ppm 1 soil sample – 8 feet | 0-4 – black gravelly, sandy, silt fill possible foundry sand with stone, cement, brick, ash 4-10 ft – silty clay soil red-brown; 10-12 – black sandy silty – wet, with odor- PID –12 ppm | 0-6 – black sandy fill possible foundry sand with stone, cement, brick, ash 6-8 ft – black sand and ash fill; 6-11 ppm PID 11-12 – black silty clay– sticky- PID –0 ppm 12-16 – clay - PID –0 ppm 1 soil sample – 6-8 feet | 0-4 – black sandy fill possible foundry sand 4-8 ft – black sand and ash fill with brick; 3-7 ppm PID 8-9 ft – black sand fill ; 10 ppm PID 9-12 – brown silty clay– sticky- PID –0 ppm 12-16 – grey clay - PID –0 ppm 1 soil sample – 6-8 feet |
| PID Readings (ppm) | 400ppm at 8-12 feet 60ppm at 12-16 feet | 40 ppm at 8-10 feet 20 ppm at 10-12 feet | 12 ppm at 10-12 feet | 6-11 ppm at 6-8 feet | 3-10 ppm at 6-9 feet |
| Odor | Strong indistinguishable odor | indistinguishable odor starting at 8 feet | indistinguishable odor | No odor noticed | No odor noticed |

**2019 BE3
REMEDIAL INVESTIGATION REPORT**

Geoprobe Bore Hole Log



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| | |
|--------------------------------|---|
| Project: 31 & 150 Tonawanda St | Sheet: 7 of 12 |
| Client: 31 Tonawanda St LLC | Location: 31 Tonawanda St, Buffalo NY |
| Contractor: Nature's Way | Ground Elevation: N/A Lat: 42.929383 Long: -78.896700 |
| Date Started: 8/16/2018 | Operator: Nate Gingrich |
| Date Completed: 8/16/2018 | Geologist/Technician: Alex Brennen |
| Bore Hole Number: 31: BH-1 | Ground Water: 8 to 9 fbg |

| Depth (FT) | Sample | | PID (ppm) | Description |
|------------|--------|------|--------------|---|
| | NO | TYPE | | |
| 0 | | | 2.7 | 0 to 3 feet: Loose black sands, fine to coarse gravel, some brick and concrete |
| 1 | | | | |
| 2 | | | 2.5 | Odor noted at 2 to 3 fbg Some brick and concrete at 3 fbg |
| 3 | 1 | | 2.8 | 3 to 3.9 feet: Brown clay, fine to coarse gravel 3.9 to 4 feet: Grey/brown sands, odor |
| 4 | | | | 4 to 7.8 feet: Concrete, grey sands, fall in |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | 7.8 to 8 feet: Moist silt and fine sand, fine to coarse gravel, trace brick 8 to 13.5 feet: Wet sands, fine to coarse gravel, odor and product noted |
| 9 | | | | |
| 10 | | | 4.5 | |
| 11 | | | | |
| 11.5 | | | 28.2 | |
| 12 | | | 7.9 | |
| 13 | | | | |
| 13.5 | 2 | | 19.2 | 13.5 to 16 feet: Wet dark brown silt, fine sand, staining noted on outside of core |
| 14 | | | | |
| 15 | | | 27.8 | |
| 16 | | | | |

Comments: Native not believed to be encountered. Once below 8 fbg, rods were noted as covered in sheen/product. Decon done after boring. PID readings detected at depths noted above. Samples taken at 0 to 3 fbg. and 13.5 to 15 fbg - fill material.

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| Project: 31 & 150 Tonawanda St | | | Sheet: 8 of 12 | | |
|---|--------|------|---|--|--|
| Client: 31 Tonawanda St LLC | | | Location: 31 Tonawanda St, Buffalo NY | | |
| Contractor: Nature's Way | | | Ground Elevation: N/A Lat: 42.929648 Long: -78.896400 | | |
| Date Started: 8/16/2018 | | | Operator: Nate Gingrich | | |
| Date Completed: 8/16/2018 | | | Geologist/Technician: Alex Brennen | | |
| Bore Hole Number: 31: BH-2 | | | Ground Water: 8 to 9 fbgs | | |
| Depth (FT) | Sample | | PID (ppm) | Description | |
| | NO | TYPE | | | |
| 0 | | | | 0 to 2 feet: Brown silt, fine sand, fine to coarse gravel, trace brick and concrete | |
| 1 | | | | | |
| 2 | | | | 2 to 4 feet: Brown clay, some fine gravel, dense | |
| 3 | | | | | |
| 4 | | | | 4 to 8 feet: Brown/black sands, some silt, fine to coarse gravel, trace brick and concrete | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | 8 to 11 feet: Same as above, wet, brick throughout | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | | | 11 to 12 feet: Brown clay/silts, medium dense, wet, trace brick | |
| 11.7 | | | 2.7 | Black staining, and strong odor | |
| 12 | 1 | | 0.4 | 12 to 16 feet: Same as above, staining and odor | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |
| | | | | Minimal stain and odor at 16fbgs | |
| 16 | | | 1.7 | 16 to 18 feet: Same as above, odor noted, wet | |
| 17 | | | | | |
| 18 | | | 2.5 | 18 to 19 feet: Fine to coarse sands, fine to coarse grave, strong odor | |
| 18.7 | | | 16.3 | | |
| 19 | 2 | | | 19 to 20 feet: Brown clay/silt, fine to coarse gravel, wet, strong odor | |
| 19.8 | | | 25.8 | Brown/Copper sheen and product | |
| 20 | | | 27.7 | Product noted in core | |
| <p>Comments: Native at 18 fbgs. Decon done after boring. PID readings detected at depths noted above. Samples taken at 12 to 13.5 fbgs - fill material and 19 to 20 fbgs - native material.</p> | | | | | |

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| | |
|--------------------------------|---|
| Project: 31 & 150 Tonawanda St | Sheet: 9 of 12 |
| Client: 31 Tonawanda St LLC | Location: 31 Tonawanda St, Buffalo NY |
| Contractor: Nature's Way | Ground Elevation: N/A Lat: 42.929923 Long: -78.896318 |
| Date Started: 8/16/2018 | Operator: Nate Gingrich |
| Date Completed: 8/16/2018 | Geologist/Technician: Alex Brennen |
| Bore Hole Number: 31: BH-3S | Ground Water: 9 fbs |

| Depth (FT) | Sample | | PID | Description |
|------------|--------|------|-------|--|
| | NO | TYPE | (ppm) | |
| 0 | | | | 0 to 1.7 feet: Asphalt at top, brown sands, silt, dry, fine to coarse gravel trace wood, brick, and concrete, |
| 1 | | | | |
| | | | | 1.7 to 4 feet: Dense brown clay, fine to coarse gravel |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | 4 to 5 feet: Brown clay, fine to coarse gravel |
| 5 | | | | 5 to 9 feet: black sands, silt, fine to coarse gravel, moist |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | Very moist at 8 fbs |
| 9 | | | | 9 to 11 feet: Wet sands, fine to coarse gravel |
| 10 | | | | |
| 11 | | | | 11 to 13.5 feet: Brown clay, wet, dark staining, slight odor |
| 11.7 | | | | |
| 12 | 1 | | 0.2 | dark staining on outside of core, stronger odor |
| 13 | | | | |
| 13.5 | | | | Refusal at 13.5 fbs |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |

Comments: Native not encountered. Decon done after boring. PID readings detected at depths noted above. Sample taken at 12 to 13.5 fbs - fill material.

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| | |
|--------------------------------|---|
| Project: 31 & 150 Tonawanda St | Sheet: 10 of 12 |
| Client: 31 Tonawanda St LLC | Location: 31 Tonawanda St, Buffalo NY |
| Contractor: Nature's Way | Ground Elevation: N/A Lat: 42.929965 Long: -78.896430 |
| Date Started: 8/16/2018 | Operator: Nate Gingrich |
| Date Completed: 8/16/2018 | Geologist/Technician: Alex Brennen |
| Bore Hole Number: 31: BH-4 | Ground Water: 7.5 to 8 fbg |

| Depth (FT) | Sample | | PID | Description |
|------------|--------|------|-------|---|
| | NO | TYPE | (ppm) | |
| 0 | 1 | | | 0 to 3.5 feet: Asphalt and subbase at top, Black silt, fine sand, fine to coarse gravel, trace glass, brick, wood |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | 3.5 to 6 feet: Brown clay, some fine gravel |
| 4 | | | | |
| 5 | | | | Concrete at 5.2 fbg |
| 6 | | | | |
| 7 | | | | 6 to 7.5 feet: Silt, fine sand, fine to coarse gravel, trace wood, moist |
| 8 | | | | |
| 9 | | | | 7.5 to 10.5 feet: Grey silt/clay, fine to coarse gravel, wet |
| 10 | | | | |
| 11 | | | | 10.5 to 12 feet: Sands, some loose gravel, trace brick, odor noted |
| 11.5 | 2 | | 0.3 | |
| 12 | | | | 12 to 16 feet: Soft grey clay/silt, fine to coarse gravel, wet Bottom of sample fall out - too wet |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |

Comments: Native not encountered. Decon done after boring. PID readings detected at depths noted above. Sample taken at 11.5 to 12 fbg - fill material.

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| | |
|--------------------------------|---|
| Project: 31 & 150 Tonawanda St | Sheet: 11 of 12 |
| Client: 31 Tonawanda St LLC | Location: 31 Tonawanda St, Buffalo NY |
| Contractor: Nature's Way | Ground Elevation: N/A Lat: 42.930092 Long: -78.896391 |
| Date Started: 8/16/2018 | Operator: Nate Gingrich |
| Date Completed: 8/16/2018 | Geologist/Technician: Alex Brennen |
| Bore Hole Number: 31: BH-5 | Ground Water: 9 fbg |

| Depth (FT) | Sample | | PID (ppm) | Description |
|------------|--------|------|--------------|---|
| | NO | TYPE | | |
| 0 | 1 | | | 0 to 1.5 feet: Brown sands, fine to coarse gravel |
| 1 | | | | |
| | | | | 1.5 to 6 feet: Brown/black silt/sand, fine grave, trace brick, concrete, and wood |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | 2 | | 20.7 | 6 to 9 feet: Black sands, fine to coarse gravel, strong petro odor, staining |
| 7 | | | 116 | |
| 7.5 | | | 224 | |
| 8 | | | 29 | |
| 9 | | | 15 | 9 to 12 feet: Soft brown silt/sand, fine to coarse gravel, light staining |
| 10 | | | | |
| 11 | | | | |
| 12 | | | 0.3 | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |

Comments: Native not encountered. Decon done after boring. PID readings detected at depths noted above. Sample taken at 0 to 2 fbg and 6 to 8 fbg - fill material.

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| | |
|--------------------------------|--|
| Project: 31 & 150 Tonawanda St | Sheet: 12 of 12 |
| Client: 31 Tonawanda St LLC | Location: 31 Tonawanda St, Buffalo NY |
| Contractor: Nature's Way | Ground Elevation: N/A Lat: 42.90263 Long: -78.896511 |
| Date Started: 8/16/2018 | Operator: Nate Gingrich |
| Date Completed: 8/16/2018 | Geologist/Technician: Alex Brennen |
| Bore Hole Number: 31: BH-6 | Ground Water: 9 fbgs |

| Depth (FT) | Sample | | PID | Description |
|------------|--------|------|-------|---|
| | NO | TYPE | (ppm) | |
| 0 | 1 | | | 0 to 1 feet: Brown dry sands, fine to coarse gravel, trace brick |
| 1 | | | | Concrete at 1 fbgs |
| | | | | 1 to 2.5 feet: Grey/brown silt and sand, fine to coarse gravel, trace brick, concrete |
| 2 | | | | |
| | | | | 2.5 to 4.2 feet: Dense brown clay, some silt, fine to coarse gravel |
| 3 | | | | |
| | | | | |
| 4 | 2 | | 22.1 | 4.2 to 6 feet: Black sand, fine to coarse gravel, trace wood. Ptero odor |
| | | | | |
| 5 | | | | |
| | | | | |
| 6 | | | | Refusal at 6 fbgs |
| | | | | |
| 7 | | | | |
| 7.5 | | | | |
| 8 | | | | |
| | | | | |
| 9 | | | | |
| | | | | |
| 10 | | | | |
| | | | | |
| 11 | | | | |
| | | | | |
| 12 | | | | |
| | | | | |
| 13 | | | | |
| | | | | |
| 14 | | | | |
| | | | | |
| 15 | | | | |
| | | | | |
| 16 | | | | |

Comments: Native not encountered. Decon done after boring. PID readings detected at depths noted above. Sample taken at 0 to 2 fbgs and 4 to 6 fbgs - fill material.

Geoprobe Bore Hole Log



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| | |
|---|--|
| Project: 31 Tonawanda Street Supplemental RI | Sheet: 1 of 1 |
| Client: 31 Tonawanda Street LLC | Location: 31 Tonawanda Street Buffalo NY |
| Contractor: Natures Way | Ground Elevation: |
| Date Started: 2-4-19 | Operator: |
| Date Completed: 2-4-19 | Geologist/Technician: Peter J. Gorton |
| Bore Hole Number: SBH-1 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|---|
| | NO | TYPE | |
| 0 | | | Cut through woof floor - 2-4 feet of crawl space below |
| 1 | | | 0-1 feet - sandy, gritty, cinders with brick |
| 2 | | | 1-1.5 ft - silty clay |
| 3 | | | 1.5-3 ft - black sand with cinder |
| 4 | | | 3-4 ft - brown-red silty clay 10ppm PID |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | 4-7.5 ft - red-brown clay 7.5-8 ft black silty sand moist 1-3 ppm PID |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | 8-12 ft - brown silty clay soft at 10 ft |
| 13 | | | |
| 14 | | | 12-14 ft - dark brown silty clay - soft, moist |
| 15 | | | |
| 16 | | | 14-16ft - dark brown-black silty clay - soft |

Comments: Collect soil samples at 2- 4, 8 and 16 feet

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| | |
|---|--|
| Project: 31 Tonawanda Street Supplemental RI | Sheet: 1 of 1 |
| Client: 31 Tonawanda Street LLC | Location: 31 Tonawanda Street Buffalo NY |
| Contractor: Natures Way | Ground Elevation: |
| Date Started: 2-4-19 | Operator: |
| Date Completed: 2-4-19 | Geologist/Technician: Peter J. Gorton |
| Bore Hole Number: SBH-2 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 0 | | | Cut through wood Floor - 2-4 feet of crawl space |
| 1 | | | 0-1 feet - slag and cement - refusal |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: Slag and cement prevents further drilling

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| | |
|---|--|
| Project: 31 Tonawanda Street Supplemental RI | Sheet: 1 of 1 |
| Client: 31 Tonawanda Street LLC | Location: 31 Tonawanda Street Buffalo NY |
| Contractor: Natures Way | Ground Elevation: |
| Date Started: 2-4-19 | Operator: |
| Date Completed: 2-4-19 | Geologist/Technician: Peter J. Gorton |
| Bore Hole Number: SBH-3 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 0 | | | Cut through wooden floor - 2-4 feet of crawl space below |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | 0-4 ft - slag, sand, cinder 10ppm PID |
| 5 | | | |
| 6 | | | 4-6 Ft - sand with stone |
| 7 | | | 6-7 ft - clay 7-7.5 fet - coal |
| 8 | | | 7.1-8 ft - red-brown clay |
| 9 | | | |
| 10 | | | 8-10 ft- brown clay - soft at 10 ft |
| 11 | | | |
| 12 | | | 10-12 ft - silty clay with sand and stone - wet |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | 12-16 - real lose and wet- no recovery |

Comments: installed 1-inch well to 16 feet and collected grab water sample and soil sample collected at 10 -11'

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| | |
|---|--|
| Project: 31 Tonawanda Street Supplemental RI | Sheet: 1 of 1 |
| Client: 31 Tonawanda Street LLC | Location: 31 Tonawanda Street Buffalo NY |
| Contractor: Natures Way | Ground Elevation: |
| Date Started: 2-4-19 | Operator: |
| Date Completed: 2-4-19 | Geologist/Technician: Peter J. Gorton |
| Bore Hole Number: SBH-4 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|---|
| | NO | TYPE | |
| 0 | | | Cut through wood floor - 2-4 feet crawl space below |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | 0-4 ft - some cement at 0-1; black cindery sand with brick 1-10ppm PID |
| 5 | | | |
| 6 | | | 4-6 Ft - sand, cinder, ash black and white |
| 7 | | | 6-7 ft - clay |
| 8 | | | 7-8 ft - sand with stone - damp |
| 9 | | | |
| 10 | | | 8-10 ft- sand, cinder - damp 20-30 ppm on PID |
| 11 | | | |
| 12 | | | 10-12 ft - silty clay - soft |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: Collected soil sample for analysis at 8 feet, 10 feet and 12 feet

Geoprobe Bore Hole Log



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| Project: 31 Tonawanda Street Supplemental RI | | | Sheet: 1 of 1 |
|---|--------|------|---|
| Client: 31 Tonawanda Street LLC | | | Location: 31 Tonawanda Street Buffalo NY |
| Contractor: Natures Way | | | Ground Elevation: |
| Date Started: 2-4-19 | | | Operator: |
| Date Completed: 2-4-19 | | | Geologist/Technician: Peter J. Gorton |
| Bore Hole Number: SBH-5 | | | Ground Water: |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | Cut through metal and then wooden floor - 2-4 feet crawl space below. Fire damage on wood beams noted |
| 1 | | | |
| 2 | | | 0-2 ft - sand, cinder, ash |
| 3 | | | |
| 4 | | | 2-4 ft - clay, tight 5-30ppm PID |
| 5 | | | |
| 6 | | | |
| 7 | | | 4-7 ft - clay, tight 5-10 ppm PID |
| 8 | | | 7-8 ft - sand, cinder 5-20 ppm PID |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | 8-12 ft - silty sand with some clay and stone - wet - partial recovery 10-40 ppm PID |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| Comments: Collected soil sample for analysis at 4 feet, 8 feet and 10-12 feet | | | |

Geoprobe Bore Hole Log



1270 Niagara Street
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| | |
|---|--|
| Project: 31 Tonawanda Street Supplemental RI | Sheet: 1 of 1 |
| Client: 31 Tonawanda Street LLC | Location: 31 Tonawanda Street Buffalo NY |
| Contractor: Natures Way | Ground Elevation: |
| Date Started: 2-4-19 | Operator: |
| Date Completed: 2-4-19 | Geologist/Technician: Peter J. Gorton |
| Bore Hole Number: SBH-6 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 0 | | | refusal - could not break through the cement with the machine that was brought |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments:

Geoprobe Bore Hole Log



1270 Niagara Street
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| Project: 31 Tonawanda Street Supplemental RI | | | Sheet: 1 of 1 |
|---|--------|------|--|
| Client: 31 Tonawanda Street LLC | | | Location: 31 Tonawanda Street Buffalo NY |
| Contractor: Natures Way | | | Ground Elevation: |
| Date Started: 2-4-19 | | | Operator: |
| Date Completed: 2-4-19 | | | Geologist/Technician: Peter J. Gorton |
| Bore Hole Number: SBH-7 | | | Ground Water: |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | refusal - could not break through the cement with the machine that was brought |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |
| Comments: | | | |

Geoprobe Bore Hole Log



1270 Niagara Street
Buffalo, NY 14213
716.249.6880 be3corp.com

| | |
|---|--|
| Project: 31 Tonawanda Street Supplemental RI | Sheet: 1 of 1 |
| Client: 31 Tonawanda Street LLC | Location: 31 Tonawanda Street Buffalo NY |
| Contractor: Natures Way | Ground Elevation: |
| Date Started: 2-4-19 | Operator: |
| Date Completed: 2-4-19 | Geologist/Technician: Peter J. Gorton |
| Bore Hole Number: SBH-8 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|---|
| | NO | TYPE | |
| 0 | | | refusal - cut through the wood floor - could not break through the cement below the floor with the machine that was brought |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments:

**31 TONAWANDA STREET OFF-SITE
SITE NO. C915299A**

**2020 NYSDEC
REMEDIAL INVESTIGATION**



Department of
Environmental
Conservation

SOIL BORING LOG

| PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation | | | | | | | | | | BORING NO.: SB-100 | | |
|--|--------|-------|---------|-------|--|-------------------------|---|------|---------------------------|--------------------|------|--|
| CLIENT: NYSDEC | | | | | | | | | | SHEET: 1 of 2 | | |
| DRILLING CONTRACTOR: TREC Environmental | | | | | | | | | | SITE NO.: C915299A | | |
| GROUNDWATER: | | | | | CASING | SAMPLER | CORE | TUBE | BORING LOCATION: | | | |
| DATE | TIME | LEVEL | TYPE | TYPE | | Macrocore | | | DATE STARTED: 09/18/20 | | | |
| | | | | DIA. | | 2" | | | DATE FINISHED: 09/18/20 | | | |
| | | | | WT. | | -- | | | DRILLER: Eric Hamman | | | |
| | | | | FALL | | -- | | | GEOLOGIST: Steven Moeller | | | |
| | | | | | | | | | | REVIEWED BY: | | |
| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | | |
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | | USCS | PID (ppm) | | |
| | | | | | | | | | | Soil | BHS | |
| 1 | | 1 | 2.0" MC | 50% | Brown | Dry | 2" Topsoil with grass | | Fill | 2.8 | N/A | |
| 2 | | | | | Gray to Dark Gray to Black | Slightly Moist to Moist | 6" Angular gravel with sand | | | | | |
| 3 | | | | | Gravel and brick fragment in silty clay loam soil matrix | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | 2 | 2.0" MC | 30% | Brown | Wet | Sand and angular gravel in a clayey silt matrix | | Fill | 0.0 | N/A | |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | - piece of wood |
| 9 | | 3 | 2.0" MC | 25% | Gray | Wet | Sand and mostly angular gravel, trace silt & clay, no odor. Possible fall in. | | Fill | 0.0 | N/A | |
| 10 | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | |
| 13 | | 4 | 2.0" MC | 23% | Gray | Wet | Same as above with trace of brick fragments. Slight petroleum/coal tar odor. | | Fill | N/A | 0.2 | |
| 14 | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | |
| 17 | | 5 | 2.0" MC | 53% | Gray | Wet | 0.8' same as above | | Fill | 71.4 | 80.4 | |
| 18 | | | | | Black | | 0.7' Silty Clay with a coal tar odor | | | | | ML-CL SM |
| 19 | | | | | Gray | | Fine Sand, trace silt, coal tar odor | | | | | |
| 20 | | | | | | | | | | | | - reddish brown coal tar in tip of sampler |

End of Boring @ 28' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;
2"φ PVC monitoring well MW-100 installed in borehole;
BHS = Bag Headpace NR = Not Recorded

SITE NO.: C915299A

BORING NO.: SB-100



Department of Environmental Conservation

SOIL BORING LOG

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

BORING NO: SB-100

CLIENT: NYSDEC

SHEET: 2 of 2

DRILLING CONTRACTOR: TREC Environmental

SITE NO.: C915299A

GROUNDWATER:

BORING LOCATION:

| DATE | TIME | LEVEL | TYPE | CASING | SAMPLER | CORE | TUBE |
|------|------|-------|------|--------|-----------|------|------|
| | | | | | Macrocore | | |
| | | | DIA. | | 2" | | |
| | | | WT. | | -- | | |
| | | | FALL | | -- | | |

DATE STARTED: 09/18/20

DATE FINISHED: 09/18/20

DRILLER: Eric Hamman

GEOLOGIST: Steven Moeller

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | |
|------------|--------|-----|---------|-------|---------------|--------|---|-------|-----------|-------------|--|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | | |
| | | | | | | | | | Soil | BHS | |
| 21 | | | | | Gray | Wet | 1.3' fine & medium Sand, trace silt & clay. Coal tar staining & odor. | SM | | | |
| 22 | | 6 | 2.0" MC | 38% | Reddish Brown | Moist | Bottom 0.2' Silty Clay with visible reddish brown coal tar. | ML-CL | N/A | 547 | |
| 23 | | | | | | | | | | | |
| 24 | | | | | | | | | | | |
| 25 | | 7 | 2.0" MC | 78% | Reddish Brown | DNAPL | 1.2' fine & medium Sand, trace silt & clay. Coal tar staining & odor. Possible fall in. Silty Clay, heavily tar impacted - 4" thick medium to coarse sand stringer There was some inter layering of sand/gravel & silty clay | ML-CL | N/A | 823 1295 | |
| 26 | | | | | | | | | | | |
| 27 | | | | | | | | | | | |
| 28 | | | | | | | | | | | |
| 29 | | | | | | | | | | | |
| 30 | | | | | | | | | | | |
| 31 | | | | | | | | | | | |
| 32 | | | | | | | | | | | |
| 33 | | | | | | | | | | | |
| 34 | | | | | | | | | | | |
| 35 | | | | | | | | | | | |
| 36 | | | | | | | | | | | |
| 37 | | | | | | | | | | | |
| 38 | | | | | | | | | | | |
| 39 | | | | | | | | | | | |
| 40 | | | | | | | | | | | |

End of Boring @ 28' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;

SITE NO.: C915299A

2"φ PVC monitoring well MW-100 installed in borehole;

BHS = Bag Headspace NR = Not Recorded

BORING NO.: SB-100



Department of
Environmental
Conservation

SOIL BORING LOG

BORING NO: SB-103

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

SHEET: 1 of 2

CLIENT: NYSDEC

SITE NO.: C915299A

DRILLING CONTRACTOR: TREC Environmental

BORING LOCATION:

GROUNDWATER: CASING SAMPLER CORE TUBE

DATE STARTED: 09/18/20

DATE TIME LEVEL TYPE TYPE Macrocore

DATE FINISHED: 09/18/20

DIA. 2"

DRILLER: Eric Hamman

WT. -

GEOLOGIST: Steven Moeller

FALL -

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | |
|------------|-------------------------|-----|---------|-------|------------------------|-----------------------|--|-------|-----------|------|--|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | | |
| | | | | | | | | | Soil | BHS | |
| 1 | [Cross-hatched pattern] | 1 | 2.0" MC | 55% | Brown | Slightly Moist to Dry | 1' Topsoil with gravel | Fill | N/A | N/A | |
| 2 | | | | | Gray | | 8" Sand and angular Gravel | | | | |
| 3 | | | | | Reddish Brown to Black | | Reworked silty clay with sand, gravel, & brick fragments | | | | |
| 4 | | | | | | | | | | | |
| 5 | [Cross-hatched pattern] | 2 | 2.0" MC | 48% | Dark Brown to Black | Moist to Wet | Intermixed sand, silty clay, clayey silt, brick pieces & gravel | Fill | 0.0 | N/A | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | [Dotted pattern] | 3 | 2.0" MC | 35% | Black | Wet | Fine to coarse Sand & Gravel, trace silt & clay | SM-GM | 0.0 | N/A | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | Grayish Brown | | Last few inches coarse Sand & Gravel, trace silt & clay | | | | |
| 13 | [Dotted pattern] | 4 | 2.0" MC | 50% | Black | Wet | 0.8' fine sand, trace silt, gravel & brick pieces. Fall in. | SM-GM | N/A | 68.2 | |
| 14 | | | | | | | Fine to coarse Sand & Gravel, trace silt & clay | | | | |
| 15 | | | | | | | | | | | |
| 16 | | | | | | | - last few inches NAPL impacted - sheen & coal tar odor | | | | |
| 17 | [Dotted pattern] | 5 | 2.0" MC | 25% | Black | Wet | Same as above. Outside of sample liner tube did not show NAPL impacts. | SM-GM | 6.4 | N/A | |
| 18 | | | | | | | | | | | |
| 19 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |

End of Boring @ 24' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;
2" PVC monitoring well MW-103 installed in borehole;
BHS = Bag Headspace NR = Not Recorded

SITE NO.: C915299A

BORING NO.: SB-103



Department of Environmental Conservation

SOIL BORING LOG

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

BORING NO: SB-103

CLIENT: NYSDEC

SHEET: 2 of 2

DRILLING CONTRACTOR: TREC Environmental

SITE NO.: C915299A

GROUNDWATER:

BORING LOCATION:

| DATE | TIME | LEVEL | TYPE | TYPE | CASING | SAMPLER | CORE | TUBE |
|------|------|-------|------|------|--------|-----------|------|------|
| | | | | | | Macrocore | | |
| | | | | DIA. | | 2" | | |
| | | | | WT. | | -- | | |
| | | | | FALL | | -- | | |

DATE STARTED: 09/18/20

DATE FINISHED: 09/18/20

DRILLER: Eric Hamman

GEOLOGIST: Steven Moeller

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | |
|------------|--------|-----|---------|-------|---------------|--------|---|-------|-----------|-------|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | |
| | | | | | | | | | Soil | BHS |
| 21 | | | | | Black | Wet | 1.4' fall in. | Fill | | |
| 22 | | 6 | 2.0" MC | 100% | Gray | | 0.7' Silty Clay with Fine Sand, slightly plastic, sticky. NAPL impacts observed. Silty Clay with fine silty partings, very firm, plastic. Dark reddish brown NAPL at 22.5' (top of clay) but not into clay. | ML-SM | N/A | 248.4 |
| 23 | | | | | Reddish Brown | ML-CL | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 29 | | | | | | | | | | |
| 30 | | | | | | | | | | |
| 31 | | | | | | | | | | |
| 32 | | | | | | | | | | |
| 33 | | | | | | | | | | |
| 34 | | | | | | | | | | |
| 35 | | | | | | | | | | |
| 36 | | | | | | | | | | |
| 37 | | | | | | | | | | |
| 38 | | | | | | | | | | |
| 39 | | | | | | | | | | |
| 40 | | | | | | | | | | |

End of Boring @ 24' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;

SITE NO.: C915299A

2"φ PVC monitoring well MW-103 installed in borehole;

BHS = Bag Headspace NR = Not Recorded

BORING NO.: SB-103



NEW YORK
STATE OF
OPPORTUNITY
Department of
Environmental
Conservation

SOIL BORING LOG

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

BORING NO: SB-106
SHEET: 1 of 2

CLIENT: NYSDEC

SITE NO.: C915299A

DRILLING CONTRACTOR: TREC Environmental

BORING LOCATION:

| GROUNDWATER: | | | | CASING | SAMPLER | CORE | TUBE |
|--------------|------|-------|------|--------|-----------|------|------|
| DATE | TIME | LEVEL | TYPE | TYPE | Macrocore | | |
| | | | | DIA. | 2" | | |
| | | | | WT. | -- | | |
| | | | | FALL | -- | | |

DATE STARTED: 09/18/20
DATE FINISHED: 09/18/20
DRILLER: Eric Hamman
GEOLOGIST: Steven Moeller
REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | |
|------------|--------|-----|---------|-------|---------------|--------------|--|-------|-----------|-----|--|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | | |
| | | | | | | | | | Soil | BHS | |
| 1 | | 1 | 2.0" MC | 55% | Brown | Moist | 4" Topsoil with gravel | Fill | N/A | N/A | |
| 2 | | | | | Gray | | Few inches sand and angular gravel | | | | |
| 3 | | | | | Brown | | Reworked silty clay, plastic, gravel inclusions, gray silty partings | | | | |
| 4 | | | | | | | | | | | |
| 5 | | 2 | 2.0" MC | 53% | Brown | Moist to Wet | 1' same as above | Fill | N/A | N/A | |
| 6 | | | | | Black | | Silty fine sand (possibly foundry sand), no odors | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | 3 | 2.0" MC | 50% | Grayish Brown | Wet | 0.7' possible fall in | Fill | N/A | N/A | |
| 10 | | | | | Black | | 1.3' Silty Fine Sand, some gravel in top 4", sheen, slight coal tar odor | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | 4 | 2.0" MC | 75% | Black | Wet | 1.5' same as above | SM | N/A | N/A | |
| 14 | | | | | Black | | 1.5' Silty Clay, plastic, soft, sticky, sheens, strong coal tar odor | | | | |
| 15 | | | | | | | | | | | |
| 16 | | | | | | | | | | | |
| 17 | | 5 | 2.0" MC | 75% | Black | Wet | 1.6' fine to coarse Silty Sand & Gravel, sticky, sheens, coal tar odor. | SM-GM | N/A | N/A | |
| 18 | | | | | Gray | | 1.4' Silty Clay to Clayey Silt, plastic, sticky, soft to slightly firm | | | | |
| 19 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |

End of Boring @ 24' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;
2"φ PVC monitoring well MW-106 installed in borehole;
BHS = Bag Headspace NR = Not Recorded PID Problems

SITE NO.: C915299A

BORING NO.: SB-106



Department of Environmental Conservation

SOIL BORING LOG

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

BORING NO: SB-106

CLIENT: NYSDEC

SHEET: 2 of 2

DRILLING CONTRACTOR: TREC Environmental

SITE NO.: C915299A

GROUNDWATER:

BORING LOCATION:

| DATE | TIME | LEVEL | TYPE | CASING | SAMPLER | CORE | TUBE |
|------|------|-------|------|--------|-----------|------|------|
| | | | | | Macrocore | | |
| | | | | | 2" | | |
| | | | | | -- | | |
| | | | | | -- | | |

DATE STARTED: 09/18/20

DATE FINISHED: 09/18/20

DRILLER: Eric Hamman

GEOLOGIST: Steven Moeller

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | |
|------------|-------------------|-----|---------|-------|---------------|----------------|--|-------|-----------|-----|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | |
| | | | | | | | | | Soil | BHS |
| 21 | [Hatched Pattern] | 6 | 2.0" MC | 50% | Reddish Brown | Slightly Moist | Silty Clay, trace rounded gravel with coarse sand, very firm | ML-CL | N/A | N/A |
| 22 | | | | | | | | | | |
| 23 | | | | | | | | | | |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | | | | | | | | | | |
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| 35 | | | | | | | | | | |
| 36 | | | | | | | | | | |
| 37 | | | | | | | | | | |
| 38 | | | | | | | | | | |
| 39 | | | | | | | | | | |
| 40 | | | | | | | | | | |

End of Boring @ 24' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;
 2"φ PVC monitoring well MW-106 installed in borehole;
 BHS = Bag Headspace NR = Not Recorded PID Problems

SITE NO.: C915299A

BORING NO.: SB-106

**57-71 TONAWANDA STREET
SITE NO. C915024**

**1989 CRA
SITE INVESTIGATION REPORT**

TABLE 2
MONITORING WELL STRATIGRAPHY

| <i>Well Description</i> | <i>Depth (BGS)</i> | <i>Material Description</i> |
|-------------------------|--------------------|--|
| MW1-89 | 0' - 0.2' | black moist gravelly sand fill |
| | 0.2' - 1.5' | brown dry silty sand fill, with many large stones and some bricks, cinders, concrete rubble, and lumps of silty clay |
| | 1.5' - 6.0' | brown dry clayey silt fill, with some sand, many large stones and some concrete rubble |
| | 6.0' - 10.0' | brown moist clayey silt fill, with some gravel, concrete and asphalt rubble, stones, rocks, and wood fragments |
| | 10.0' - 12.0' | brown moist silty clay fill, with some stones, rocks, gravel, cinders, ash, and wood fragments |

Notes:

| | |
|----------------------|--------------------|
| - static water level | 7.0 ft. BGS* |
| - bottom of well | 11.3 ft. BGS |
| - top of well | 2.9 ft. AGS** |
| - top of sandpack | 7.3 ft. BGS |
| - screened interval | 11.0 - 9.0 ft. BGS |
| - total well length | 13.9 ft. |

* BGS - below ground surface
** AGS - above ground surface

TABLE 2
MONITORING WELL STRATIGRAPHY

| <i>Well Description</i> | <i>Depth (BGS)</i> | <i>Material Description</i> |
|-------------------------|--------------------|---|
| MW2-89 | 0' - 0.3' | black moist gravelly sand fill |
| | 0.3' - 1.5' | brown dry silty sand fill, with some gravel, some cinders, stones, rocks, concrete rubble, and trace brick material |
| | 1.5' - 6.0' | brown dry gravelly sand fill, with trace silt, some concrete rubble, asphalt rubble, stones and rocks |
| | 6.0' - 9.0' | brown wet sandy silt fill, with some gravel and clay lumps and trace wood fragments |
| | 9.0' - 11.0' | same as above except soil has an iridescent sheen and diesel odor |

Notes:

- static water level 6.0 ft. BGS*
- bottom of well 8.0 ft. BGS
- top of well 2.3 ft. AGS**
- top of sandpack 4.0 ft. BGS
- screened interval 7.7 - 5.7 ft. BGS
- total well length 10.0 ft.

* BGS - below ground surface

** AGS - above ground surface

**1992 NYSDEC
PHASE II INVESTIGATION REPORT**

DATE
 STARTED 9-26-90
 FINISHED 9-26-90
 SHEET 1 OF 1



E + E DRILLING AND TESTING CO., INC.
 SUBSURFACE LOG

HOLE NUMBER GW-1
 SURFACE ELEVATION _____
 GROUNDWATER DEPTH _____

PROJECT Fedders Auto
YPLE040

LOCATION NW corner of lot.
10 E of 40.20

| DEPTH - FT | WELL DIAGRAM | SAMPLE TYPE | SAMPLE NO. | BLOWS ON SAMPLER | | PROFILE SAMPLE ID G1 S1 S4 G1 | FIELD IDENTIFICATION OF SOILS | NOTES |
|------------|--------------|-------------|------------|------------------|-------|-------------------------------------|--|--------------------------------------|
| | | | | 0-6 | 6-12 | | | |
| | | | | 12-18 | 18-24 | | | |
| 0-5 | | SS | 1 | 25 | 35 | SB-1A | SS #1 0-2' 1.3' Recovery | OVA = 0 HNU = 0 DRY |
| | | SS | 2 | 1 | 1 | SB-1B | 0-0.5' Black gravelly sand fill | |
| | | SS | 3 | 2 | 1 | SB-1C | 0.5-0.65' Red brick. | |
| | | SS | 4 | 1 | 2 | SB-1D | 0.65-1.0' Concrete | |
| | | SS | 5 | 2 | 1 | | 1.0-1.3' Black sand fill. | |
| | | SS | 6 | 7 | 14 | | SS #2 2-4' 1.1' Recovery | OVA > 1000 HNU = 15 app MOIST. |
| | | SS | | 19 | 20 | | 0-0.7' Black sandy fill with greasy appearance + oil-like aroma. | |
| | | SS | | 15 | 13 | | 0.7'-1.1' reddish brown clay fill w/ brick. | |
| | | | | 18 | 16 | | SS #3 4-6' 0.7' Recovery | OVA = 10 HNU = 3 MOIST. |
| | | | | | | | All moist reddish brown clay. can't see any foreign fragments. ∴ perhaps its natural (!) | |
| | | | | | | | SS #4 6-8' 0.8' Recovery | OVA = 0 HNU = 0 WET. |
| | | | | | | | All wet reddish brown clay w/ no visible signs of fill material. Clay (as in #3) Clay is highly cohesive + moderately plastic. | |
| | | | | | | | SS #5 8-10' 1.1' Recovery | OVA = 0 HNU = 0 DRY |
| | | | | | | | All dry reddish brown clay, tight, highly cohesive + plastic. Appears natural. Water is sitting on top of this layer. | |
| | | | | | | | SS #6 9-11' | OVA HNU = 0 |
| | | | | | | | Same as #5 | |
| | | | | | | | There is water in the hole. | |

640088

CLASSIFICATION/BY P. W. WA

DATE
 STARTED 9-26-90
 FINISHED 9-26-90
 SHEET 1 OF 1



E + E DRILLING AND TESTING CO., INC.
 SUBSURFACE LOG

HOLE NUMBER GW-2
 SURFACE ELEVATION _____
 GROUNDWATER DEPTH _____

PROJECT Fedders Auto.
YPL2040

LOCATION NE corner of lot near
Scajacanda Creek.

| DEPTH - FT | WELL DIAGRAM | SAMPLE TYPE | SAMPLE NO. | BLOWS ON SAMPLER | | | | PROFILLE SAMPLE ID Cl Si Sd Gr | FIELD IDENTIFICATION OF SOILS | NOTES |
|------------|------------------|-------------|------------|------------------|----|----|----|--------------------------------------|--|---|
| | | | | 0 | 6 | 6 | 12 | | | |
| | | | | 12 | 18 | 18 | 24 | | | |
| 0-3 | 0.0 | SS | 1 | 6 | 11 | | | SB-2A | SS #1 0-2' 1.7' Recovery 0-0.6 Black sandy fill w/ brick, glass, slag, etc. 0.6-1.1' Concrete (weathered) 1.1-1.7' Reddish-brown + black clay fill w/ sand, slag, (foundry material) etc. SS #2 2-4' 1.6' Recovery 0-1.0' Dark brown sandy fill w/ brick, slag, a white ceramic material, black glass (foundry) 1.0-1.6' Black sandy clay fill, greasy in appearance but not in touch. SS #3 4-6' 0.4' Recovery Limited sample volume ∴ will spoon again. 0-0.4' wet black sandy fill. 2nd time retrieved nothing but water. SS #4 6-8' 0.4' Recovery Appears to be material that was stuck in bit. Auger cuttings indicate saturated black sandy fill, spoon shows damp sandy clay fill. SS #5 8-10' No recovery. Try again - 2nd spoon is saturated gravelly sand fill. SS #6 10-12' 1.0' Recovery All wood, as in GW-3b. SS #7 12-14' 1.0' Recovery 0-0.4' Reddish brown sandy clay fill w/ brick fragments. 0.4-0.9' wood 0.9-1.0' Black clay w/ wood. | HNu = 10 ppm OVA = 10 ppm Both only @ very end of spoon. MOIST. HNu = 0 OVA = 0 Damp HNu = 0 OVA = 0 Wet. HNu = 0 OVA = 0 Saturated. OVA = 10 HNu N/A OVA = 100 HNu = 0 |
| 3-4 | 0.0 | SS | 2 | 8 | 4 | | | SB-2B | | |
| 4-5 | 0.0 | SS | 3 | 3 | 1 | | | SB-3C | | |
| | | SS | 4 | 4 | 2 | | | NONE | | |
| | | SS | 5 | 2 | 2 | | | | | |
| | | SS | 6 | 2 | 4 | | | | | |
| | | SS | 7 | 4 | 2 | | | | | |
| 15 | TD=14.5 | | | | | | | | | |
| 15-20 | Screen 4.5-14.5' | | | | | | | | | |
| 20-25 | sand 4-14.5' | | | | | | | | | |
| | seal 3-4' | | | | | | | | | |

640088

C-3 CLASSIFICATION/BY R. Watt

DATE
 STARTED 9-25-90
 FINISHED 9-25-90
 SHEET 1 OF 2



E + E DRILLING AND TESTING CO., INC.
 SUBSURFACE LOG

HOLE NUMBER GW-3a
 SURFACE ELEVATION _____
 GROUNDWATER DEPTH N/A

PROJECT Fedders Auto
YPL0040

LOCATION SE corner of lot near
Scjacanda Creek.

| DEPTH - FT | WELL DIAGRAM | SAMPLE TYPE | SAMPLE NO. | BLOWS ON SAMPLER | | | | PROFILE SAMPLE ID G1 G2 G3 G4 | FIELD IDENTIFICATION OF SOILS | NOTES |
|---------------------------------|--------------|-------------|------------|------------------|------|-------|-------|---|---|---------------------------------|
| | | | | 0-6 | 6-12 | 12-18 | 18-24 | | | |
| 5 10 15 20 25 30 | ABANDONED | SS | 1 | 7 | 8 | | | SB-3A | SS#1 0-2' 1.8' Recovery | OVA = 3ppm HNU = 0ppm DRY |
| | | SS | 2 | 5 | 3 | | | SB-3B | Black sandy fill w/ some clay and gravel. Contains brick, glass, slag, greenstone, etc. | |
| | | SS | 3 | 1 | 3 | | | SB-3C | | |
| | | SS | 4 | 3 | 2 | | | SB-3D | SS#2 2-4' 2.0' Recovery. | OVA = 0 HNU = 0 MOIST. |
| | | SS | 5 | 1 | 2 | | | | Same fill @ as 0-2'. clay seam 3" thick in middle is part of the fill | |
| | | SS | 6 | 2 | 2 | | | SB-3D | SS#3 4-6' 0.5' Recovery | OVA = 0 HNU = 0 MOIST. |
| | | | | | | | | All clay fill. Must have pushed a stone because the top of the spoon was clean. Clay matrix is reddish brown with high cohesion + moderate plasticity. Contains medium + coarse sand, coal fragments + small brick fragments. Auger cutting indicate that remainder is black sandy fill as above. | | |
| | | | | | | | | SS#4 6-8' 0.2' Recovery. | | |
| | | | | | | | | Same clay fill as #3. Spoon is dry inside - not picking up soil. | | |
| | | | | | | | | SS #5 9-11' 1.7' Recovery. | | |
| | | | | | | | | All "natural" reddish brown moist clay with minor fine + medium sand. Same clay as seen in B-1. | OVA = 0 HNU = 0 MOIST. | |
| | | | | | | | | SS#6 11-13' 1.1' Recovery | | |
| | | | | | | | | All clay as in #5 but with black greasy material + organic matter @ 0.8'. Also a wood frag. @ 0.4' and a coal frag. (1/2") @ 0.6'. Probably natural but unsure | | |

640088

CLASSIFICATION/BY R. Watt

DATE

STARTED 9-25-90

FINISHED 9-25-90

SHEET 2 OF 2



E + E DRILLING AND TESTING CO., INC.
SUBSURFACE LOG

HOLE NUMBER GW-3a

SURFACE ELEVATION _____

GROUNDWATER DEPTH N/A

PROJECT Fedders Auto
YPC040

LOCATION _____

| DEPTH - FT | WELL DIAGRAM | SAMPLE TYPE | SAMPLE NO. | BLOWS ON SAMPLER | | | | PROFILE Cl Si Sd Gr | FIELD IDENTIFICATION OF SOILS | NOTES |
|------------|--------------|-------------|------------|------------------|----|----|----|------------------------|--|-------|
| | | | | 0 | 6 | | | | | |
| | | | | 8 | 12 | 18 | 24 | | | |
| ABANDONED | | | | | | | | | SS #7 13-15' 2.0' Recovery. Natural materials. 0-0.5' Reddish brown clay as above 0.5-1.1' Organic rich clay. Reddish brown w/ black mottles. Contains wood & plant fragments & coal. 1.1-1.3' Black peat moss w/ coalified plant fragments. 1.3-2.0' organic rich sand. Fine lt brown sand w/ rootlets and plant fragments. Also contains numerous (1070) shells (<5mm) of gastropods & brachiopods. No water to speak of so will abandon this hole and move towards the creek. | |
| | | | | | | | | | | |
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640088

CLASSIFICATION/BY R. Watt

DATE

STARTED 9-25-90FINISHED 9-25-90SHEET 1 OF 1

E + E DRILLING AND TESTING CO., INC.
SUBSURFACE LOG

HOLE NUMBER GW-36

SURFACE ELEVATION _____

GROUNDWATER 5'
DEPTH _____PROJECT Fedders Auto
YP6040LOCATION SE corner of lot near
Scajaranda Creek.

| DEPTH - FT | WELL DIAGRAM | SAMPLE TYPE | SAMPLE NO. | BLOWS ON SAMPLER | | | | PROFILE | FIELD IDENTIFICATION OF SOILS | NOTES |
|------------|--------------|-------------|------------|------------------|------|-------|-------|-------------|--|---|
| | | | | 0-6 | 6-12 | 12-18 | 18-24 | | | |
| | | | | | | | | Cl SI Sd Gr | | |
| 5 | ABANDONED | SS | 1 | 6 | 2 | | | | <p>SS#1 4-6' 1.3' Recovery. (Augered to 4')</p> <p>Top 0.4' is gravelly sand fill (black) similar to GW-3a (probably from inside auger bit. Bottom 0.9' is reddish brown clay w/ areas of black sand. Contains ~10% medium to coarse sand + 10% gravel. Very bottom is wet sand fill.</p> <p>SS#2 6-8' 1.4' Recovery. A solid core of wet wood. Has an odd aroma. (Creosote?)</p> <p>CAN'T AUGER THROUGH THE WOOD SO MOVE UP 6' AND TRY AGAIN.</p> | <p>MOIST DVA = 1 ppm HMu = 0</p> <p>OVA to 30 ppm HMu to 30 ppm</p> |
| | | | | | | | | | | |
| | | | | | | | | | | |
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640088

recycled paper
recycled paper

C-6

CLASSIFICATION/BY R. W. W.ecology and environment
ecology and environment

DATE

STARTED 9-25-90

FINISHED 9-26-90

SHEET 1 OF 1



E + E DRILLING AND TESTING CO., INC.
SUBSURFACE LOG

HOLE NUMBER GW-3

SURFACE ELEVATION _____

GROUNDWATER DEPTH _____

PROJECT Fedders Auto
4P6040

LOCATION SE corner of lot near
Sciacaranda Creek.

| DEPTH - FT | WELL DIAGRAM | SAMPLE TYPE | SAMPLE NO. | BLOWS ON SAMPLER | | | | PROFILE | FIELD IDENTIFICATION OF SOILS | NOTES |
|------------|------------------|-------------|------------|------------------|----|----|----|---------|-------------------------------|-------|
| | | | | 0 | 6 | 6 | 12 | | | |
| | | | | 12 | 18 | 18 | 24 | | | |
| | | | | | | | | | | |
| 5 | | | | | | | | | | |
| | | SS | 1 | 2 | 1 | | | | | |
| | | SS | 2 | 1 | 1 | | | | | |
| | | SS | 3 | 1 | 1 | | | | | |
| | | SS | 4 | 1 | 1 | | | | | |
| | | SS | 5 | 2 | 1 | | | | | |
| 15 | TP=14.5' | | | | | | | | | |
| | screen 4.5-14.5' | | | | | | | | | |
| | sand 4-14.5' | | | | | | | | | |
| | seal 3-4' | | | | | | | | | |
| 20 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 30 | | | | | | | | | | |
| 35 | | | | | | | | | | |
| 40 | | | | | | | | | | |

Third try @ GW-3
Auger to 4' then splitspoon.

SS #1 1.2' Recovery. 4-6'
All black sandy fill as we've seen before. Contains limestone gravel, brick, wood, etc.
Wet below 5'.

SS #2 6-8' 1.2' Recovery.
Reddish brown + black clay fill with slag + coke fragments
Moist to wet.

SS #3 8-10' 1.8' Recovery
Saturated.
0-0.5' Sandy clayey fill (black)
0.5-1.1' Reddish brown + black clay fill with gravel.
1.1-1.8' Coarse sand + coke/slag fill material.

SS #4 10-12' 0.6' Recovery
Saturated black sandy clay fill

SS #5 12-14' No recovery but spoon is all wet. Will run another spoon + try to get something...
... now recovered 1.8' to about 14.5'. Contains:
0-0.5 Brown sandy fill w/ clay + brick fragments.
0.5-1.1 Black organic-rich clay
1.1-1.4 clayey peat moss
1.4-1.8 Brown sandy clay, organic rich w/ ~30% intact shells of gastropods.

H₂O = 0
OVA < 1 ppm
water table near 5'

H₂O = 0
OVA < 1 ppm

H₂O = 0
OVA < 1 ppm
SATURATED

H₂O = 0
OVA = $\frac{5}{25}$ ppm
Saturated.

H₂O = 0
OVA = 0
Wet to saturated.

640088

CLASSIFICATION/BY R. Watt

DATE

STARTED 9-25-90

FINISHED 9-25-90

SHEET 1 OF 1



E + E DRILLING AND TESTING CO., INC.
SUBSURFACE LOG

HOLE NUMBER B-1

SURFACE ELEVATION _____

GROUNDWATER DEPTH _____

PROJECT Fedders Auto
4P0040

LOCATION Near enhance gate on
West Ave.

| DEPTH - FT | WELL DIAGRAM | SAMPLE TYPE | SAMPLE NO. | BLOWS ON SAMPLER | | | | PROFILE SAMPLE ID Cl Si Sd Gr | FIELD IDENTIFICATION OF SOILS | NOTES |
|------------|---------------------------------------|-------------|------------|------------------|----|----|----|---|--|---|
| | | | | 0 | 6 | 6 | 12 | | | |
| | | | | 12 | 18 | 18 | 24 | | | |
| 5 | BOREHOLE FILLED WITH CUTTINGS + GROUT | SS | 1 | 3 | 3 | | | SB-4A | <p>SS#1 0-2' 1.6' Recovery 6" of black, damp silty sand fill material w/ brick fragments followed to 1.6' with reddish brown clay fill. Clay is moderate to highly cohesive with a moderate plasticity + contains <10% angular black chert fragments (coarse gravel size) + tan sand lenses as well as minor brick fragments.</p> | <p>HNu = 0 ppm (30-40 ppm in hole). OVA = 0</p> |
| | | SS | 2 | 3 | 4 | | | SB-4B | | |
| | | SS | 3 | 4 | 6 | | | SB-4C | | |
| | | SS | 4 | 12 | 12 | | | SB-4D | | |
| 10 | | | | | | | | <p>SS#2 2-4' 1.3' Recovery All reddish brown damp "natural" clay with black silt mottled throughout. Also contains <5% medium + coarse sand throughout.</p> | <p>HNu < 1 ppm OVA = 0 ppm</p> | |
| | | | | | | | | <p>SS#3 4-6' 1.5' Recovery Top 0.4' is clay as above mixed with slag - hard to tell if it has fallen in from above or not. Remaining 1.1' is clay as above. (like 2-4'). Dry.</p> | <p>HNu = 40-50 ppm OVA = 0 ppm (water vapor)</p> | |
| | | | | | | | | <p>SS#4 6-8' 1.8' Recovery Same clay as above but dry.</p> | <p>HNu = 20-30 OVA < 1 ppm (water vapor)</p> | |

640088

CLASSIFICATION/BY P. Watt

**1998 RETEC ENGINEERING
INVESTIGATION**

RETEC

SOIL BORING LOG

SB 01

RETEC Engineering, P.C.

| | | | | | |
|-------------|-----------------------------------|------------|---|------------------------|-------|
| PROJECT NO: | 3 - 2111 - 600 (3 - 3540 - 102) | DATE: | December 12, 1998 | Ground Elevation : | ~ 579 |
| CLIENT: | National Fuel Gas | GEOLOGIST: | Mark Hofferbert | Depth to Groundwater : | ~ 8 |
| SITE: | Scajaquada Creek | EQUIPMENT: | 2 inch x 4 foot Direct Push Core Barrel | Groundwater Elevation: | ~ 571 |
| LOCATION: | West Bank near West Avenue | OPERATOR: | Maxim Technologies | Creekwater Elevation : | ~ 565 |

| DEPTH BGS (feet) | SAMPLE INTERVAL | PID HEADSPACE (ppm) | SOIL LITHOLOGY | SOIL DESCRIPTION LOG | MONITORING WELL CONSTRUCTION |
|------------------------|--------------------|---------------------------|-------------------|----------------------------|------------------------------------|
|------------------------|--------------------|---------------------------|-------------------|----------------------------|------------------------------------|

| | | | | | |
|----|--|------|----|---|-----|
| 2 | | -- | -- | No Recovery | N/A |
| 4 | | | | | |
| 6 | | 6.5 | | | |
| 8 | | | | Misc. Industrial Fill and Soil Gravel, soil, brick and concrete. No Sheen / No Odor. Wet at 8' BGS. | |
| 10 | | 1.2 | | | |
| 12 | | | | | |
| 14 | | 3.2 | | Gravel and Sand No Sheen / No Odor. | |
| 16 | | | | | |
| 18 | | 51.8 | | Gravel and Sand Thin Lenses of Hydrocarbon NAPL. | |
| 20 | | | | End of Boring | |
| 22 | | | | | |
| 24 | | | | | |
| 26 | | | | | |

Comments:

RETEC

SOIL BORING LOG

SB 02

RETEC Engineering, P.C.

| | | | | | |
|-------------|---------------------------------|------------|---|------------------------|-------|
| PROJECT NO: | 3 - 2111 - 600 (3 - 3540 - 102) | DATE: | December 12, 1998 | Ground Elevation : | ~ 579 |
| CLIENT: | National Fuel Gas | GEOLOGIST: | Mark Hofferbert | Depth to Groundwater : | ~ 8 |
| SITE: | Scajaquada Creek | EQUIPMENT: | 2 inch x 4 foot Direct Push Core Barrel | Groundwater Elevation: | ~ 571 |
| LOCATION: | West Bank near West Avenue | OPERATOR: | Maxim Technologies | Creekwater Elevation : | ~ 565 |

| DEPTH BGS (feet) | SAMPLE INTERVAL | PID HEADSPACE (ppm) | SOIL LITHOLOGY | SOIL DESCRIPTION LOG | MONITORING WELL CONSTRUCTION |
|------------------------|--------------------|---------------------------|-------------------|--|------------------------------------|
| 2 | | 4.2 | | | N/A |
| 4 | | | | Misc. Industrial Fill and Soil Gravel, soil, brick and concrete. No Sheen / No Odor. Wet at 8' BGS. | |
| 6 | | 16.5 | | | |
| 8 | | | | | |
| 10 | | 7.2 | | Gravel and Sand No Sheen / No Odor. | |
| 12 | | | | | |
| 14 | | 1000 + | | Gravel and Sand Hydrocarbon NAPL. | |
| 16 | | | | End of Boring (Boring Collapsed) | |
| 18 | | | | | |
| 20 | | | | | |
| 22 | | | | | |
| 24 | | | | | |
| 26 | | | | | |

Comments:

RETEC

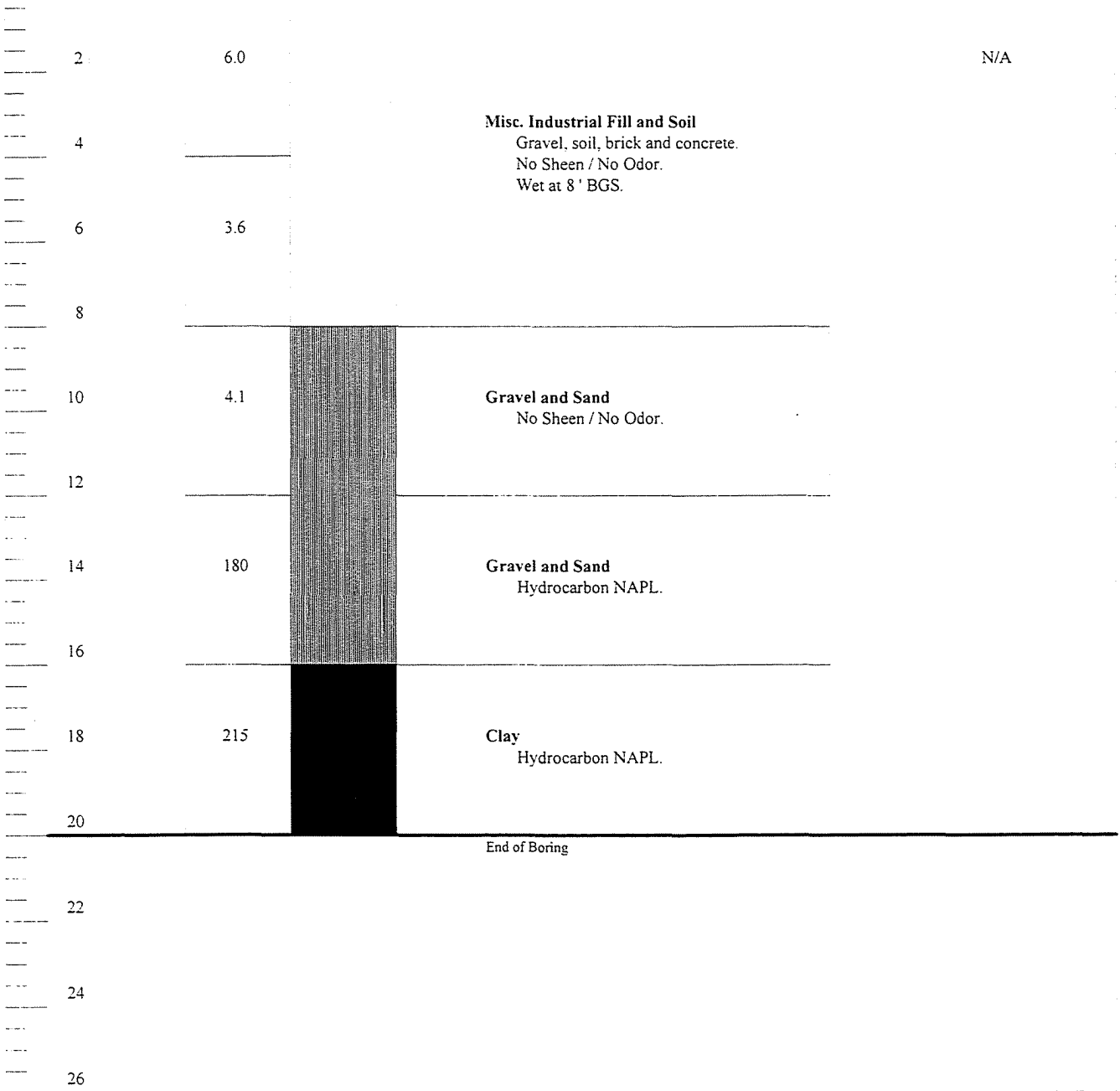
SOIL BORING LOG

SB 03

RETEC Engineering, P.C.

| | | | | | |
|-------------|---------------------------------|------------|---|------------------------|-------|
| PROJECT NO: | 3 - 2111 - 600 (3 - 3540 - 102) | DATE: | December 12, 1998 | Ground Elevation : | ~ 579 |
| CLIENT: | National Fuel Gas | GEOLOGIST: | Mark Hofferbert | Depth to Groundwater : | ~ 8 |
| SITE: | Scajaquada Creek | EQUIPMENT: | 2 inch x 4 foot Direct Push Core Barrel | Groundwater Elevation: | ~ 571 |
| LOCATION: | West Bank near West Avenue | OPERATOR: | Maxim Technologies | Creekwater Elevation : | ~ 565 |

| DEPTH BGS (feet) | SAMPLE INTERVAL | PID HEADSPACE (ppm) | SOIL LITHOLOGY | SOIL DESCRIPTION LOG | MONITORING WELL CONSTRUCTION |
|------------------------|--------------------|---------------------------|-------------------|----------------------------|------------------------------------|
|------------------------|--------------------|---------------------------|-------------------|----------------------------|------------------------------------|



Comments:

RETEC

SOIL BORING LOG

SB 04

RETEC Engineering, P.C.

| | | | | | |
|-------------|---------------------------------|------------|---|------------------------|-------|
| PROJECT NO: | 3 - 2111 - 600 (3 - 3540 - 102) | DATE: | December 12, 1998 | Ground Elevation : | ~ 579 |
| CLIENT: | National Fuel Gas | GEOLOGIST: | Mark Hofferbert | Depth to Groundwater : | ~ 8 |
| SITE: | Sajaquada Creek | EQUIPMENT: | 2 inch x 4 foot Direct Push Core Barrel | Groundwater Elevation: | ~ 571 |
| LOCATION: | West Bank near West Avenue | OPERATOR: | Maxim Technologies | Creekwater Elevation : | ~ 565 |

| DEPTH BGS (feet) | SAMPLE INTERVAL | PID HEADSPACE (ppm) | SOIL LITHOLOGY | SOIL DESCRIPTION LOG | MONITORING WELL CONSTRUCTION |
|------------------------|--------------------|---------------------------|-------------------|--|------------------------------------|
| 2 | | 5.1 | | | N/A |
| 4 | | | | Misc. Industrial Fill and Soil Gravel, soil, brick and concrete. No Sheen / No Odor. Wet at 8' BGS. | |
| 6 | | 4.9 | | | |
| 8 | | | | | |
| 10 | | 3.4 | | Gravel and Sand No Sheen / No Odor. | |
| 12 | | | | | |
| 14 | | 80.5 | | Gravel and Sand Hydrocarbon NAPL. | |
| 16 | | | | End of Boring (Boring Collapsed) | |
| 18 | | | | | |
| 20 | | | | | |
| 22 | | | | | |
| 24 | | | | | |
| 26 | | | | | |

Comments:

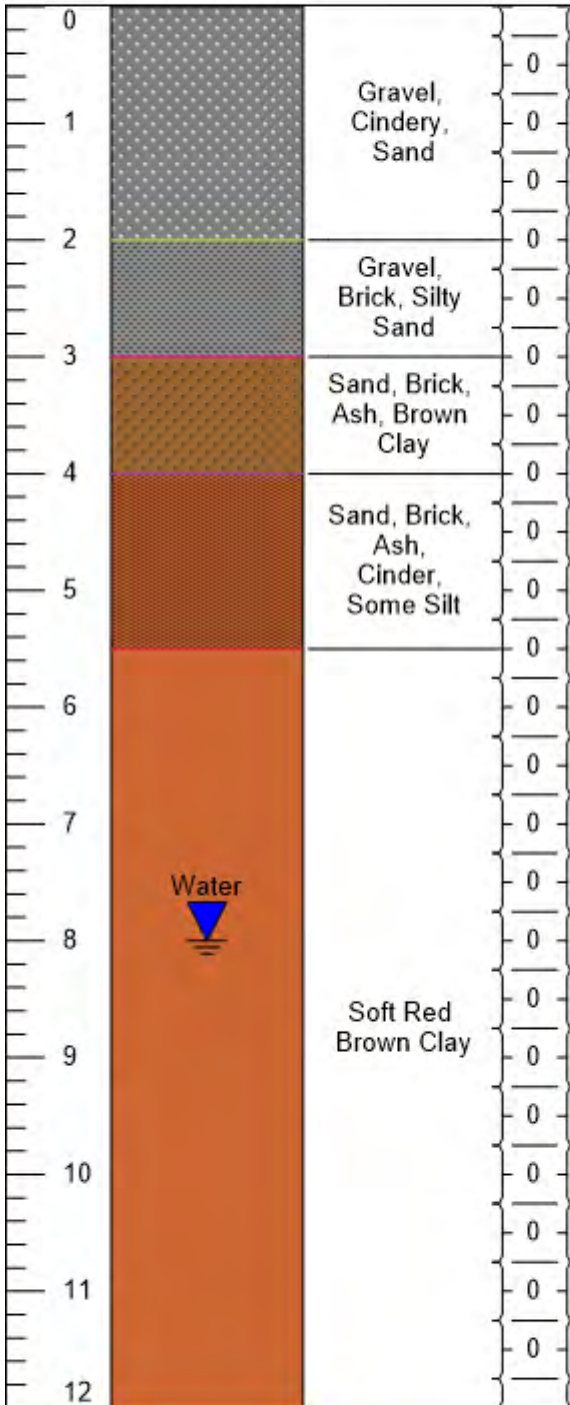
**2020 BE3
REMEDIAL INVESTIGATION REPORT**

Remedial Investigation Borehole Log

Borehole ID: BH-01
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: 25°F, Windy
 Drill Date: 12/17/2019

Geologist/Engineer: Peter Gorton
 Location: 42.930471° -78.895773°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1039-1101

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO: SOIL CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

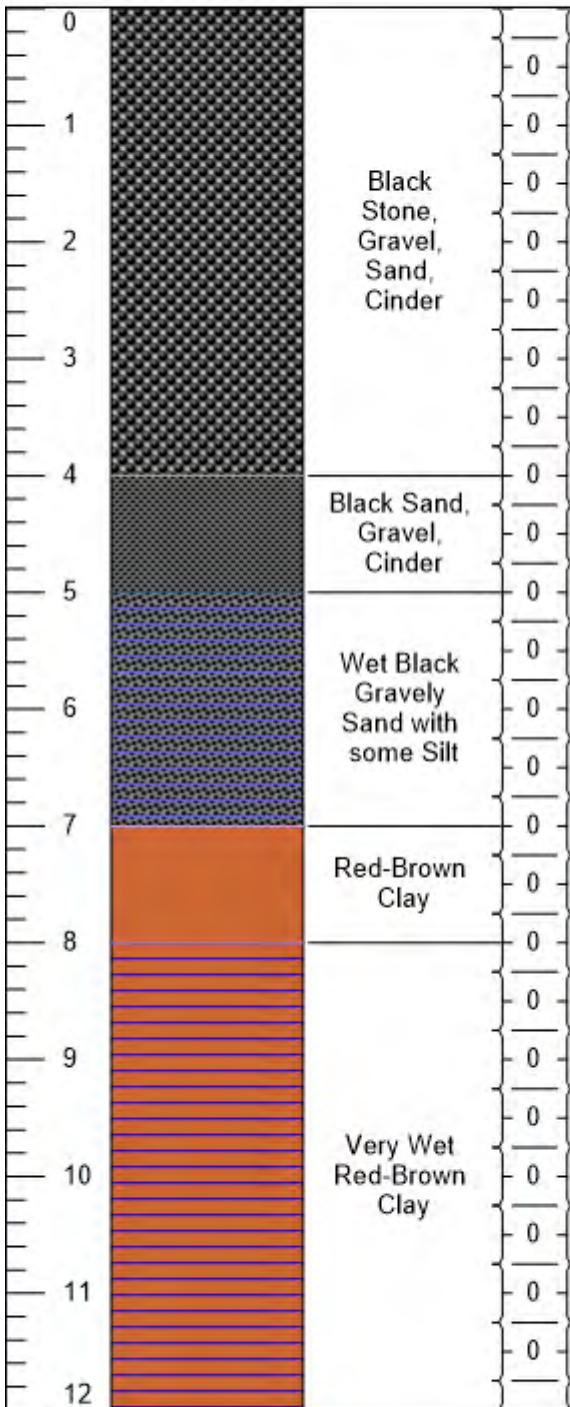


Remedial Investigation Borehole Log

Borehole ID: BH-02
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: 25°F, Windy
 Drill Date: 12/18/2019

Geologist/Engineer: Peter Gorton
 Location: 42.930664° -78.895301°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1045-1130

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO: SOIL CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

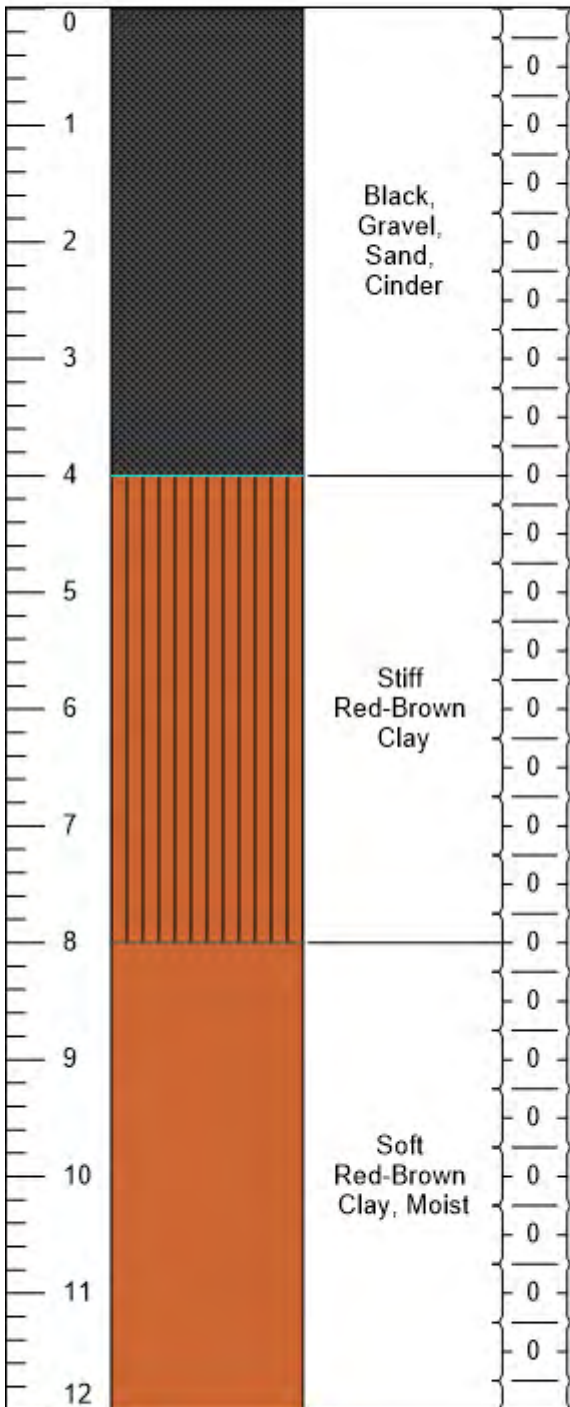
BE3CORP
 BRYDGES ENGINEERING IN ENVIRONMENT & ENERGY

Remedial Investigation Borehole Log

Borehole ID: BH-03
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: 25°F, Windy
 Drill Date: 12/18/2019

Geologist/Engineer: Peter Gorton
 Location: 42.930909° -78.895107°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1045-1130

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO: SOIL CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213



Remedial Investigation Borehole Log

Borehole ID: BH-04
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: 25°F, Windy
 Drill Date: 12/17/2019

Geologist/Engineer: Peter Gorton
 Location: 42.930777° -78.895483°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1040-1250

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|

| | | | |
|----|--|--|---|
| 0 | | | 0 |
| 1 | | Gravel, Cindery, Sand, Ash, Black-Brown | 0 |
| 2 | | | 0 |
| 3 | | Black Sand, Cinder | 0 |
| 4 | | Stiff Red-Brown Clay | 0 |
| 5 | | | 0 |
| 6 | | | 0 |
| 7 | | Soft Red-Brown Clay | 0 |
| 8 | | | 0 |
| 9 | | | 0 |
| 10 | | Soft, Dark Gray Silty, Sandy Clay | 0 |
| 11 | | | 0 |
| 12 | | | 0 |
| 13 | | Dark and Light Gray, Moist, Sandy, Silty Clay with some Red material | 0 |
| 14 | | | 0 |
| 15 | | | 0 |
| 16 | | | 0 |
| 17 | | Wet Dark Brown Silty Sandy Clay | 0 |
| 18 | | | 0 |
| 19 | | Red-Brown Clay | 0 |
| 20 | | | 0 |

MAP OVERLAY



PHOTO: SOIL CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

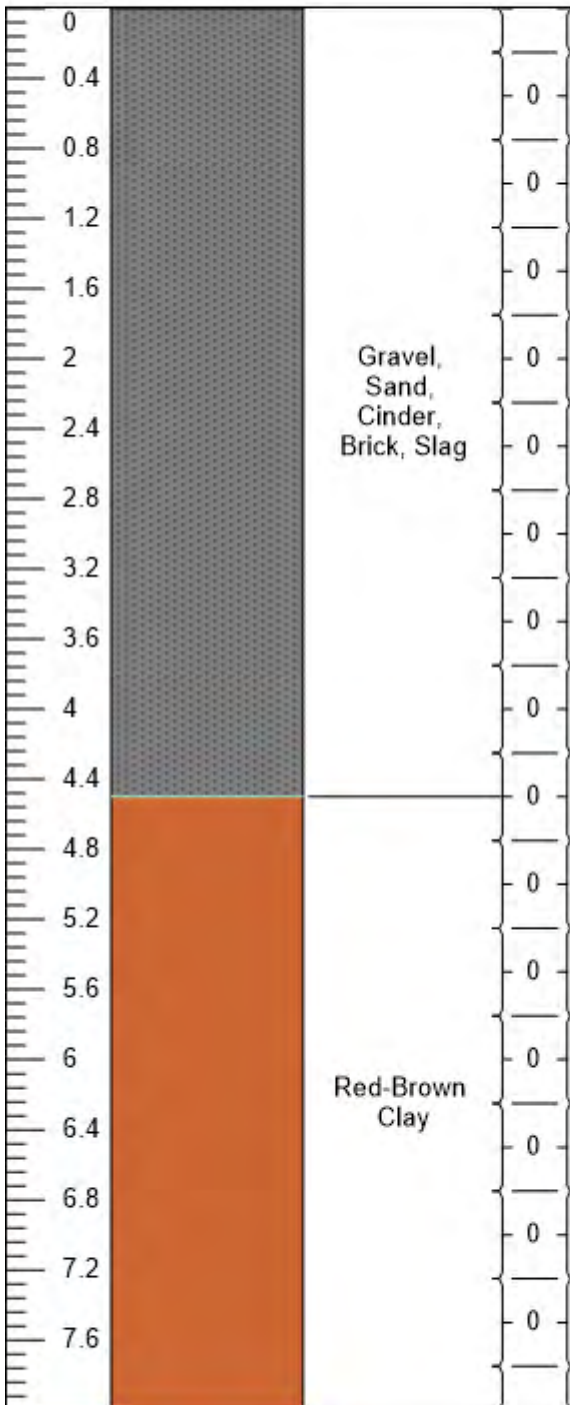


Remedial Investigation Borehole Log

Borehole ID: BH-05
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: 25°F, Windy
 Drill Date: 12/18/2019

Geologist/Engineer: Peter Gorton
 Location: 42.930959° -78.895565°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1330-1436

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO: SOIL CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

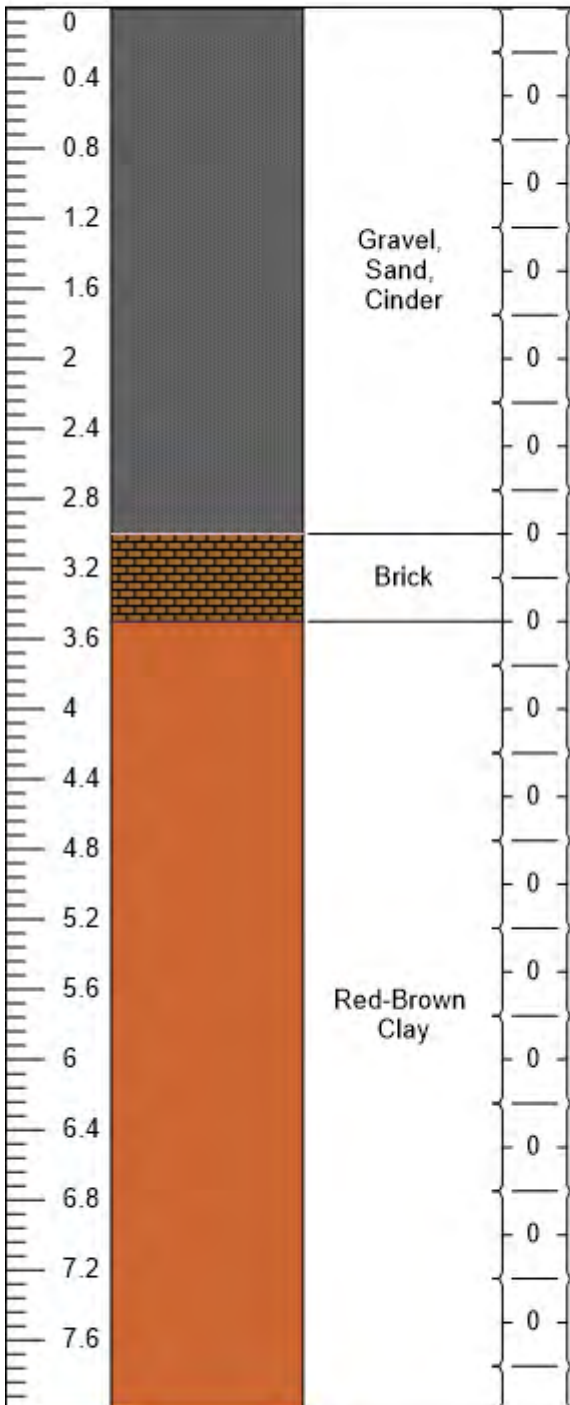


Remedial Investigation Borehole Log

Borehole ID: BH-06
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: 25°F, Windy
 Drill Date: 12/18/2019

Geologist/Engineer: Peter Gorton
 Location: 42.930997° -78.895728°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1436-1500

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO: SOIL CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213



Remedial Investigation Borehole Log

Borehole ID: BH-07
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: 25°F, Windy
 Drill Date: 12/17/2019

Geologist/Engineer: Peter Gorton
 Location: 42.930872° -78.895858°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1217-1350

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|

| | | | |
|----|--|--|---|
| 0 | | Cement | 0 |
| 1 | | | 0 |
| 2 | | Gravel, Sand, Silt, Cinder | 0 |
| 3 | | | 0 |
| 4 | | Soft Red-Brown Clay | 0 |
| 5 | | NO RECOVERY tube contained very soft, wet, loosely consolidated silty sand with some clay | 0 |
| 6 | | | 0 |
| 7 | | | 0 |
| 8 | | | 0 |
| 9 | | | 0 |
| 10 | | Red-Brown Clay | 0 |
| 11 | | | 0 |
| 12 | | | 0 |

MAP OVERLAY



PHOTO: SOIL CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213



Remedial Investigation Borehole Log

Borehole ID: BH-08
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: 25°F, Windy
 Drill Date: 12/18/2019

Geologist/Engineer: Peter Gorton
 Location: 42.930697° -78.895854°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1350-1500

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|

| | | | |
|----|--|----------------------------------|---|
| 0 | | | 0 |
| 1 | | | 0 |
| 2 | | Silt, Sand, Ash, Cinder, Brick | 0 |
| 3 | | | 0 |
| 4 | | | 0 |
| 5 | | | 0 |
| 6 | | Silty Clay, Very Wet | 0 |
| 7 | | | 0 |
| 8 | | | 0 |
| 9 | | Soft, Damp Brown-Gray Silty Clay | 0 |
| 10 | | | 0 |
| 11 | | Soft Red-Brown Clay | 0 |
| 12 | | | 0 |

MAP OVERLAY



PHOTO: SOIL CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

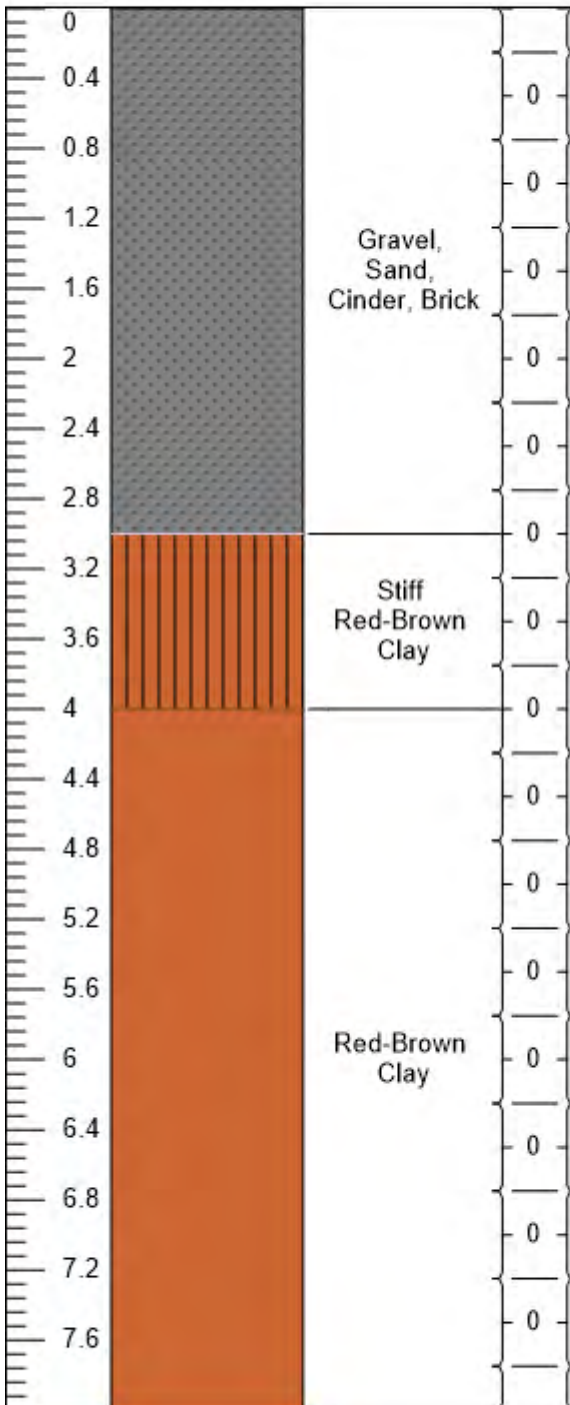


Remedial Investigation Borehole Log

Borehole ID: BH-09
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: 25°F, Windy
 Drill Date: 12/18/2019

Geologist/Engineer: Peter Gorton
 Location: 42.930655° -78.89609°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1500-1530

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO: SOIL CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

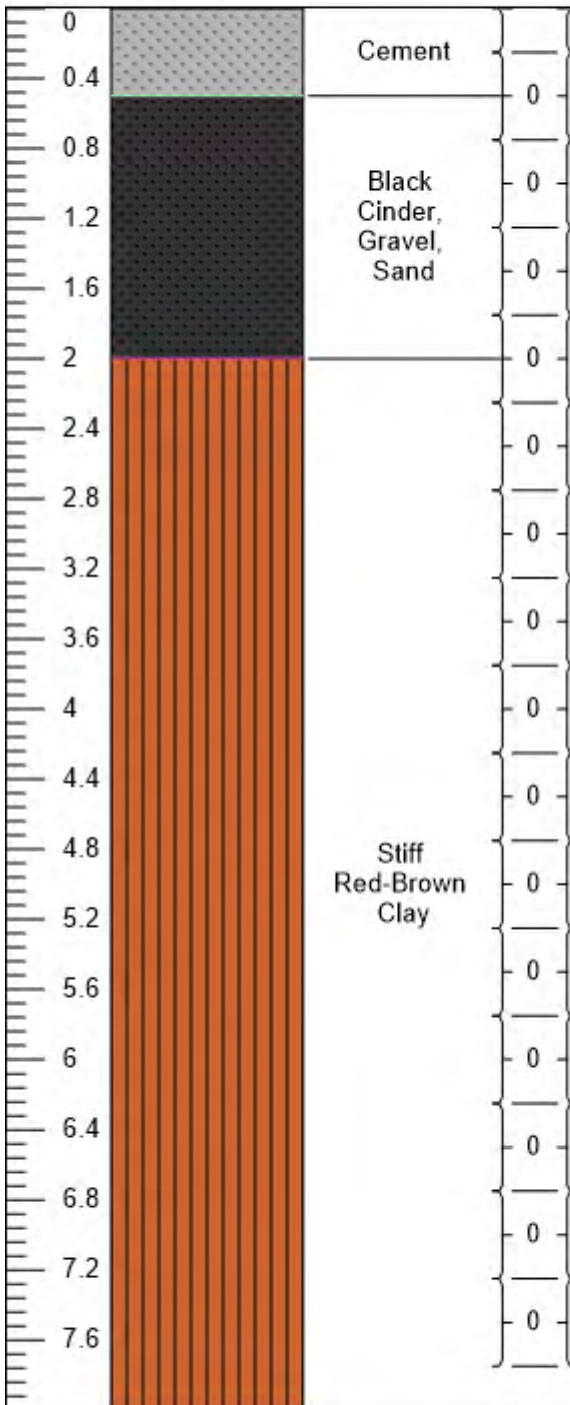


Remedial Investigation Borehole Log

Borehole ID: BH-10
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: 25°F, Windy
 Drill Date: 12/18/2019

Geologist/Engineer: Peter Gorton
 Location: 42.930566° -78.896377°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 0920-0950

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO: SOIL CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

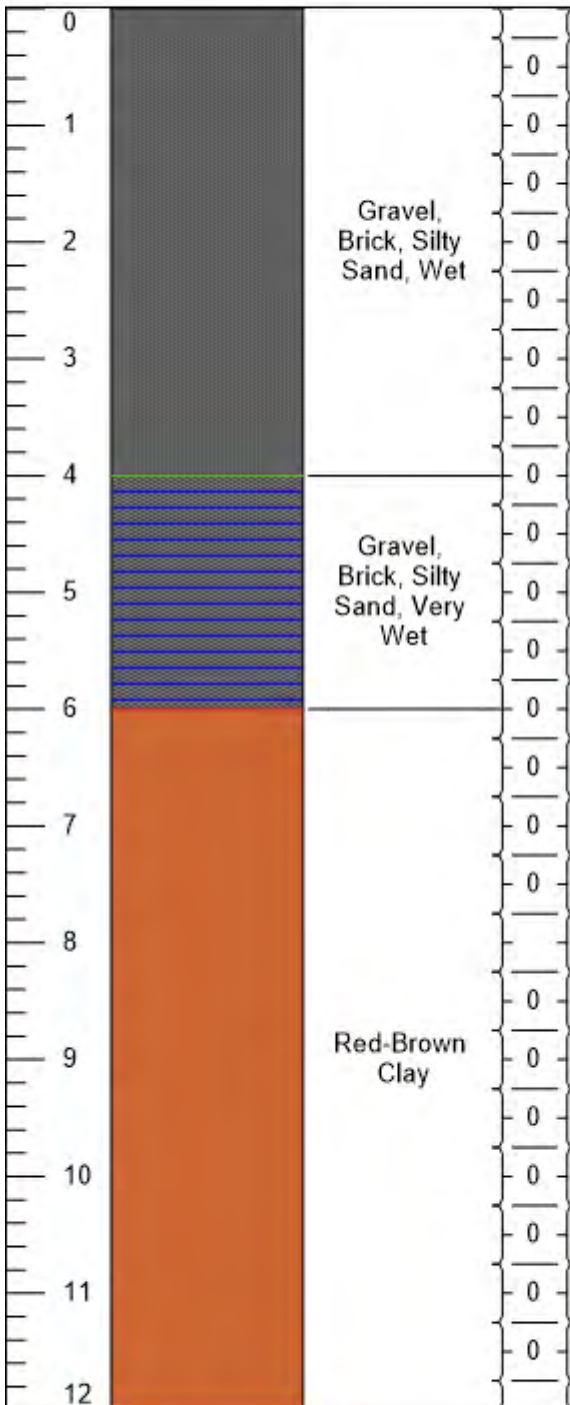


Remedial Investigation Borehole Log

Borehole ID: BH-11
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: 25°F, Windy
 Drill Date: 12/18/2019

Geologist/Engineer: Peter Gorton
 Location: 42.930822° -78.896412°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1020-1210

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO: SOIL CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

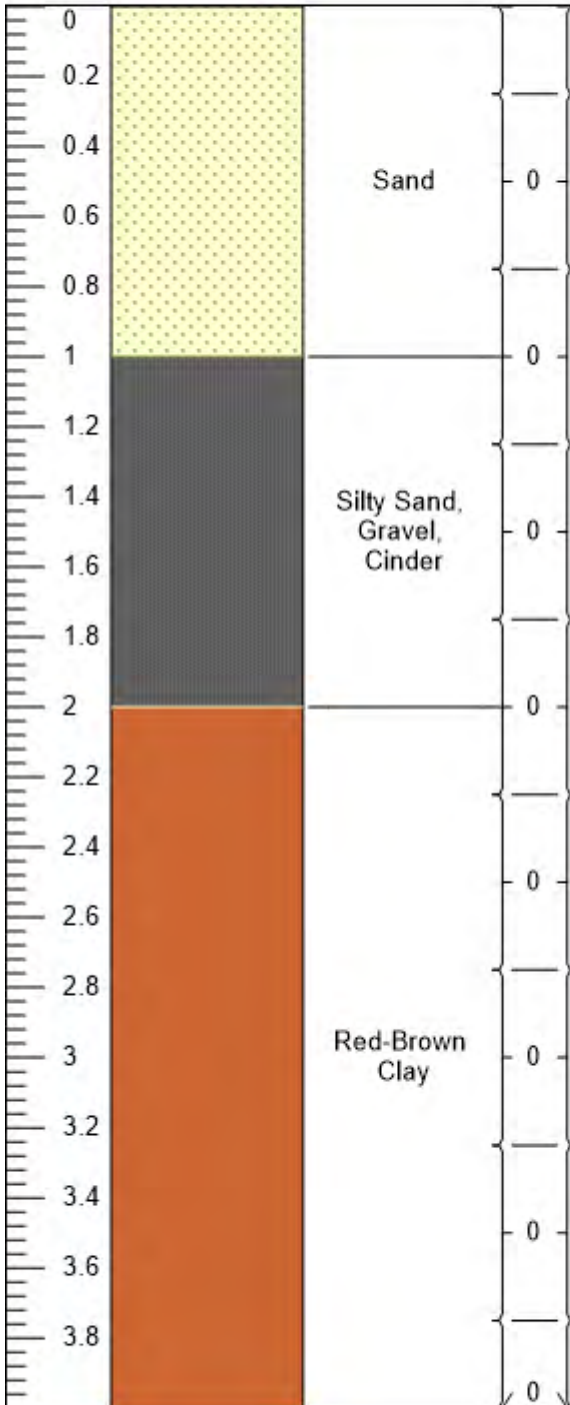


Remedial Investigation Borehole Log

Borehole ID: BH-12
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: 25°F, Windy
 Drill Date: 12/19/2019

Geologist/Engineer: Peter Gorton
 Location: 42.930587° -78.896337°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1210-1300

| Borehole Depth (Ft) | Soil | Description | PID | PPM |
|---------------------|------|-------------|-----|-----|
|---------------------|------|-------------|-----|-----|



MAP OVERLAY



PHOTO: SOIL CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

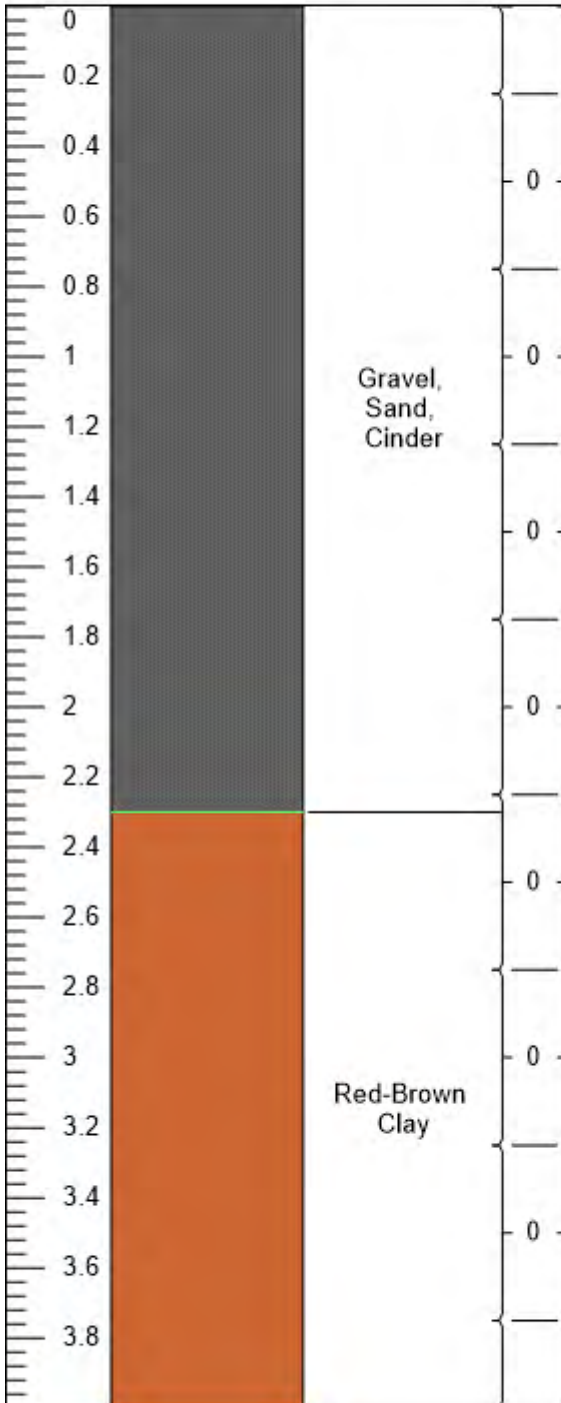


Remedial Investigation Borehole Log

Borehole ID: BH-13
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: 25°F, Windy
 Drill Date: 12/18/2019

Geologist/Engineer: Peter Gorton
 Location: 42.931023° -78.896338°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1500-1600

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO: SOIL CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

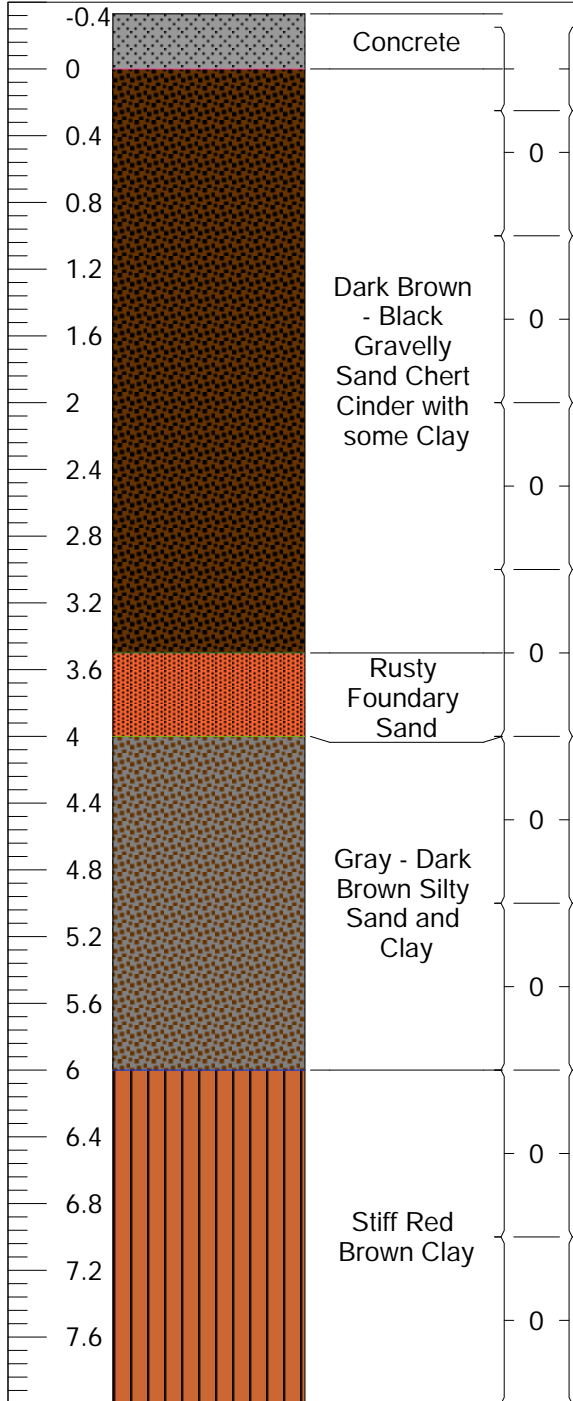


Remedial Investigation Borehole Log

Borehole ID: SSB1
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: Indoors, Cold
 Drill Date: 03/18/2020

Geologist\Engineer: Peter Gorton
 Location: 42.930623° -78.896554°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1230-1250

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO OF CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

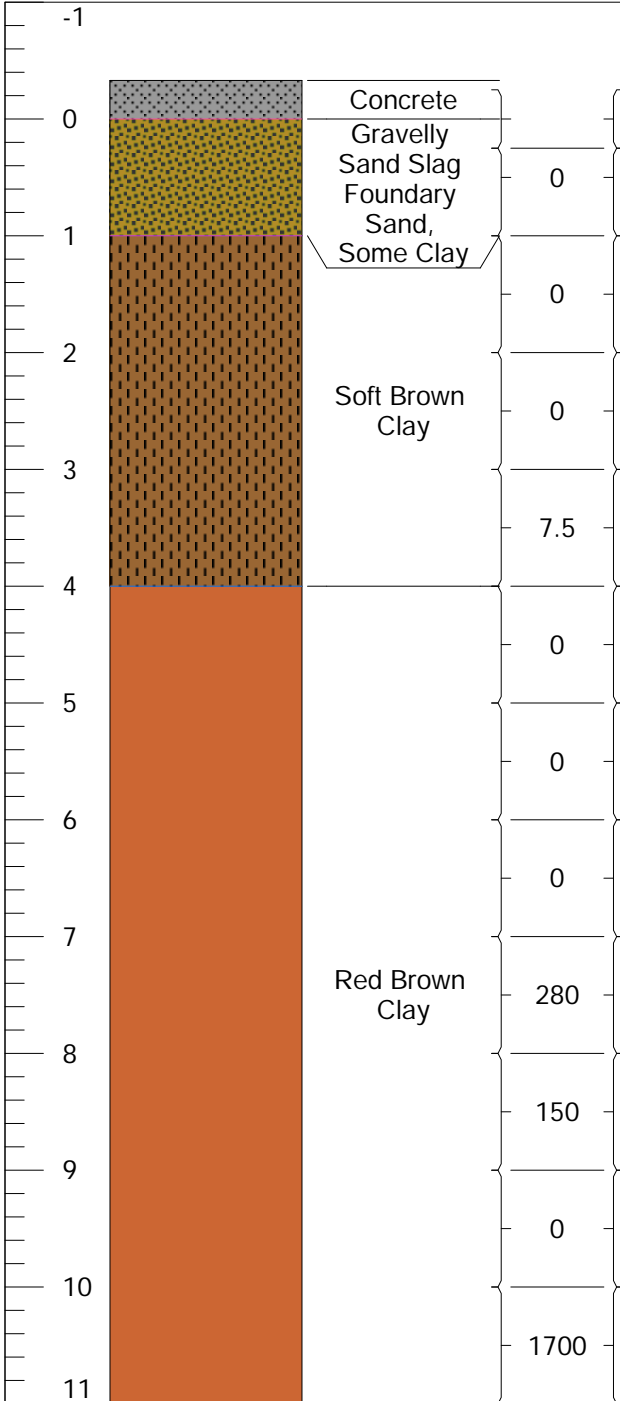


Remedial Investigation Borehole Log

Borehole ID: SSB2
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: Indoors, Cold
 Drill Date: 03/18/2020

Geologist\Engineer: Peter Gorton
 Location: 42.930713° -78.896765°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 1250-1320

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO OF CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

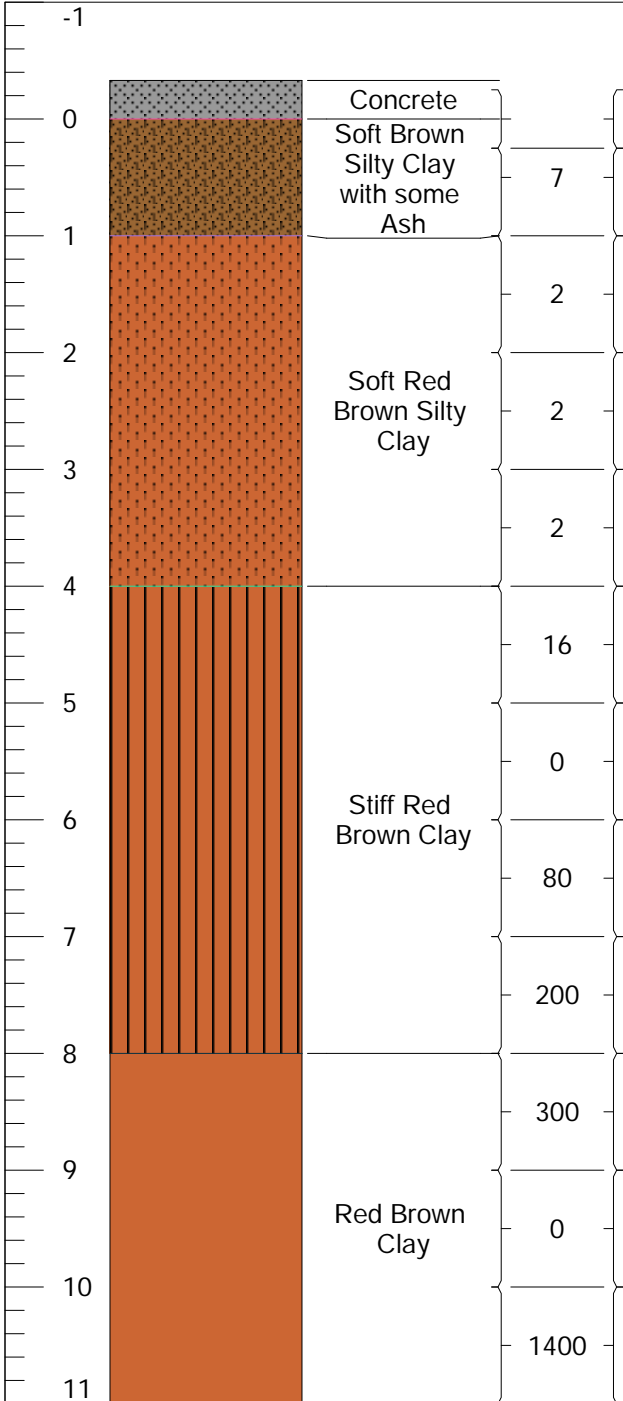


Remedial Investigation Borehole Log

Borehole ID: SSB3
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: Indoors, Cold
 Drill Date: 03/19/2020

Geologist/Engineer: Peter Gorton
 Location: 42.930671° -78.897005°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 0830-0920

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO OF CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

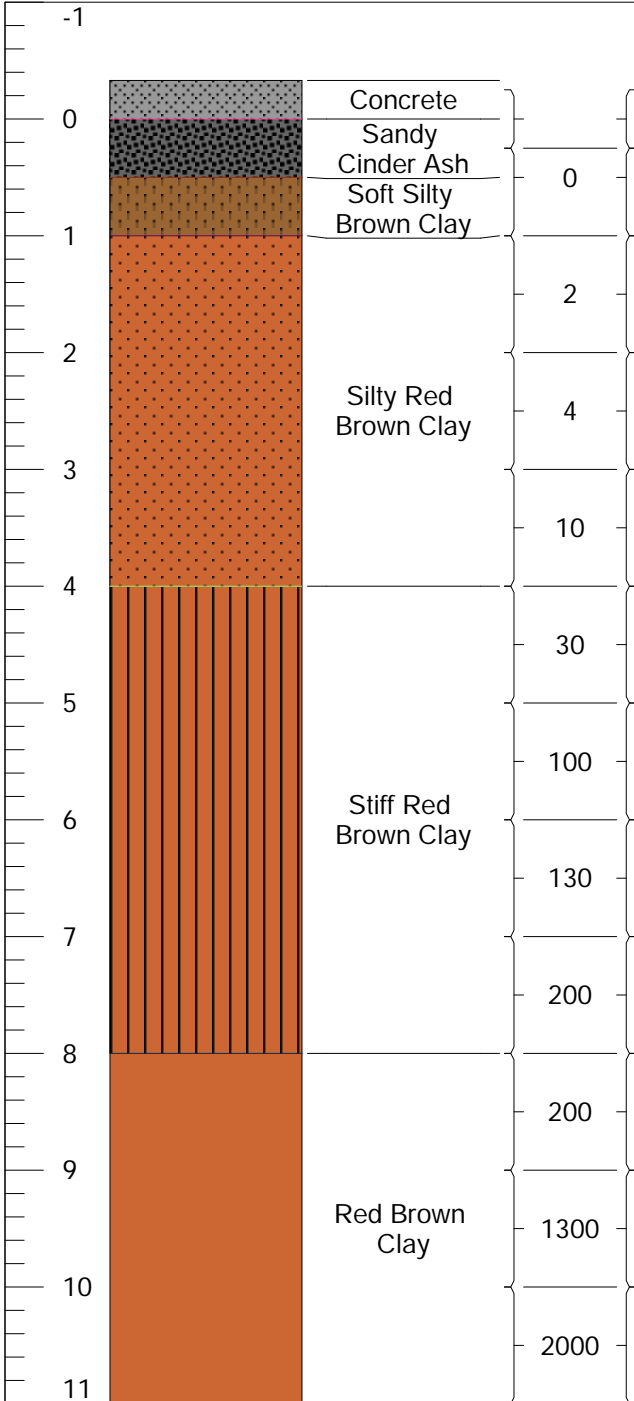


Remedial Investigation Borehole Log

Borehole ID: SSB4
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: Indoors, Cold
 Drill Date: 03/19/2020

Geologist/Engineer: Peter Gorton
 Location: 42.930817° -78.896979°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 0920-0950

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO OF CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213

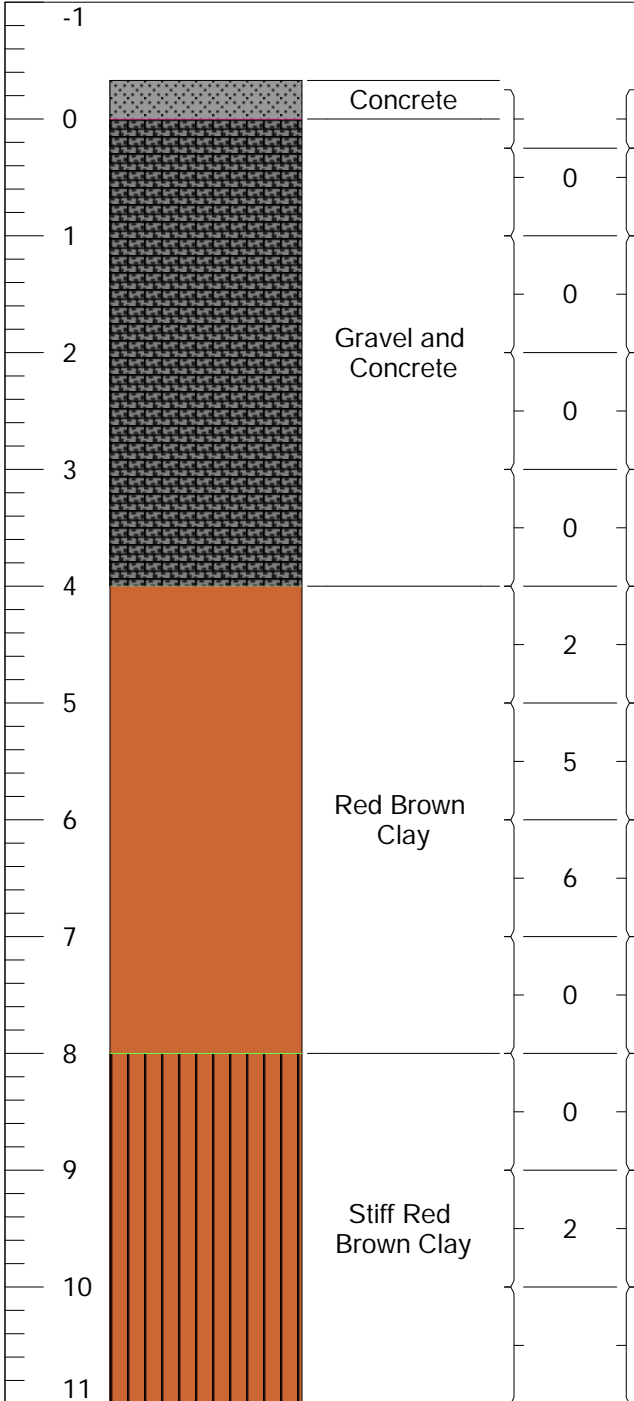


Remedial Investigation Borehole Log

Borehole ID: SSB5
 Drilling Company: Nature's Way
 Drill Type: 2" Geoprobe
 Weather: Indoors, Cold
 Drill Date: 03/19/2020

Geologist/Engineer: Peter Gorton
 Location: 42.930791° -78.896548°
 Analysis: 375, Metals, PFA's, sVOC, VOC
 Lab: Paradigm Solutions
 Time: 0950-1020

| Borehole Depth (Ft) | Soil | Description | PID PPM |
|---------------------|------|-------------|---------|
|---------------------|------|-------------|---------|



MAP OVERLAY



PHOTO OF CORES



Project: 57 - 71 Tonawanda

Client: Eran Epstein

Address: 57-71 Tonawanda Street Buffalo, NY 14213



Test Pit Log



Project: 57-71 Tonawanda Street
 Address: 57 Tonawanda St. Buffalo NY, 14211
 Client: Eran Epstein
 Contractor: Nature's Way Contracting
 Equipment: Track Hoe
 Date: January 8th, 2020
 Latitude: 42.931135
 Longitude: -78.896398
 Test Pit Name: TP-14

| Depth (Ft) | Description | TYPE | # |
|------------|-------------|------|---|
|------------|-------------|------|---|

| | | | |
|----|--|------|-------|
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | Fill containing concrete, brick, cinder, ash, sand | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | Red-Brown Clay | Grab | TP-14 |
| 10 | Cement Footer, End of Pit | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |



Test Pit Photo

Log Book Description

Fill including black cinder, sand, concrete rubble and wood.

Concrete footer running East-West inside old building foundation.

See 1981 Sanborn Map for historic details.

Sample Collected at 8-9 Feet

Technician On Site: Peter Gorton
 On Site Time: 8:00 a.m.
 Off Site Time: 3:30 p.m.



1270 Niagara Street
 Buffalo, New York, 14213

Test Pit Log



Project: 57-71 Tonawanda Street
 Address: 57 Tonawanda St. Buffalo NY, 14211
 Client: Eran Epstein
 Contractor: Nature's Way Contracting
 Equipment: Track Hoe
 Date: January 8th, 2020
 Latitude: 42.931193
 Longitude: -78.896596
 Test Pit Name: TP-15

| Depth (Ft) | Description | TYPE | # |
|------------|-------------|------|---|
|------------|-------------|------|---|

| | | | |
|----|---|--|--|
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | Fill containing concrete, lots of brick, cinder, ash, sand, I-Beam observed | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | End of Pit | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |



Test Pit Photo

Log Book Description

Fill consisted of sand, cinder, lots of brick, cement, wood and a foundation wall.

Test pit 6 foot wide, 8 foot long 9 to 10 feet deep.

No sample collected.

Technician On Site: Peter Gorton
 On Site Time: 8:00 a.m.
 Off Site Time: 3:30 p.m.



1270 Niagara Street
 Buffalo, New York, 14213

Test Pit Log



Project: 57-71 Tonawanda Street
 Address: 57 Tonawanda St. Buffalo NY, 14211
 Client: Eran Epstein
 Contractor: Nature's Way Contracting
 Equipment: Track Hoe
 Date: January 8th, 2020
 Latitude: 42.931248
 Longitude: -78.896751
 Test Pit Name: TP-16

| Depth (Ft) | Description | TYPE | # |
|------------|-------------|------|---|
|------------|-------------|------|---|

| | | | |
|----|--|------|------|
| 0 | | | |
| 1 | | | |
| 2 | | Grab | TP16 |
| 3 | | | |
| 4 | | | |
| 5 | Fill containing concrete, brick, cinder, ash, sand, Red-Brown clay on north side | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | Concrete Floor, End of Pit | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |



Test Pit Photo

Log Book Description

Fill consisted of brick, cement, metal, ash, sand and cinder. Cement block wall and Red-Brown clay on north side.

Pit is 6 foot by 6 foot with refusal encountered at 10 feet, observed possible cement floor.

Sample collected between 1-3 feet.

Technician On Site: Peter Gorton
 On Site Time: 8:00 a.m.
 Off Site Time: 3:30 p.m.



1270 Niagara Street
 Buffalo, New York, 14213

Test Pit Log



Project: 57-71 Tonawanda Street
 Address: 57 Tonawanda St. Buffalo NY, 14211
 Client: Eran Epstein
 Contractor: Nature's Way Contracting
 Equipment: Track Hoe
 Date: January 8th, 2020
 Latitude: 42.931064
 Longitude: -78.896837
 Test Pit Name: TP-17

| Depth (Ft) | Description | TYPE | # |
|------------|-------------|------|---|
|------------|-------------|------|---|

| | | | |
|----|-------------------------------------|-------|------|
| 0 | Surface, Cement floor | | |
| 1 | Fill, ash, cinder stone, black sand | | |
| 2 | | | |
| 3 | Red-Brown Clay | TP-17 | Grab |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | End of Pit | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |



Test Pit Photo

Log Book Description

Surface featured a cement floor, 1-2 feet consisted of fill material of ash, black sand, cinder and stone. 2-10 feet consisted of red-brown clay.

Pit is 13 feet long, 7 feet across and 10 feet deep. Pit dug east to west, sample taken from east end. West end had a suspected wood floor.

Sample collected between 3-4 feet.

Technician On Site: Peter Gorton
 On Site Time: 8:00 a.m.
 Off Site Time: 3:30 p.m.



1270 Niagara Street
 Buffalo, New York, 14213

Test Pit Log



Project: 57-71 Tonawanda Street
 Address: 57 Tonawanda St. Buffalo NY, 14211
 Client: Eran Epstein
 Contractor: Nature's Way Contracting
 Equipment: Track Hoe
 Date: January 8th, 2020
 Latitude: 42.931065
 Longitude: -78.89662
 Test Pit Name: TP-18

| Depth (Ft) | Description | TYPE | # |
|------------|-------------|------|---|
|------------|-------------|------|---|

| | | | |
|----|----------------------------------|--|--|
| 0 | | | |
| 1 | Surface, ash, cinder, black sand | | |
| 2 | | | |
| 3 | | | |
| 4 | Red-Brown Clay | | |
| 5 | | | |
| 6 | End of Pit | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |



Test Pit Photo

Log Book Description

Fill at 1-2 feet consisted of ash, cinder and blacks sand. 2-6 feet red-brown clay.
 Pit is 13 feet long, 5 feet wide and 6 feet deep.

No Sample Collected.

Technician On Site: Peter Gorton
 On Site Time: 8:00 a.m.
 Off Site Time: 3:30 p.m.



1270 Niagara Street
 Buffalo, New York, 14213

**68 TONAWANDA STREET
SITE NO. C915316**

**2014 PANAMERICAN ENVIRONMENTAL
LIMITED PHASE II ENVIRONMENTAL
SITE ASSESSMENT REPORT**

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
 (716) 821-1650

Bore Hole Log

| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|-----------------------------------|--|
| Client: Wayne Bacon & Ed Hogel | | Location: See Associated Figure | |
| Contractor: Natures Way | | Ground Elevation: | |
| Date Started: 3-5-14 | | Operator: | |
| Date Completed: 3-5-14 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-1 | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | 0-2 - fill - black, gravely, sand and ash |
| 3 | | | 2-4 - sand and gravel |
| 4 | | | |
| 5 | | | 4-6 - fill - black silty sand with gravel |
| 6 | | | |
| 7 | | | 6-8 - red clay soft to firm towards 8 feet |
| 8 | | | |
| 9 | | | 8-12 - reddish-brown clay |
| 10 | | | |
| 11 | | | |
| 12 | | | Borehole ends at 12 foot |

Comments: No sample collected. No PID readings observed and No odor

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
 (716) 821-1650

Bore Hole Log

| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|-----------------------------------|---|
| Client: Wayne Bacon & Ed Hogel | | Location: See Associated Figure | |
| Contractor: Natures Way | | Ground Elevation: | |
| Date Started: 3-5-14 | | Operator: | |
| Date Completed: 3-5-14 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-2 | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| | | | 0-2 - fill - sandy silt |
| 2 | | | |
| | | | |
| 3 | | | 2-3.5 - black ash/cinder fill with wood |
| | | | |
| 4 | | | |
| | | | 4-6 - fill - black silty sand with gravel |
| 5 | | | |
| | | | |
| 6 | | | 3.5-8 - red clay |
| | | | |
| 7 | | | |
| | | | |
| 8 | | | End of boring |
| | | | |
| 9 | | | |
| | | | |
| 10 | | | |
| | | | |
| 11 | | | |
| | | | |
| 12 | | | Borehole ends at 12 foot |

Comments: No sample collected. No PID readings observed and No odor

Bore Hole Log

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
 (716) 821-1650

| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|-----------------------------------|---|
| Client: Wayne Bacon & Ed Hogel | | Location: See Associated Figure | |
| Contractor: Natures Way | | Ground Elevation: | |
| Date Started: 3-5-14 | | Operator: | |
| Date Completed: 3-5-14 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-3 | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | 0-1 - fill - black sandy silty gravel with cinder |
| 2 | | | 1-2 - brick |
| 3 | | | 2-2.5 - grey sandy with gravel |
| 4 | | | 2.5-4 - red clay. Borehole end at 4 feet |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: Collected sample from 0-2 feet. No PID readings observed and No odor

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
 (716) 821-1650

Bore Hole Log

| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|-----------------------------------|---|
| Client: Wayne Bacon & Ed Hogel | | Location: See Associated Figure | |
| Contractor: Natures Way | | Ground Elevation: | |
| Date Started: 3-5-14 | | Operator: | |
| Date Completed: 3-5-14 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-4 | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | 0-1 - fill - dark brown sandy silt |
| 2 | | | 1-2 - Fill - brown silty sand with gravel |
| 3 | | | 2-3 - Fill - black cherty 3-3.5 - brick |
| 4 | | | 3.5-4 - clayey silt |
| 5 | | | 4-6 - silty clay - petroleum odor - PID 14-15 ppm |
| 6 | | | |
| 7 | | | 6-8 - black sand - petroleum odor - PID 28-30 ppm |
| 8 | | | |
| 9 | | | 8-11 - black silty sand |
| 10 | | | |
| 11 | | | 11-12 - red clay |
| 12 | | | boring end |

Comments: Collected sample from 5-7 feet. PID 14-30 ppm and petroleum odor

Panamerican Environmental, Inc
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 (716) 821-1650

Bore Hole Log

| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|-----------------------------------|--------------------------------|
| Client: Wayne Bacon & Ed Hogel | | Location: See Associated Figure | |
| Contractor: Natures Way | | Ground Elevation: | |
| Date Started: 3-5-14 | | Operator: | |
| Date Completed: 3-5-14 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-5 | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | 0-1 - fill - silty gravel |
| 2 | | | 1-3 - red-black sandy-ash fill |
| 3 | | | 3-3.5 - cement |
| 4 | | | |
| 5 | | | |
| 6 | | | 3.5-7 - red clay |
| 7 | | | Boreing end |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: No sample collected. No PID readings observed and No odor

Bore Hole Log

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
 (716) 821-1650

| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|-----------------------------------|--|
| Client: Wayne Bacon & Ed Hogel | | Location: See Associated Figure | |
| Contractor: Natures Way | | Ground Elevation: | |
| Date Started: 3-5-14 | | Operator: | |
| Date Completed: 3-5-14 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-9 | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | 0-0.5 - stone |
| 1 | | | 0-1 - fill - silty gravel |
| 2 | | | 1-3 - red-black sandy-ash fill |
| 3 | | | 0.5-3 - silty fill with gravel |
| 4 | | | 3-4 - black gravel sandy fill with chert Boring end at 4 feet |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: Sample collected at 3-4 feet. PID 16 ppm odor

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Bore Hole Log

| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|-----------------------------------|----------------------------|
| Client: Wayne Bacon & Ed Hogel | | Location: See Associated Figure | |
| Contractor: Natures Way | | Ground Elevation: | |
| Date Started: 3-5-14 | | Operator: | |
| Date Completed: 3-5-14 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-10 | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | 0-0.5 - gravely silty fill |
| 1 | | | |
| 2 | | | |
| 3 | | | 0.5-4 - gravel-cherty fill |
| 4 | | | |
| 5 | | | |
| 6 | | | 4-8 - clay |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: No sample collected. No PID readings observed and No odor

Bore Hole Log

Panamerican Environmental, Inc
 2391 Clinton Street
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| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|-----------------------------------|--|
| Client: Wayne Bacon & Ed Hogel | | Location: See Associated Figure | |
| Contractor: Natures Way | | Ground Elevation: | |
| Date Started: 3-5-14 | | Operator: | |
| Date Completed: 3-5-14 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-11 | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| | | | 0-2 feet - black sandy gravely fill |
| 2 | | | |
| | | | 2-3 - cement |
| 3 | | | |
| | | | |
| 4 | | | 3-5 - black sandy gravely fill with wood |
| | | | |
| 5 | | | |
| | | | |
| 6 | | | 5-8 - red clay |
| | | | |
| 7 | | | |
| | | | |
| 8 | | | |
| | | | |
| 9 | | | |
| | | | |
| 10 | | | |
| | | | |
| 11 | | | |
| | | | |
| 12 | | | |

Comments: No sample collected. No PID readings observed and No odor

**2017 PANAMERICAN ENVIRONMENTAL/BE3
PHASE II ENVIRONMENTAL
SITE ASSESSMENT REPORT**

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
 (716) 821-1650

Bore Hole Log

| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|---|---|
| Client: Yots & Frizlen | | Location: See Associated Figure | |
| Contractor: SJB | | Ground Elevation: N42.933026 W78.897231 | |
| Date Started: 1-26-17 | | Operator: | |
| Date Completed: 1-26-17 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-1A | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | 0-4 - Fill consisting of black sandy with some gravel and ash - possible foundry sand |
| 4 | | | |
| 5 | | | |
| 6 | | | 4-8 - Reddish brown clay; stiff |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | 8-12 - Reddish brown clay; stiff wet |
| 11 | | | |
| 12 | | | End of Boring |

Comments: Collected sample at 1-4 feet. Hole filled with water

Bore Hole Log

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
 (716) 821-1650

| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|---|---|
| Client: Yots & Frizlen | | Location: See Associated Figure | |
| Contractor: SJB | | Ground Elevation: N42.932889 W78.897244 | |
| Date Started: 1-26-17 | | Operator: | |
| Date Completed: 1-26-17 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-2A | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | 0-3.5 - Fill consisting of black chert with light gray and black sand with pieces of brick and wood |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | 3.5-12 - Reddish brown clay; stiff |
| 11 | | | |
| 12 | | | End of Boring |

Comments: Collected sample at 1-3 feet.

Bore Hole Log

Panamerican Environmental, Inc
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| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|---|---|
| Client: Yots & Frizlen | | Location: See Associated Figure | |
| Contractor: SJB | | Ground Elevation: N42.932785 W78.897391 | |
| Date Started: 1-26-17 | | Operator: | |
| Date Completed: 1-26-17 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-3A | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | 0-4 - Fill consisting of brown-grey silty sand with pieces of brick, gravel and black chert |
| 4 | | | |
| 5 | | | 4-6 - fill with brick, gravel, black sandy chert - wet |
| 6 | | | |
| 7 | | | 6-7 - reddish brown clay |
| 8 | | | |
| 9 | | | |
| 10 | | | 7-12 - Reddish brown clay; very wet |
| 11 | | | |
| 12 | | | End of Boring |

Comments: No sample collected

Bore Hole Log

Panamerican Environmental, Inc
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| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|---|---|
| Client: Yots & Frizlen | | Location: See Associated Figure | |
| Contractor: SJB | | Ground Elevation: N42.932727 W78.897440 | |
| Date Started: 1-26-17 | | Operator: | |
| Date Completed: 1-26-17 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-4A | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | 0-4 - Fill - oily at surface - consisting of brown-grey-black silty sand and gravel |
| 4 | | | |
| 5 | | | |
| 6 | | | 4-9 - wet black, gravely, sandy silt - very wet |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | 9-12 - Reddish brown clay; very wet |
| 11 | | | |
| 12 | | | End of Boring |

Comments: Sample collected from 0-6 feet

Bore Hole Log

Panamerican Environmental, Inc
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| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|---|--|
| Client: Yots & Frizlen | | Location: See Associated Figure | |
| Contractor: SJB | | Ground Elevation: N42.932511 W78.897565 | |
| Date Started: 1-26-17 | | Operator: | |
| Date Completed: 1-26-17 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-5A | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | 0-4 - Fill - Silty, clayey sand with brick, stone and cement |
| 4 | | | |
| 5 | | | |
| 6 | | | 4-6- brown-black, gravely, sandy silt |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | 6-12 - Reddish brown clay; very wet |
| 11 | | | |
| 12 | | | End of Boring |

Comments: Sample collected from 1-6 feet

Bore Hole Log

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
 (716) 821-1650

| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|---|---|
| Client: Yots & Frizlen | | Location: See Associated Figure | |
| Contractor: SJB | | Ground Elevation: N42.932134 W78.897330 | |
| Date Started: 1-26-17 | | Operator: | |
| Date Completed: 1-26-17 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-6A | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | 0-4 - Fill - sand with ash, brick, stone and cement |
| 4 | | | |
| 5 | | | |
| 6 | | | 4-8- brown-black, gravely, sandy silt - wet |
| 7 | | | |
| 8 | | | Borehole ended at 8 feet refusal |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: Sample collected from 0-3 feet

Bore Hole Log

Panamerican Environmental, Inc
 2391 Clinton Street
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| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|---|---|
| Client: Yots & Frizlen | | Location: See Associated Figure | |
| Contractor: SJB | | Ground Elevation: N42.931753 W78.897628 | |
| Date Started: 1-26-17 | | Operator: | |
| Date Completed: 1-26-17 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-7A | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | 0-4 - Fill - sand with ash, brick, stone and cement |
| 4 | | | |
| 5 | | | |
| 6 | | | 4-8- reddish-brown clay |
| 7 | | | |
| 8 | | | Borehole ended at 8 feet |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: No sample collected

Bore Hole Log

Panamerican Environmental, Inc
 2391 Clinton Street
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| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|---|----------------------------------|
| Client: Yots & Frizlen | | Location: See Associated Figure | |
| Contractor: SJB | | Ground Elevation: N42.931228 W78.897542 | |
| Date Started: 1-26-17 | | Operator: | |
| Date Completed: 1-26-17 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-8A | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | 0-4 - Fill - pink and brown sand |
| 4 | | | |
| 5 | | | |
| 6 | | | 4-8- reddish-brown clay |
| 7 | | | |
| 8 | | | Borehole ended at 8 feet |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: Sample collected from 0-4 feet

Bore Hole Log

Panamerican Environmental, Inc
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 Buffalo, NY 14227
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| Project: 68 Tonawanda Street | | Sheet: 1 of 1 | |
|--------------------------------|--------|---|---|
| Client: Yots & Frizlen | | Location: See Associated Figure | |
| Contractor: SJB | | Ground Elevation: N42.930781 W78.897763 | |
| Date Started: 1-26-17 | | Operator: | |
| Date Completed: 1-26-17 | | Geologist/Technician: Pete Gorton | |
| Bore Hole Number: BH-9A | | Ground Water: | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | 0-3.5 - Fill - stone, brick, silty clay |
| 4 | | | 3.5 - dark silty clay with petroleum odor |
| 5 | | | 4-6 - silty clay |
| 6 | | | |
| 7 | | | 6-8 - Black sand with strong petroleum odor |
| 8 | | | Borehole ended at 8 feet |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: SVOC Sample collected from 2-6 feet and VOC sample collected from 6-8 feet. PID not functioning due to rain

**2018 BE3
REMEDIAL INVESTIGATION REPORT**

Geoprobe Bore Hole Log



1270 Niagara Street
Buffalo, NY 14213
716.249.6880 be3corp.com

| | |
|------------------------------------|---|
| Project: 68 Tonawanada Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93080622 Long -78.89747178 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-1 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | 0-6 feet - fill with cinder, ash, gravel, wood wood at 6 feet |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | 7-12 - silty clay; red-brown slight odor of naphthalene-weathered petroleum |
| 13 | | | Silty clay -red-brown is likely native material |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - slight odor of naphthalene/weathered petroleum. Collect fill sample; Collected clay sample. Note, borehole was inside south end of building through a dirt floor

Geoprobe Bore Hole Log



1270 Niagara Street
Buffalo, NY 14213
716.249.6880 be3corp.com

| | |
|------------------------------------|---|
| Project: 68 Tonawanada Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93094231 Long -78.89757917 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-2 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | 0-4 feet - fill with silty cinder soil and brick |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | 4-12 - silty clay; red-brown Silty red-brown clay is likely native material |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - Collect fill sample at 1-4 feet for metal analysis only

Geoprobe Bore Hole Log



1270 Niagara Street
Buffalo, NY 14213
716.249.6880 be3corp.com

| | |
|------------------------------------|---|
| Project: 68 Tonawanada Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93109858 Long -78.89761244 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-3 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| | | | 0-4.5 Feet - fill with cinder and sand. Sand at 4 feet - wet |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | 4.5-12 - silty clay; red-brown Silty red-brown clay is likely native material |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - Collect fill sample at 1-4 feet for metals only.

Geoprobe Bore Hole Log



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| | |
|------------------------------------|---|
| Project: 68 Tonawanada Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93141463 Long -78.89758093 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-4 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | 0-5 Feet - fill with cinder, sand, gravel, cement, stone. |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | 5-12 - silty clay; red-brown red-brown silty clay is likley native material |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - Collect fill sample at 2-5 feet for metals and SVOcs only. Took sample from 6-8 feet (native) for full analysis list

Geoprobe Bore Hole Log



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716.249.6880 be3corp.com

| | |
|------------------------------------|---|
| Project: 68 Tonawanada Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93176994 Long -78.89755499 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-5 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | 0-4 feet - fill |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | 4-8 feet - silty clay; red-brown Red-brown silty clay is likely native material |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - Collect fill sample at 1-4 feet for metals.

Geoprobe Bore Hole Log



1270 Niagara Street
Buffalo, NY 14213
716.249.6880 be3corp.com

| | |
|------------------------------------|---|
| Project: 68 Tonawanada Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93193806 Long -78.89751742 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-6 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|---|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | 0-5 feet - fill with sand, cinder, gravel, cement |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | 5-12 silty clay; red-brown very wet Red-brown Silty clay is likely native material |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - Collect fill sample at 1-5 feet for metals.

Geoprobe Bore Hole Log



1270 Niagara Street
Buffalo, NY 14213
716.249.6880 be3corp.com

| | |
|------------------------------------|---|
| Project: 68 Tonawanada Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93239117 Long -78.89740486 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-7 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | 0-5 feet - fill with sand, cinder, gravel wood at 5-6 feet |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | 6-12 silty clay; red-brown Red-brown Silty clay is likely native material |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - Collect fill sample at 2-6 feet for metals.

Geoprobe Bore Hole Log



1270 Niagara Street
Buffalo, NY 14213
716.249.6880 be3corp.com

| | |
|------------------------------------|---|
| Project: 68 Tonawanda Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93239117 Long -78.89740486 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-8 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | 0-4 feet - silty sandy fill with cinder, stone, cement, rock-gravel |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | 4-8 feet - silty clay; red-brown Red-brown Silty clay is likely native material |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - Collect fill sample at 2-4 feet for metals and SVOC analysis.

Geoprobe Bore Hole Log



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| | |
|------------------------------------|---|
| Project: 68 Tonawanada Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93288538 Long -78.89722696 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-9 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|---|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | 0-1 feet - cement floor (6-7 inches), black cinder fill |
| 2 | | | 1-2 feet - silty clay |
| 3 | | | |
| 4 | | | 2-4 feet - black cindery fill |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | 4-12 feet - silty clay; red brown Red-brown Silty clay is likely native material |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - Collect fill sample at 2-4 feet for metals analysis. Note this boring was completed inside the north end of building

Geoprobe Bore Hole Log



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| | |
|------------------------------------|---|
| Project: 68 Tonawanada Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93311572 Long -78.89720037 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-10 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| | | | 0-4.5 feet - fill including gravel, sandy silty soil with black cinders at 4 feet |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | 4.5-8 feet - silty sandy clay; red-brown Red-brown Silty clay is likely native material |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | 4-12 feet - silty clay; red brown |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - Collect fill sample at 3-4 feet for metals analysis only

Geoprobe Bore Hole Log



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| | |
|------------------------------------|---|
| Project: 68 Tonawanada Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93335586 Long -78.89712128 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-11 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | 0-3.5 feet - fill with gravel, silt, brick and cinder |
| 4 | | | 3.5-4 feet - sand; wet |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | 4.5-8 feet - silty sandy clay; red-brown Red-brown Silty clay is likely native material |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | 4-12 feet - silty clay; red brown |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - Collect fill sample at 2-4 feet for metals analysis only

Geoprobe Bore Hole Log



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| | |
|------------------------------------|--|
| Project: 68 Tonawanada Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93336566 Long -78.8973264 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-12 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | 0-4.5 feet -fill with gravel,silt, cinder, brick, cement |
| 5 | | | 4.5-5 feet - wood, slight odor refusal at 5 feet |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - Collect fill sample at 1-3 feet. Collected sample at 4.5 feet for VOC analysis

Geoprobe Bore Hole Log



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| | |
|------------------------------------|---|
| Project: 68 Tonawanda Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93319923 Long -78.89731132 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-13 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|---|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | 0-4.5 feet -fill with silt, cinder, cement |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | 4.5-8 feet - silty clay - red-brown Red-brown Silty clay is likely native material |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - Collect fill sample at 3-4.5 feet for metals analysis.

Geoprobe Bore Hole Log



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| | |
|------------------------------------|---|
| Project: 68 Tonawanada Street | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | Location: 68 Tonawanda Street, Buffalo NY |
| Contractor: Natures Way | Ground Elevation: Lat 42.93302469 Long -78.89734779 |
| Date Started: February 7, 2018 | Operator: |
| Date Completed: February 7, 2018 | Geologist/Technician: Brennen/Gorton |
| Bore Hole Number: RI-14 | Ground Water: |

| Depth (FT) | Sample | | Description |
|------------|--------|------|---|
| | NO | TYPE | |
| 0 | | | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | 0-4 feet -fill with silt, cinder, cement refusal at 4 feet (concrete) 3 attempts to move |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |
| 16 | | | |

Comments: PID - 0 ppm above background - Collect fill sample at 2-4 feet for metals analysis.

TEST PIT LOG



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| | | |
|------------------------------------|--|--|
| Project: 68 Tonawanda Street | | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | | Job Number: BCP #C015316 |
| Contractor: Pinto | | Location: 68 Tonawanda Street, Buffalo, New York |
| Date Started: February 13, 20018 | | Ground Elevation: Lat. 42.93337735 Long -78.89722714 |
| Date Completed: February 13, 2018 | | Operator: |
| Pit Number: Test Pit - TP-1 | | Geologist/Technician: Gorton |
| | | Ground Water: NA |

| Depth (ft) | Sample | | Description |
|------------|--------|------|---|
| | # | Type | |
| 1 | | | 0-1 feet - asphalt tailings |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | 1-7 feet - fill including stone-gravel, wood, concrete pieces Hard concrete floor at 7 feet - refusal Test Pit ends. Perched water fills bottom of pit |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: Approximatelt 4 feet wide by 12 feet long by 7 feet deep
Sample fill at 2-4 feet for metals analysis

PID - no PID above background

TEST PIT LOG



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| | | |
|------------------------------------|--|--|
| Project: 68 Tonawanda Street | | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | | Job Number: BCP #C015316 |
| Contractor: Pinto | | Location: 68 Tonawanda Street, Buffalo, New York |
| Date Started: February 13, 20018 | | Ground Elevation: Lat. 42.93324833 Long -78.89724759 |
| Date Completed: February 13, 2018 | | Operator: |
| Pit Number: Test Pit - TP-2 | | Geologist/Technician: Gorton |
| | | Ground Water: NA |

| Depth (ft) | Sample | | Description |
|------------|--------|------|---|
| | # | Type | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | 0-4.7 feet - fill including brick,stone-gravel, cement pieces |
| 5 | | | |
| 6 | | | 4.7 - 6 feet - sand |
| 7 | | | 6-7 feet - clay Test pit ends Red-brown Silty clay is likely native material |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: Approximatelt 4 feet wide by 10 feet long by 7 feet deep
 Sample fill at 2-4 feet for full analysis
 Sample clay (native) at 6 feet for full analysis
 PID - no PID above background

TEST PIT LOG



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| | | |
|------------------------------------|--|--|
| Project: 68 Tonawanda Street | | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | | Job Number: BCP #C015316 |
| Contractor: Pinto | | Location: 68 Tonawanda Street, Buffalo, New York |
| Date Started: February 13, 20018 | | Ground Elevation: Lat. 42.93263784 Long -78.89740701 |
| Date Completed: February 13, 2018 | | Operator: |
| Pit Number: Test Pit - TP-3 | | Geologist/Technician: Gorton |
| | | Ground Water: NA |

| Depth (ft) | Sample | | Description |
|------------|--------|------|--|
| | # | Type | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | 0-5 feet - fill including gravel, cinder, plastic, cement pieces, rubble, gravel, timber-rail ties |
| 6 | | | perced water enter pit at 3 feet possibly old storm drain |
| 7 | | | end pit at 5 feet due to water |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: Approximatelt 4 feet wide by 9 feet long by 5 feet deep
 Sample fill at 2-4 feet for full analysis
 No Sample clay (native).
 PID - no PID above background

TEST PIT LOG



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| | | |
|------------------------------------|--|---|
| Project: 68 Tonawanda Street | | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | | Job Number: BCP #C015316 |
| Contractor: Pinto | | Location: 68 Tonawanda Street, Buffalo, New York |
| Date Started: February 13, 20018 | | Ground Elevation: Lat. 42.93087375 Long -78.8976017 |
| Date Completed: February 13, 2018 | | Operator: |
| Pit Number: Test Pit - TP-4 | | Geologist/Technician: Gorton |
| | | Ground Water: NA |

| Depth (ft) | Sample | | Description |
|------------|--------|------|---|
| | # | Type | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | 0-5 feet - fill with brick, cement pieces |
| 6 | | | |
| 7 | | | |
| 8 | | | 5-8 feet - silty clay; red-brown |
| 9 | | | Test pit end - Red-brown Silty clay is likely native material |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: Approximatelt 4 feet wide by 17 feet long by 8 feet deep
Sample fill at 4-5 just above clay native layer; full analysis

No PID organic vapor readings above background

TEST PIT LOG



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| | | |
|------------------------------------|--|--|
| Project: 68 Tonawanda Street | | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | | Job Number: BCP #C015316 |
| Contractor: Pinto | | Location: 68 Tonawanda Street, Buffalo, New York |
| Date Started: February 13, 20018 | | Ground Elevation: Lat. 42.93085768 Long -78.89759593 |
| Date Completed: February 13, 2018 | | Operator: |
| Pit Number: Test Pit - TP-5 | | Geologist/Technician: Gorton |
| | | Ground Water: NA |

| Depth (ft) | Sample | | Description |
|------------|--------|------|--|
| | # | Type | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | 0-5 feet - fill with rail ties, brick, cement pieces and wodden blocks (possible old wodden floor) |
| 6 | | | 5-6 feet - stone-gravel; perched water enters pit from this layer 6 feet - silty clay (native) |
| 7 | | | 6-7 feet - silty clay; red-brown Test Pit ends at 7 feet - Red-brown Silty clay is likely native material |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: Approximatelt 4 feet wide by 15 feet long by 7 feet deep
 Sample fill at 4-5 feet for VOC analysis
 Sample Fill from 1-4 feet for metal analysis
 PID organic vapor readings of 1-3 ppm at 5.5-6 feet.

TEST PIT LOG



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| | | |
|------------------------------------|--|--|
| Project: 68 Tonawanda Street | | Sheet: 1 of 1 |
| Client: Buffalo Freight House, LLC | | Job Number: BCP #C015316 |
| Contractor: Pinto | | Location: 68 Tonawanda Street, Buffalo, New York |
| Date Started: February 13, 20018 | | Ground Elevation: Lat. 42.93093964 Long -78.89759045 |
| Date Completed: February 13, 2018 | | Operator: |
| Pit Number: Test Pit - TP-6 | | Geologist/Technician: Gorton |
| | | Ground Water: NA |

| Depth (ft) | Sample | | Description |
|------------|--------|------|---|
| | # | Type | |
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | 0-5.5 feet - fill with brick, cement pieces and gravel |
| 6 | | | perched water in pit |
| 7 | | | 5.5 - 6.5 feet - silty clay (native) |
| 8 | | | Test pit end at 6.5 feet - Red-brown Silty clay is likely native material |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments: Approximatelt 4 feet wide by 16 feet long by 6.5 feet deep
 Sample fill at 4-5 feet for VOC and SVOC analysis
 Sample Fill from 1-4 feet for metal analysis
 PID organic vapor readings of 3-10 ppm at 4-5.5 feet. Strong petroleum odor

**150 TONAWANDA STREET
SITE NO. C915299**

**2016 PANAMERICAN ENVIRONMENTAL
PHASE II ENVIRONMENTAL
SITE ASSESSMENT REPORT**

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
 (716) 821-1650

Test Pit Log

| Project: <i>CSX Property</i> | | Sheet: 1 of 1 | |
|-------------------------------------|--------|--|--|
| Client: | | Location: <i>TONAWANDA ST. - BUFFALO, NY</i> | |
| Contractor: | | Ground Elevation: | |
| Date Started: <i>JAN. 4, 2016</i> | | Operator: | |
| Date Completed: <i>JAN. 4, 2016</i> | | Geologist: | |
| Test Pit Number: <i>1</i> | | Ground Water: <i>6 ft</i> | |
| Depth (FT) | Sample | | Description |
| | NO | TYPE | |
| 1 | | | <i>Concrete, Brick, Debris stayed soil</i> |
| 2 | | | |
| 3 | | | <i>Black Soil SAMPLE</i> |
| 4 | | | |
| 5 | | | |
| 6 | | | <i>CLAY - BROWN/TAN WATER</i> |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments:

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
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Test Pit Log

| | |
|-------------------------------|----------------------------------|
| Project: <i>CSX Property</i> | Sheet: 1 of 1 |
| Client: | Location: |
| Contractor: | Ground Elevation: |
| Date Started: <i>1/4/16</i> | Operator: |
| Date Completed: <i>1/4/16</i> | Geologist: |
| Test Pit Number: <i>2</i> | Ground Water: <i>5 ft - 6 ft</i> |

| Depth (FT) | Sample | | Description |
|------------|--------|------|---|
| | NO | TYPE | |
| 1 | | | Concrete, Brick, Debris BROWN/TAN SOIL |
| 2 | 02 | | SAMPLE |
| 3 | | | Black Sandy Material |
| 4 | | | ↓ DARK CLAY |
| 5 | | | WATER |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments:

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
 (716) 821-1650

Test Pit Log

| | |
|------------------------|---------------------------------------|
| Project: CSX | Sheet: 1 of 1 |
| Client: | Location: TONAWANDA ST. - BUFFALO, NY |
| Contractor: | Ground Elevation: |
| Date Started: 1-4-16 | Operator: |
| Date Completed: 1-4-16 | Geologist: |
| Test Pit Number: 3 | Ground Water: 5.5 ft. |

| Depth (FT) | Sample | | Description |
|------------|--------|------|---|
| | NO | TYPE | |
| 1 | | | Concrete, Brick, Debris BROWN / TAN SOIL |
| 2 | | | *NO Sample TAKEN |
| 3 | | | ↓ |
| 4 | | | DARK CLAY |
| 5 | | | ↓ |
| 6 | | | WATER ↓ |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments:

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
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Test Pit Log

| Project: CSX | | Sheet: 1 of 1 | | |
|------------------------|--------|---|----------------------------------|--------------|
| Client: | | Location: Tonawanda St. - Buffalo, N.Y. | | |
| Contractor: | | Ground Elevation: | | |
| Date Started: 1/4/16 | | Operator: | | |
| Date Completed: 1/4/16 | | Geologist: | | |
| Test Pit Number: 4 | | Ground Water: 6 Ft. | | |
| Depth (FT) | Sample | | Description | |
| | NO | TYPE | | |
| 1 | ↓ | | Concrete, Brick, Debris | |
| 2 | | | Brown/Tan Soil Urban fill mix | |
| 3 | | | | |
| 4 | | | Black Soil | |
| 5 | | D3 | | SAMPLE TAKEN |
| 6 | | | | CLAY (Water) |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |

Comments:

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
 (716) 821-1650

Test Pit Log

| | |
|------------------------|---------------------------------------|
| Project: CSX | Sheet: 1 of 1 |
| Client: | Location: Tonawanda St. - Buffalo, NY |
| Contractor: | Ground Elevation: |
| Date Started: 1-4-16 | Operator: |
| Date Completed: 1-4-16 | Geologist: |
| Test Pit Number: 5 | Ground Water: 6 ft |

| Depth (FT) | Sample | | Description |
|------------|--------|------|--|
| | NO | TYPE | |
| 1 | | | URBAN Fill : concrete, Brick, Debris |
| 2 | 04 | | BROWN / TAN Soil |
| 3 | | | |
| 4 | | | |
| 5 | | | CONSISTENT Debris w/ mix of BROWN/TAN Soil |
| 6 | | | WATER |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments:

Panamerican Environmental, Inc
 2391 Clinton Street
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Test Pit Log

| | |
|-------------------------------|--|
| Project: <i>CSX</i> | Sheet: 1 of 1 |
| Client: | Location: <i>Tonawanda St. - Buffalo, N.Y.</i> |
| Contractor: | Ground Elevation: |
| Date Started: <i>1/4/16</i> | Operator: |
| Date Completed: <i>1/4/16</i> | Geologist: |
| Test Pit Number: <i>6</i> | Ground Water: <i>5-6 ft.</i> |

| Depth (FT) | Sample | | Description |
|------------|--------|------|-------------------------------------|
| | NO | TYPE | |
| 1 | | | URBAN fill: Concrete, Brick, Debris |
| 2 | | | Mixture of Brown/Tan soil |
| 3 | | | * NO Sample Taken |
| 4 | | | ↓ |
| 5 | | | CLAY (Brown/Black stain) |
| 6 | | | ↓ WATER Seepage ↓ |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments:

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
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Test Pit Log

| | |
|------------------------|---|
| Project: CSX | Sheet: 1 of 1 |
| Client: | Location: TOWAWANDA ST. - BUFFALO, N.Y. |
| Contractor: | Ground Elevation: |
| Date Started: 1/4/16 | Operator: |
| Date Completed: 1/4/16 | Geologist: |
| Test Pit Number: 7 | Ground Water: 5.5 - 6.0 Ft. |

| Depth (FT) | Sample | | Description |
|------------|--------|------|-------------------------------------|
| | NO | TYPE | |
| 1 | | | URBAN Fill: concrete, BRICK, Debris |
| 2 | 05 | | ORANGE / BLACK / DARK SOIL |
| 3 | | | SOIL / CLAY Mix |
| 4 | | | BLACK SOIL (DARK STAIN) |
| 5 | 06 | | Water ↓ clay |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments:

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
 (716) 821-1650

Test Pit Log

| | |
|------------------------|--|
| Project: CSX | Sheet: 1 of 1 |
| Client: | Location: Tonawanda St. - Buffalo, NY. |
| Contractor: | Ground Elevation: |
| Date Started: 1/4/16 | Operator: |
| Date Completed: 1/4/16 | Geologist: |
| Test Pit Number: 8 | Ground Water: 4 FT. |

| Depth (FT) | Sample | | Description |
|------------|--|------|---------------------------|
| | NO | TYPE | |
| 1 | | | GRASS DARK Rich SOIL |
| 2 | | | * NO Sample TAKEN |
| 3 | | | ↓ |
| 4 | | | Tight BROWN Clay WATER |
| 5 | <hr/> | | |
| 6 | * Pit location: BERM AREA, EAST side Tonawanda ST. | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments:

Panamerican Environmental, Inc
 2391 Clinton Street
 Buffalo, NY 14227
 (716) 821-1650

Test Pit Log

| | |
|------------------------|---|
| Project: CSX | Sheet: 1 of 1 |
| Client: | Location: TONAWANDA ST. - BUFFALO, N.Y. |
| Contractor: | Ground Elevation: |
| Date Started: 1/4/16 | Operator: |
| Date Completed: 1/4/16 | Geologist: |
| Test Pit Number: 9 | Ground Water: 4.5 - 5.0 Ft. |

| Depth (FT) | Sample | | Description |
|------------|--------|------|---|
| | NO | TYPE | |
| 1 | | | GRASS DARK Rich Soil |
| 2 | | | * NO Sample TAKEN |
| 3 | | | ↓ |
| 4 | | | TIGHT BROWN CLAY |
| 5 | | | ↓ WATER |
| <hr/> | | | |
| 6 | | | PT Location: N. edge of property - BERM |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |

Comments:

**2019 BE3
REMEDIAL INVESTIGATION REPORT**

Geoprobe Bore Hole Log



1270 Niagara Street
Buffalo, NY 14213
716.249.6880 be3corp.com

| | |
|--------------------------------|---|
| Project: 31 & 150 Tonawanda St | Sheet: 1 of 12 |
| Client: 31 Tonawanda St LLC | Location: 150 Tonawanda St, Buffalo NY |
| Contractor: Nature's Way | Ground Elevation: N/A Lat: 42.933921 Long: -78.897152 |
| Date Started: 8/15/2018 | Operator: Nate Gingrich |
| Date Completed: 8/15/2018 | Geologist/Technician: Alex Brennen |
| Bore Hole Number: 150: BH-1 | Ground Water: N/A |

| Depth (FT) | Sample | | PID | Description |
|------------|--------|------|-------|---|
| | NO | TYPE | (ppm) | |
| 0 | | | | 0 to 2 feet: Dark sands, fine to coarse gravel |
| 1 | | | | |
| 2 | | | | 2 to 6 feet: Concrete at 2 fbgs, grey sands, trace brick, fine to coarse gravel |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | Blue colored slag resembling material at 5.5 fbgs |
| 6 | 1 | | | 6 to 7 feet: Moist, dark silt/clay, fine to coarse gravel, dark stain, no odor |
| 7 | | | | 7 to 10.5 feet: brown clay, dense, moist |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | Refusal at 10.5 fbgs |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |

Comments: Native at 7 fbgs. No PID readings detected. Sample take at 6 to 7 fbgs - fill material. Boring done in large mounding area running north-south along railroad tracks.

Geoprobe Bore Hole Log



1270 Niagara Street
Buffalo, NY 14213
716.249.6880 be3corp.com

| | |
|--------------------------------|---|
| Project: 31 & 150 Tonawanda St | Sheet: 2 of 12 |
| Client: 31 Tonawanda St LLC | Location: 150 Tonawanda St, Buffalo NY |
| Contractor: Nature's Way | Ground Elevation: N/A Lat: 42.934071 Long: -78.897179 |
| Date Started: 8/15/2018 | Operator: Nate Gingrich |
| Date Completed: 8/15/2018 | Geologist/Technician: Alex Brennen |
| Bore Hole Number: 150: BH-2 | Ground Water: N/A |

| Depth (FT) | Sample | | PID | Description |
|------------|--------|------|-------|---|
| | NO | TYPE | (ppm) | |
| 0 | | | | 0 to 4 feet: Light brown sands, trace concrete and asphalt, fine to coarse gravel, fill |
| 1 | | | | |
| 2 | | | | 2 to 6 feet: Concrete at 2 fbgs, grey sands, trace brick, fine to coarse gravel |
| 3 | | | | |
| 4 | | | | 4 to 7 feet: Dark sands, black gravel, fill, wet |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | 7 to 11 feet: Moist, brown clay, fine gravel, dense |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | Refusal at 11 fbgs |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |

Comments: Native at 7 fbgs. No PID readings detected. Sample take at 8 to 10 fbgs - native material. Surface sample taken at 0 to 1 fbgs. Boring done in large mounding area running north-south along railroad tracks

Geoprobe Bore Hole Log



1270 Niagara Street
Buffalo, NY 14213
716.249.6880 be3corp.com

| | |
|--------------------------------|---|
| Project: 31 & 150 Tonawanda St | Sheet: 3 of 12 |
| Client: 31 Tonawanda St LLC | Location: 150 Tonawanda St, Buffalo NY |
| Contractor: Nature's Way | Ground Elevation: N/A Lat: 42.934444 Long: -78.897249 |
| Date Started: 8/15/2018 | Operator: Nate Gingrich |
| Date Completed: 8/15/2018 | Geologist/Technician: Alex Brennen |
| Bore Hole Number: 150: BH-3 | Ground Water: N/A |

| Depth (FT) | Sample | | PID | Description |
|------------|--------|------|-------|---|
| | NO | TYPE | (ppm) | |
| 0 | | | | 0 to 2 feet: Brown sands, loose brick, coarse gravel |
| 1 | | | | |
| 2 | | | | 2 to 2.75 feet: Concrete and possible slag material, urban fill |
| | | | | 2.75 to 6 feet: Brown/black silty sand, fine gravel |
| 3 | | | | |
| 4 | 1 | | | |
| 5 | | | | |
| 6 | | | | 6 to 6.3 feet: Grey sand, coarse gravel, dry |
| | | | | 6.3 to 8 feet: Black coarse sand, fine to coarse sand, fine to coarse gravel, wet |
| 7 | | | | |
| 8 | | | | 8 to 10.7 feet: Brown dense clay |
| 9 | | | | |
| 10 | | | | |
| | | | | Refusal at 10.7 fbgs |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |

Comments: Native at 8 fbgs. No PID readings detected. Sample take at 4 to 6 fbgs - fill material.

Geoprobe Bore Hole Log



1270 Niagara Street
Buffalo, NY 14213
716.249.6880 be3corp.com

| | |
|--------------------------------|---|
| Project: 31 & 150 Tonawanda St | Sheet: 4 of 12 |
| Client: 31 Tonawanda St LLC | Location: 150 Tonawanda St, Buffalo NY |
| Contractor: Nature's Way | Ground Elevation: N/A Lat: 42.934609 Long: -78.897098 |
| Date Started: 8/15/2018 | Operator: Nate Gingrich |
| Date Completed: 8/15/2018 | Geologist/Technician: Alex Brennen |
| Bore Hole Number: 150: BH-4 | Ground Water: N/A |

| Depth (FT) | Sample | | PID | Description |
|------------|--------|------|-------|---|
| | NO | TYPE | (ppm) | |
| 0 | 1 | | | 0 to 2 feet: Black sands, some fine to coarse gravel |
| 1 | | | | |
| 2 | | | | 2 to 2.8 feet: Brown sand/silt, fine to coarse gravel |
| | 2 | | | 2.8 to 8 feet: Brown dense clay, some fine gravel |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |

Comments: Native at 2.8 fbg. No PID readings detected. Surface sample taken at 0 to 1 feet. Sample taken at 2.8 to 4 fbg - native material. Sample taken off of large mounding area near middle of parcel.

Geoprobe Bore Hole Log



1270 Niagara Street
Buffalo, NY 14213
716.249.6880 be3corp.com

| | |
|--------------------------------|---|
| Project: 31 & 150 Tonawanda St | Sheet: 5 of 12 |
| Client: 31 Tonawanda St LLC | Location: 150 Tonawanda St, Buffalo NY |
| Contractor: Nature's Way | Ground Elevation: N/A Lat: 42.934881 Long: -78.897130 |
| Date Started: 8/15/2018 | Operator: Nate Gingrich |
| Date Completed: 8/15/2018 | Geologist/Technician: Alex Brennen |
| Bore Hole Number: 150: BH-5 | Ground Water: N/A |

| Depth (FT) | Sample | | PID | Description |
|------------|--------|------|-------|---|
| | NO | TYPE | (ppm) | |
| 0 | | | | 0 to 1 feet: Black sand, fine to coarse gravel |
| 1 | | | | 1 to 2 feet: Brown/black silt, trace brick, fine gravel, 2 to 2.3 feet: Concrete |
| 2 | 1 | | | 2.3 to 4 feet: Moist black sand fine to coarse gravel |
| 3 | | | | |
| 4 | | | | 4 to 8 feet: Brown dense clay, some fine gravel |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | Refusal at 8 fbs |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |

Comments: Native at 4 fbs. No PID readings detected. Sample taken at 2 to 4 fbs - fill material.

Geoprobe Bore Hole Log



1270 Niagara Street
Buffalo, NY 14213
716.249.6880 be3corp.com


| | |
|--------------------------------|---|
| Project: 31 & 150 Tonawanda St | Sheet: 6 of 12 |
| Client: 31 Tonawanda St LLC | Location: 150 Tonawanda St, Buffalo NY |
| Contractor: Nature's Way | Ground Elevation: N/A Lat: 42.934936 Long: -78.896852 |
| Date Started: 8/15/2018 | Operator: Nate Gingrich |
| Date Completed: 8/15/2018 | Geologist/Technician: Alex Brennen |
| Bore Hole Number: 150: BH-6 | Ground Water: N/A |


| Depth (FT) | Sample | | PID | Description |
|------------|--------|------|-------|---|
| | NO | TYPE | (ppm) | |
| 0 | 1 | | | 0 to 1 feet: Dark sands, coarse gravel, brick |
| 1 | | | | 1 to 2 feet: Concrete/rock, light grey sands |
| 2 | | | | 2 to 3 feet: Light brown sands, trace fine to coarse gravel |
| 3 | | | | 3 to 4 feet: Black sands, fine to coarse gravel |
| 4 | | | | 4 to 5.2 feet: Grey sand, blue colored rock, dry |
| 5 | | | | |
| 6 | 2 | | | 5.2 to 9 feet: Brown clay, dense, some fine gravel, moist |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | Refusal at 9 fbgs |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |
| 13 | | | | |
| 14 | | | | |
| 15 | | | | |
| 16 | | | | |


Comments: Native at 5.2 fbgs. No PID readings detected. Surface sample taken at 0 to 1 fbgs. Sample taken at 5.5 to 8 fbgs - native material. Sample taken in mounding adjacent to Tonawanda street.


**1660 NIAGARA STREET
SITE NO. C915311**


**2016 LABELLA ASSOCIATES
PHASE II ENVIRONMENTAL
SITE ASSESSMENT REPORT**


|  300 PEARL STREET, BUFFALO, NY ENVIRONMENTAL ENGINEERING CONSULTANT | | | PROJECT | | | BORING: #SB1 SHEET 1 OF 9 JOB: 2151177 CHKD BY: CK | | |
|---|-----------------|----------------------------|--|---|---------------------------------|---|--|---------------------|
| | | | Buffalo Niagara Riverkeeper 1660 Niagara Street, Buffalo, New York | | | | | |
| CONTRACTOR: DRILLER: Nature's Way Environmental LABELLA REPRESENTATIVE: Chris Kibler | | | BORING LOCATION: #1 GROUND SURFACE ELEVATION START DATE: 12/8/2015 | | | TIME 8:45 | | |
| TYPE OF DRILL RIG: AUGER SIZE AND TYPE: OVERBURDEN SAMPLING METHOD: | | | DRIVE SAMPLER TYPE: INSIDE DIAMETER: OTHER: | | | | | |
| D E P T H | SAMPLE | | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS | | |
| | SAMPLE DEPTH | SAMPLE NO. AND RECOVERY | STRATA CHANGE | | | | | |
| 0 | | 15" | | 0-4": Concrete 4"-2": Fill (asphalt, brick, slag) | 0 | No odors or staining. | | |
| 2 | | 15" | | Fill (asphalt, brick, slag) | 0 | No odors or staining. | | |
| 4 | | 18" | | 4-5": Brown clay (medium plasticity, moderate stiff, dry) 5-6": Fill (brick, slag) | 0 | No odors or staining. | | |
| 6 | | 18" | | Fill (brick, slag) | 0 | No odors or staining. | | |
| 8 | | 18" | | 8-9": Fill (brick, slag) 9-10": Grey-black sandy silt (high plasticity, moist) | 0 | No odors but heavy black staining observed within fill material. | | |
| 10 | | 18" | | Grey sandy silt (high plasticity, moist) | 0 | No odors or staining. | | |
| 12 | | 15" | | Grey sandy silt (high plasticity, moist) | 0 | No odors or staining. | | |
| 14 | | 15" | | Grey sandy silt (high plasticity, moist) | 0 | No odors or staining. | | |
| | | | DEPTH (FT) | | | NOTES: Boring to 16'. TPMW #1 installed in this boring. | | |
| WATER LEVEL DATA | | | BOTTOM OF | BOTTOM OF | GROUNDWATER | | | |
| DATE | TIME | ELAPSED TIME | CASING | BORING | ENCOUNTERED | | | |
| | | | 15.5' | 16' | 6.8' | | | |
| GENERAL NOTES 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE | | | | | | | | |
| | | | | | | | | BORING: #SB1 |


| | | | | | | |
|---|-----------------|---|---------------------|--|---|--|
|  LABELLA Associates, D.P.C. 300 PEARL STREET, BUFFALO, NY ENVIRONMENTAL ENGINEERING CONSULTANT | | PROJECT Buffalo Niagara Riverkeeper 1660 Niagara Street, Buffalo, New York | | | BORING: #SB2 SHEET 2 OF 9 JOB: 2151177 CHKD BY: CK | |
| | | CONTRACTOR: Nature's Way Environmental DRILLER: Nature's Way Environmental LABELLA REPRESENTATIVE: Chris Kibler | | BORING LOCATION: #2 GROUND SURFACE ELEVATION START DATE: 12/8/2015 | | TIME: 9:20 |
| TYPE OF DRILL RIG: AUGER SIZE AND TYPE: OVERBURDEN SAMPING METHOD: | | DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER: | | | | |
| D E P T H | SAMPLE | | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
| | SAMPLE DEPTH | SAMPLE NO. AND RECOVERY | STRATA CHANGE | | | |
| 0 | | 15" | | 0-6": Concrete 6"-2": Fill (brick, slag) | 0 | No odors or staining throughout entire boring. |
| 2 | | 15" | | Fill (slag, brick) | 0 | |
| 4 | | 18" | | Fill (slag, brick) | 0 | |
| 6 | | 18" | | Fill (slag, brick) | 0 | |
| 8 | | 20" | | Brown-grey sandy silt (high plasticity, moist) | 0 | |
| 10 | | 20" | | Brown-grey sandy silt (high plasticity, moist) | 0 | |
| 12 | | 17" | | Grey silty sand (fine, medium dense, moist) | 0 | |
| 14 | | 17" | | Grey silty clay (medium plasticity, moderate stiff, moist) | 0 | |
| WATER LEVEL DATA | | | DEPTH (FT) | | | NOTES: Boring to 16'. |
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF BORING | GROUNDWATER ENCOUNTERED | |
| | | | | | | |
| GENERAL NOTES 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE | | | | | | |
| | | | | | | BORING: #SB2 |


|  LABELLA Associates, D.P.C. 300 PEARL STREET, BUFFALO, NY ENVIRONMENTAL ENGINEERING CONSULTANT | | PROJECT Buffalo Niagara Riverkeeper 1660 Niagara Street, Buffalo, New York | | | BORING: #SB3 SHEET 3 OF 9 JOB: 2151177 CHKD BY: CK | |
|---|-----------------|---|---------------------|--|---|--|
| | | CONTRACTOR: Nature's Way Environmental DRILLER: Nature's Way Environmental LABELLA REPRESENTATIVE: Chris Kibler | | BORING LOCATION: #3 GROUND SURFACE ELEVATION START DATE: 12/8/2015 | | TIME: 10:15 |
| TYPE OF DRILL RIG: AUGER SIZE AND TYPE: OVERBURDEN SAMPING METHOD: | | DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER: | | | | |
| D E P T H | SAMPLE | | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
| | SAMPLE DEPTH | SAMPLE NO. AND RECOVERY | STRATA CHANGE | | | |
| 0 | | 18" | | 0-6": Concrete 6"-2": Fill (asphalt, brick, slag) | 0 | No odors or staining throughout entire boring. |
| 2 | | 18" | | Fill (brick, slag) | 0 | |
| 4 | | 14" | | Brown clay (medium plasticity, moderate stiff, moist) | 0 | |
| 6 | | 14" | | Brown clay (medium plasticity, moderate stiff, moist) | 0 | |
| 8 | | 14" | | Grey silty sand (medium, fine, medium dense, moist) | 0 | |
| 10 | | 14" | | Grey silty sand (medium, fine, medium dense, moist) | 0 | |
| 12 | | 12" | | Grey sandy silt (medium plasticity, moist) | 0 | |
| 14 | | 12" | | Grey sandy silt (medium plasticity, moist) | 0 | |
| WATER LEVEL DATA | | | DEPTH (FT) | | | NOTES: Boring to 16'. |
| DATE | TIME | ELASPED TIME | BOTTOM OF CASING | BOTTOM OF BORING | GROUNDWATER ENCOUNTERED | |
| | | | | | | |
| GENERAL NOTES 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE | | | | | | |
| | | | | | | BORING: #SB3 |

|  LABELLA Associates, D.P.C. 300 PEARL STREET, BUFFALO, NY ENVIRONMENTAL ENGINEERING CONSULTANT | | PROJECT Buffalo Niagara Riverkeeper 1660 Niagara Street, Buffalo, New York | | | BORING: #SB4 SHEET 4 OF 9 JOB: 2151177 CHKD BY: CK | |
|---|-----------------|---|------------------|--|---|---|
| | | CONTRACTOR: Nature's Way Environmental DRILLER: Nature's Way Environmental LABELLA REPRESENTATIVE: Chris Kibler | | BORING LOCATION: #4 GROUND SURFACE ELEVATION START DATE: 12/8/2015 | | TIME: 10:45 |
| TYPE OF DRILL RIG: AUGER SIZE AND TYPE: OVERBURDEN SAMPING METHOD: | | DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER: | | | | |
| D E P T H | SAMPLE | | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
| | SAMPLE DEPTH | SAMPLE NO. AND RECOVERY | STRATA CHANGE | | | |
| 0 | | 14" | | 0-6": Concrete 6"-2": Fill (brick, slag) | 0 | No odors or staining throughout entire boring. |
| 2 | | 14" | | Brown silty clay (medium plasticity, moderate stiff, moist) | 0 | |
| 4 | | 14" | | Fill (slag, brick) | 0 | |
| 6 | | 14" | | Fill (slag, brick, asphalt) | 0 | |
| 8 | | 4" | | Fill (slag, brick) | 0 | |
| 10 | | 4" | | Fill (slag, brick) | 0 | |
| 12 | | 21" | | Black-grey sandy silt (medium plasticity, moderate stiff, moist) | 0 | |
| 14 | | 21" | | Grey silty sand (medium, fine, loose, moist) | 0 | |
| WATER LEVEL DATA | | DEPTH (FT) | | | NOTES: | |
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF BORING | | |
| | | | 15.3' | 16' | 7' | Boring to 16'. TPMW #2 installed in this boring. |
| GENERAL NOTES 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE | | | | | | |
| | | | | | | BORING: #SB4 |

|  300 PEARL STREET, BUFFALO, NY ENVIRONMENTAL ENGINEERING CONSULTANT | | PROJECT Buffalo Niagara Riverkeeper 1660 Niagara Street, Buffalo, New York | | | BORING: #SB5 SHEET 5 OF 9 JOB: 2151177 CHKD BY: CK | |
|---|-----------------|---|---------------------|--|---|---|
| | | CONTRACTOR: Nature's Way Environmental DRILLER: Nature's Way Environmental LABELLA REPRESENTATIVE: Chris Kibler | | BORING LOCATION: #5 GROUND SURFACE ELEVATION START DATE: 12/8/2015 | | TIME: 11:20 |
| TYPE OF DRILL RIG: AUGER SIZE AND TYPE: OVERBURDEN SAMPING METHOD: | | DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER: | | | | |
| D E P T H | SAMPLE | | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
| | SAMPLE DEPTH | SAMPLE NO. AND RECOVERY | STRATA CHANGE | | | |
| 0 | | 10" | | 0-14": Concrete 14"-2': Fill (asphalt, brick, slag) | 0 | No odors or staining. |
| 2 | | 10" | | Fill (asphalt, brick, slag) | 0 | No odors or staining. |
| 4 | | 13" | | Fill (slag, brick) | 0 | No odors or staining. |
| 6 | | 13" | | Fill (slag, brick) | 0 | No odors or staining. |
| 8 | | 12" | | Fill (slag, brick) | 725 | Strong gasoline odors and black staining observed in fill material. |
| WATER LEVEL DATA | | | DEPTH (FT) | | | NOTES: Boring to 10' due to equipment refusal. |
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF BORING | GROUNDWATER ENCOUNTERED | |
| | | | | | | |
| GENERAL NOTES 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE | | | | | | |
| | | | | | | BORING: #SB5 |

|  LABELLA Associates, D.P.C. 300 PEARL STREET, BUFFALO, NY ENVIRONMENTAL ENGINEERING CONSULTANT | | PROJECT Buffalo Niagara Riverkeeper 1660 Niagara Street, Buffalo, New York | | | BORING: #5SBA SHEET 6 OF 9 JOB: 2151177 CHKD BY: CK | |
|---|-----------------|---|---------------------|---|--|---|
| | | CONTRACTOR: Nature's Way Environmental DRILLER: Nature's Way Environmental LABELLA REPRESENTATIVE: Chris Kibler | | BORING LOCATION: #5A GROUND SURFACE ELEVATION START DATE: 12/8/2015 | | TIME 13:50 |
| TYPE OF DRILL RIG: AUGER SIZE AND TYPE: OVERBURDEN SAMPING METHOD: | | DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER: | | | | |
| D E P T H | SAMPLE | | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
| | SAMPLE DEPTH | SAMPLE NO. AND RECOVERY | STRATA CHANGE | | | |
| 0 | | 10" | | 0-14": Concrete 14"-2': Fill (asphalt, brick, slag) | 0 | No odors or staining. |
| 2 | | 10" | | Fill (asphalt, brick, slag) | 0 | No odors or staining. |
| 4 | | 13" | | Fill (slag, brick) | 0 | No odors or staining. |
| 6 | | 13" | | Fill (slag, brick) | 0 | No odors or staining. |
| 8 | | 12" | | Fill (slag, brick) | 607 | Strong gasoline odors and black staining observed in fill material. |
| WATER LEVEL DATA | | | | DEPTH (FT) | | NOTES: Boring to 10' due to equipment refusal. |
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF BORING | GROUNDWATER ENCOUNTERED | |
| | | | | | | |
| GENERAL NOTES 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE | | | | | | |
| | | | | | | BORING: #SB5A |

|  LABELLA Associates, D.P.C. 300 PEARL STREET, BUFFALO, NY ENVIRONMENTAL ENGINEERING CONSULTANT | | PROJECT Buffalo Niagara Riverkeeper 1660 Niagara Street, Buffalo, New York | | | BORING: #SB6 SHEET 7 OF 9 JOB: 2151177 CHKD BY: CK | | |
|---|-----------------|---|---------------------|---|---|---|----------------------------|
| | | CONTRACTOR: Nature's Way Environmental DRILLER: Nature's Way Environmental LABELLA REPRESENTATIVE: Chris Kibler | | BORING LOCATION: #6 GROUND SURFACE ELEVATION START DATE: 12/8/2015 | | TIME: 12:30 | |
| TYPE OF DRILL RIG: AUGER SIZE AND TYPE: OVERBURDEN SAMPING METHOD: | | DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER: | | | | | |
| D E P T H | SAMPLE | | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS | |
| | SAMPLE DEPTH | SAMPLE NO. AND RECOVERY | STRATA CHANGE | | | | |
| 0 | | 14" | | 0-6": Concrete 6"-2": Sand backfill proximate underground storage tank area (medium, fine, loose, dry) | 0 | No odors or staining. | |
| 2 | | 14" | | Fill (brick, slag) | 0 | No odors or staining. | |
| 4 | | 18" | | Grey-black silty clay (high plasticity, soft, moist) | 140 | Strong gasoline odors and black staining. | |
| 6 | | 18" | | Grey-black silty clay (high plasticity, soft, moist) | 216 | Strong gasoline odors and black staining. | |
| 8 | | 4" | | Grey-black silty clay (high plasticity, soft, moist) | 104 | Strong gasoline odors and black staining. | |
| 10 | | 4" | | Grey-black silty clay (high plasticity, soft, moist) | 93 | Strong gasoline odors and black staining. | |
| 12 | | 15" | | Grey sandy silt (high plasticity, moist) | 61 | No staining but slight gasoline odors. | |
| 14 | | 15" | | Grey clay (medium plasticity, moderate stiff, moist) | 3 | No odors or staining. | |
| WATER LEVEL DATA | | DEPTH (FT) | | | NOTES: Boring to 16'. | | |
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF BORING | | | GROUNDWATER ENCOUNTERED |
| | | | | | | | |
| GENERAL NOTES 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE | | | | | | | |
| | | | | | | BORING: #SB6 | |

|  LABELLA Associates, D.P.C. 300 PEARL STREET, BUFFALO, NY ENVIRONMENTAL ENGINEERING CONSULTANT | | PROJECT Buffalo Niagara Riverkeeper 1660 Niagara Street, Buffalo, New York | | | BORING: #SB7 SHEET 8 OF 9 JOB: 2151177 CHKD BY: CK | | |
|---|-----------------|---|---------------------|--|---|--|----------------------------|
| | | CONTRACTOR: Nature's Way Environmental DRILLER: Nature's Way Environmental LABELLA REPRESENTATIVE: Chris Kibler | | BORING LOCATION: #7 GROUND SURFACE ELEVATION START DATE: 12/8/2015 | | TIME: 13:00 | |
| TYPE OF DRILL RIG: AUGER SIZE AND TYPE: OVERBURDEN SAMPING METHOD: | | DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER: | | | | | |
| D E P T H | SAMPLE | | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS | |
| | SAMPLE DEPTH | SAMPLE NO. AND RECOVERY | STRATA CHANGE | | | | |
| 0 | | 16" | | 0-8": Concrete 8"-2": Fill (brick, slag) | 0 | No odors or staining throughout entire boring. | |
| 2 | | 16" | | Fill (brick, slag) | 0 | | |
| 4 | | 17" | | Fill (brick, slag) | 0 | | |
| 6 | | 17" | | Brown clay (medium plasticity, moderate stiff, moist) | 0 | | |
| 8 | | 16" | | Brown silty clay (high plasticity, soft, moist) | 0 | | |
| 10 | | 16" | | Brown silty clay (medium plasticity, moderate stiff, moist) | 0 | | |
| 12 | | 18" | | Grey silty sand (medium, fine, loose, moist) | 0 | | |
| 14 | | 18" | | Grey silty clay (medium plasticity, moderate stiff, moist) | 0 | | |
| WATER LEVEL DATA | | DEPTH (FT) | | | NOTES: Boring to 16'. | | |
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF BORING | | | GROUNDWATER ENCOUNTERED |
| | | | | | | | |
| GENERAL NOTES 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL. 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE | | | | | | | |
| | | | | | | BORING: #SB7 | |



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT

Buffalo Niagara Riverkeeper
1660 Niagara Street, Buffalo, New York

BORING: #SB8
SHEET 9 OF 9
JOB: 2151177
CHKD BY: CK

CONTRACTOR: DRILLER: Nature's Way Environmental LABELLA REPRESENTATIVE: Chris Kibler BORING LOCATION: #8 GROUND SURFACE ELEVATION: TIME: 14:30 START DATE: 12/8/2015

TYPE OF DRILL RIG: AUGER SIZE AND TYPE: OVERBURDEN SAMPLING METHOD: DRIVE SAMPLER TYPE: INSIDE DIAMETR: OTHER:

| DEPTH | SAMPLE | | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
|-------|--------------|-------------------------|---------------|---|------------------------|--|
| | SAMPLE DEPTH | SAMPLE NO. AND RECOVERY | STRATA CHANGE | | | |
| 0 | | 12" | | 0-3": Concrete | 0 | No odors or staining throughout entire boring. |
| 2 | | 12" | | 3"-2": Fill (brick, slag) Fill (brick, slag) | 0 | |
| 4 | | 20" | | Fill (brick, slag) | 0 | |
| 6 | | 20" | | Brown clay (low plasticity, stiff, moist) | 0 | |
| 8 | | 16" | | Brown clay (low plasticity, stiff, moist) | 0 | |
| 10 | | 16" | | Grey silty sand (medium, fine, loose, moist) | 0 | |
| 12 | | 10" | | Grey silty sand (medium, fine, loose, moist) | 0 | |
| 14 | | 10" | | Grey silty sand (medium, fine, loose, moist) | 0 | |
| 16 | | 13" | | Grey silty sand (medium, fine, medium dense, moist) | 0 | |
| 18 | | 13" | | Grey silty sand (medium, fine, medium dense, moist) | 0 | |
| 20 | | 22" | | Brown silty sand (medium, fine, loose, wet) | 0 | |
| 22 | | 22" | | Brown silty sand (medium, fine, loose, moist) | 0 | |

| WATER LEVEL DATA | | | DEPTH (FT) | | | NOTES: |
|------------------|------|--------------|------------------|------------------|-------------------------|--------|
| DATE | TIME | ELASPED TIME | BOTTOM OF CASING | BOTTOM OF BORING | GROUNDWATER ENCOUNTERED | |
| | | | 22.1' | 24' | 8.1' | |

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER MAY OCCURE DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS WERE MADE

BORING: #SB8



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

Buffalo Niagara Riverkeeper
1660 Niagara Street, Buffalo, New York

TEST PIT: TP - 1

SHEET 1 OF 8
JOB: 2151177
CHKD BY: CK

CONTRACTOR: LaBella Env., LLC
OPERATOR: Rob Yarger
LABELLA REPRESENTATIVE: Chris K.

TEST PIT LOCATION: 1
GROUND SURFACE ELEVATION NA
START DATE: 11/18/15

Time 9:33

TYPE OF EQUIPMENT:

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
|--------------|----------------------|----------------------|--|------------------------|----------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | |
| 0 | | | 0-6": Concrete Slab | 0 | No odors or staining |
| 2 | | | 6"-2": Asphalt intermingled with fill material (slag, brick) | | |
| 4 | | | 2-4": Fill material (slag, brick) intermingled with brown clay (high, plasticity, soft, moist) | 0 | No odors or staining |
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| WATER LEVEL DATA | | | DEPTH (FT) | | | NOTES: NA = Not Applicable PPM = Parts Per Million |
|------------------|------|--------------|------------------|--------------------|-------------------------|--|
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF TEST PIT | GROUNDWATER ENCOUNTERED | |
| NA | NA | NA | NA | 4' | No | |

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

TEST PIT: TP - 1



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

Buffalo Niagara Riverkeeper
1660 Niagara Street, Buffalo, New York

TEST PIT: TP - 2

SHEET 2 OF 8

JOB: 2151177

CHKD BY: CK

CONTRACTOR: LaBella Env., LLC
OPERATOR: Rob Yarger
LABELLA REPRESENTATIVE: Chris K.

TEST PIT LOCATION: 2
GROUND SURFACE ELEVATION NA
START DATE: 11/18/15

Time 10:05

TYPE OF EQUIPMENT:

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|---|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | |
| 0 | | | 0-4": Asphalt | 0 | No odors or staining |
| 2 | | | 4"-2": Gravel and sand backfill (for underground storage tanks) | | |
| | | | 2-4": Gravel and sand backfill (for underground storage tanks) | 0 | No odors or staining |
| 4 | | | 4'-6": Brown clay (high plasticity, soft, moist) | 135.6 | Black staining and heavy gasoline odors |
| | | | Two USTs were identified within TP2 including one 1,000-gallon UST (Tank A) and one 2,000-gallon UST (Tank B). Tank A was 48" in diameter while Tank B was 64" in diameter. Tank A had 31.5" of fluid inside of it while Tank B had 8" of fluid inside of it. Based on observations the fluid in each of the USTs appeared to be diluted gasoline (mixed with water). Samples of the fluid from each UST were collected and submitted for analytical testing to confirm the nature of the fluid. PID readings were checked at the fill ports for each UST ranging in concentration from 900-2,000 PPM. At least 3, 1-inch, empty pipes were identified in TP-2 running north-south along the western side-wall of the test pit. The pipes appeared to be running from the USTs to the northern portion of the Site. PID readings at the pipe openings registered at 2 PPM. Approximately 860 gallons of fluid will be removed from the USTs by EPS of Vermont on 11/20/15 for proper disposal. Based on the discovery of the USTs and residual contamination proximate such, a spill was called into the NYSDEC (Spill #1508546). | | |

| WATER LEVEL DATA | | | DEPTH (FT) | | | NOTES: NA = Not Applicable PPM = Parts Per Million |
|------------------|------|--------------|------------------|--------------------|-------------------------|--|
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF TEST PIT | GROUNDWATER ENCOUNTERED | |
| NA | NA | NA | NA | 6' | No | |

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

TEST PIT: TP - 2



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

Buffalo Niagara Riverkeeper
1660 Niagara Street, Buffalo, New York

TEST PIT: TP - 3

SHEET 3 OF 8
JOB: 2151177
CHKD BY: CK

CONTRACTOR: LaBella Env., LLC
OPERATOR: Rob Yarger
LABELLA REPRESENTATIVE: Chris K.

TEST PIT LOCATION: 3
GROUND SURFACE ELEVATION NA
START DATE: 11/18/15

Time 12:10

TYPE OF EQUIPMENT:

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|---|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | |
| 0 | | | 0-6": Concrete slab 6"-2": Sand backfill intermingled with fill materials (slag, brick) | 0 | No odors or staining |
| 2 | | | 2'-4": Brown clay (low plasticity, soft, moist) intermingled with fill materials (slag, brick) | 0 | No odors or staining |
| 4 | | | 4'-6": Brown clay (low plasticity, soft, moist) intermingled with fill materials (slag, brick) | 0 | Slight grease odor. |
| 6 | | | 6'-8": Brown clay (low plasticity, soft, moist) intermingled with fill materials (slag, brick) | 16 | Slight grease odor. |
| 8 | | | 8'-10": Brown clay (low plasticity, soft, moist) intermingled with fill materials (slag, brick) | 110 | Strong hydraulic oil odor proximate western hydraulic cylinder. |
| 10 | | | Two hydraulic lift cylinders and one cylindrical grease pit was identified within this test pit. Residual hydraulic oil was observed to be leaking from the western hydraulic lift cylinder proximate 8'-10' bgs. | | |

| WATER LEVEL DATA | | | DEPTH (FT) | | | NOTES: |
|------------------|------|--------------|------------------|--------------------|-------------------------|--------|
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF TEST PIT | GROUNDWATER ENCOUNTERED | |
| NA | NA | NA | NA | 10' | No | |

NA = Not Applicable
PPM = Parts Per Million
BGS = Below the Ground Surface

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

TEST PIT: TP - 3



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Buffalo Niagara Riverkeeper
1660 Niagara Street, Buffalo, New York

TEST PIT: TP - 4
SHEET 4 OF 8
JOB: 2151177
CHKD BY: CK

CONTRACTOR: LaBella Env., LLC TEST PIT LOCATION: 4
OPERATOR: Rob Yarger GROUND SURFACE ELEVATION NA Time 13:30
LABELLA REPRESENTATIVE: Chris K. START DATE: 11/18/15

TYPE OF EQUIPMENT:

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|----------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | |
| 0 | | | 0-6": Concrete slab | 0 | No odors or staining |
| 2 | | | 6"-2": Brown clay (low plasticity, soft, moist) intermingled with fill materials (slag, brick) | | |
| 4.5 | | | 2'-4.5": Brown clay (low plasticity, soft, moist) intermingled with fill materials (slag, brick) | 0 | No odors or staining |
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| | | | Two, 3-inch pipes were identified within TP-4. The pipes were noted to be filled with concrete and running in an east-west direction coming out of the west side-wall of the test pit. One 1/2-inch copper pipe was also identified within TP-4 running north-south along the eastern side of the test pit. Such appeared to be an empty, water line. | | |

| WATER LEVEL DATA | | | DEPTH (FT) | | | NOTES: |
|------------------|------|--------------|------------------|--------------------|-------------------------|--|
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF TEST PIT | GROUNDWATER ENCOUNTERED | |
| NA | NA | NA | NA | 4.5' | No | NA = Not Applicable PPM = Parts Per Million |

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

TEST PIT: TP - 4



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Buffalo Niagara Riverkeeper
1660 Niagara Street, Buffalo, New York

TEST PIT: TP - 5
SHEET 5 OF 8
JOB: 2151177
CHKD BY: CK

CONTRACTOR: LaBella Env., LLC TEST PIT LOCATION: 5
OPERATOR: Rob Yarger GROUND SURFACE ELEVATION NA Time 14:00
LABELLA REPRESENTATIVE: Chris K. START DATE: 11/18/15

TYPE OF EQUIPMENT:

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|----------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | |
| 0 | | | 0-4": Asphalt 4"-2": Fill materials (slag, brick) | 0 | No odors or staining |
| 2 | | | 2'-4": Fill materials (slag, brick) | 0.1 | No odors or staining |
| 4 | | | | | |
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| | | | Refusal was encountered at 4" bgs due to a hard-like slag material. | | |

| WATER LEVEL DATA | | | DEPTH (FT) | | | NOTES: |
|------------------|------|--------------|------------------|--------------------|-------------------------|--------|
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF TEST PIT | GROUNDWATER ENCOUNTERED | |
| NA | NA | NA | NA | 4' | No | |

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

TEST PIT: TP - 5



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

Buffalo Niagara Riverkeeper
1660 Niagara Street, Buffalo, New York

TEST PIT: TP - 6

SHEET 6 OF 8

JOB: 2151177

CHKD BY: CK

CONTRACTOR: LaBella Env., LLC

OPERATOR: Rob Yarger

LABELLA REPRESENTATIVE: Chris K.

TEST PIT LOCATION: 6

GROUND SURFACE ELEVATION NA

START DATE: 11/18/15

Time 14:30

TYPE OF EQUIPMENT:

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|----------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | |
| 0 | | | 0-4": Concrete | 0 | No odors or staining |
| 2 | | | 4"-2": Fill materials (slag, wood, brick) | | |
| 4 | | | 2'-4": Brown clay (high plasticity, soft, moist) intermingled with fill materials (slag, wood, brick) | 0 | No odors or staining |
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| WATER LEVEL DATA | | | DEPTH (FT) | | | NOTES: NA = Not Applicable PPM = Parts Per Million |
|------------------|------|--------------|------------------|--------------------|-------------------------|--|
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF TEST PIT | GROUNDWATER ENCOUNTERED | |
| NA | NA | NA | NA | 4' | No | |

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

TEST PIT: TP - 6



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT

Buffalo Niagara Riverkeeper
1660 Niagara Street, Buffalo, New York

TEST PIT: TP - 7

SHEET 7 OF 8

JOB: 2151177

CHKD BY: CK

CONTRACTOR: LaBella Env., LLC
OPERATOR: Rob Yarger
LABELLA REPRESENTATIVE: Chris K.

TEST PIT LOCATION: 7
GROUND SURFACE ELEVATION NA
START DATE: 11/18/15

Time 14:40

TYPE OF EQUIPMENT:

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|----------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | |
| 0 | | | 0-4": Concrete | 0 | No odors or staining |
| 2 | | | 4"-2": Fill materials (slag, wood, brick) | | |
| 4 | | | 2'-4": Brown clay (high plasticity, soft, moist) intermingled with fill materials (slag, wood, brick) | 0 | No odors or staining |
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| WATER LEVEL DATA | | | DEPTH (FT) | | | NOTES: NA = Not Applicable PPM = Parts Per Million |
|------------------|------|--------------|------------------|--------------------|-------------------------|--|
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF TEST PIT | GROUNDWATER ENCOUNTERED | |
| NA | NA | NA | NA | 4' | No | |

GENERAL NOTES
 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

TEST PIT: TP - 7



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
Buffalo Niagara Riverkeeper
1660 Niagara Street, Buffalo, New York

TEST PIT: TP - 8
SHEET 8 OF 8
JOB: 2151177
CHKD BY: CK

CONTRACTOR: LaBella Env., LLC TEST PIT LOCATION: 8
OPERATOR: Rob Yarger GROUND SURFACE ELEVATION: NA Time: 14:50
LABELLA REPRESENTATIVE: Chris K. START DATE: 11/18/15

TYPE OF EQUIPMENT:

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|----------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | |
| 0 | | | 0-6": Concrete | 0 | No odors or staining |
| 2 | | | 6"-2": Fill materials (slag, wood, brick) | | |
| 4 | | | 2'-4": Brown clay (high plasticity, soft, moist) intermingled with fill materials (slag, wood, brick) | 0 | No odors or staining |
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| WATER LEVEL DATA | | | DEPTH (FT) | | | NOTES: NA = Not Applicable PPM = Parts Per Million |
|------------------|------|--------------|------------------|--------------------|-------------------------|--|
| DATE | TIME | ELAPSED TIME | BOTTOM OF CASING | BOTTOM OF TEST PIT | GROUNDWATER ENCOUNTERED | |
| NA | NA | NA | NA | 4' | No | |


GENERAL NOTES


- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER


TEST PIT: TP - 8


**2018 LABELLA ASSOCIATES
DRAFT REMEDIAL INVESTIGATION REPORT**


|  LaBella Associates Engineering Architecture Environmental Planning 300 Pearl Street, Suite 130 Buffalo, NY 14202 | | TEST BORING LOG | | | | BORING: RI-SB-1 | |
|---|------------|--|------------------------|-----------------------------|---------------|--|---|
| | | 1660 Niagara Street Buffalo, New York Remedial Investigation | | | | Sheet 1 of 1 JOB: 2161447 Checked by: | |
| CONTRACTOR: LaBella LLC | | | | | | TIME: 830 to 845 | |
| DRILLER: Matt Pepe | | | | | | DATUM: | |
| LABELLA REPRESENTATIVE: J Dombrowski | | | | START DATE: 5/30/2017 | | END DATE: 5/30/2017 | |
| TYPE OF DRILL RIG: | | | | DRIVE SAMPLER TYPE: | | | |
| AUGER SIZE AND TYPE: | | | | INSIDE DIAMETER: ~ 1.8-Inch | | | |
| OVERBURDEN SAMPLING METHOD: Direct Push | | | | OTHER: | | | |
| DEPTH (FT) | BLOW COUNT | SAMPLE | | | | REMARKS | VISUAL CLASSIFICATION |
| | | SAMPLE RECOVERY | PID FIELD SCREEN (PPM) | RAD COUNT | STRATA CHANGE | | |
| 0-1 | | 6" | 0.0 | 4,500 | | No staining or odors | 0' - 0.3' Black Fill Material – Asphalt and Concrete 0.3' – 8' Brown Silty Clay (HP,MS, Moist) 8' – 10' Brown Silty Clay (MP, MS, Wet) 10' – 19' Brownish-Gray Silty Clay (MP, LS, Wet) 19' – 20' Brown Silty Clay (MP,MS, Wet) |
| 1-2 | | 6" | 0.0 | 4,700 | | " " | |
| 2-3 | | 6" | 0.0 | 5,200 | | " " | |
| 3-4 | | 6" | 0.0 | 4,700 | | " " | |
| 4-5 | | 6" | 0.0 | 4,200 | | " " | |
| 5-6 | | 8" | 0.0 | 4,200 | | " " | |
| 6-7 | | 8" | 0.0 | 4,500 | | " " | |
| 7-8 | | 8" | 0.0 | 5,000 | | " " | |
| 8-9 | | 8" | 0.0 | 5,200 | | " " | |
| 9-10 | | 8" | 0.0 | 4,800 | | " " | |
| 10-11 | | 7" | 0.0 | 5,000 | | " " | |
| 11-12 | | 7" | 0.0 | 5,200 | | " " | |
| 12-13 | | 7" | 0.0 | 4,800 | | " " | |
| 13-14 | | 7" | 0.0 | 4,200 | | " " | |
| 14-15 | | 7" | 0.0 | 4,800 | | " " | |
| 15-16 | | 9.6" | 0.0 | 4,600 | | " " | |
| 16-17 | | 9.6" | 0.0 | 4,900 | | " " | |
| 17-18 | | 9.6" | 0.0 | 4,400 | | " " | |
| 18-19 | | 9.6" | 0.0 | 4,500 | | " " | |
| 19-20 | | 9.6" | 0.0 | 4,200 | | " " | |
| GROUNDWATER ENCOUNTERED | | | | NOTES: RI-SB-1D1011 @ 830 | | | |
| DATE | DEPTH | WELL INSTALLED | WELL ID | | | | |
| 5/30/2017 | 20' | YES | MW-1 | | | | |


|  LaBella Associates Engineering Architecture Environmental Planning 300 Pearl Street, Suite 130 Buffalo, NY 14202 | | TEST BORING LOG | | | | BORING: RI-SB-2 | |
|---|------------|--|------------------------|---|---------------|--|---|
| | | 1660 Niagara Street Buffalo, New York Remedial Investigation | | | | Sheet 1 of 1 JOB: 2161447 Checked by: | |
| CONTRACTOR: LaBella LLC | | | | | | TIME: 850 to 915 | |
| DRILLER: Matt Pepe | | | | | | DATUM: | |
| LABELLA REPRESENTATIVE: J Dombrowski | | | | START DATE: 5/30/2017 | | END DATE: 5/30/2017 | |
| TYPE OF DRILL RIG: | | | | | | DRIVE SAMPLER TYPE: | |
| AUGER SIZE AND TYPE: | | | | | | INSIDE DIAMETER: ~ 1.8-Inch | |
| OVERBURDEN SAMPLING METHOD: Direct Push | | | | | | OTHER: | |
| DEPTH (FT) | BLOW COUNT | SAMPLE | | | | REMARKS | VISUAL CLASSIFICATION |
| | | SAMPLE RECOVERY | PID FIELD SCREEN (PPM) | RAD COUNT | STRATA CHANGE | | |
| 0-1 | | 2.4" | 0.0 | 4,500 | | No Staining or Odors | 0' – 5' Brown Silty Clay Intermingled With Fill Material Consisting of Concrete, Gravel, and Brick (LP, LS, M) 5' – 5.3' Brown Silty Clay With Staining and Petroleum-Type Odors (MP,MS, M) 5.3' – 7' Brown Silty Clay With Slight Petroleum-Type Odor (MP,MS, M) 7' – 7.5' Fallback 7.5' – 12' Gray Silty Clay (MP, MS, Wet) 12' – 20' Brown Silty Clay (MP, MS, Wet) |
| 1-2 | | 2.4" | 0.0 | 4,600 | | " " | |
| 2-3 | | 2.4" | 0.0 | 5,200 | | " " | |
| 3-4 | | 2.4" | 0.0 | 4,800 | | " " | |
| 4-5 | | 2.4" | 0.0 | 4,200 | | " " | |
| 5-6 | | 6" | 637 | 4,700 | | Strong Petroleum Odor and Staining | |
| 6-7 | | 6" | 85 | 4,700 | | No Staining or Odors | |
| 7-8 | | 6" | 20 | 4,500 | | " " | |
| 8-9 | | 6" | 1.0 | 4,500 | | " " | |
| 9-10 | | 6" | 0.6 | 4,800 | | " " | |
| 10-11 | | 6" | 0.0 | 4,300 | | " " | |
| 11-12 | | 6" | 0.0 | 4,400 | | " " | |
| 12-13 | | 6" | 0.0 | 4,700 | | " " | |
| 13-14 | | 6" | 0.0 | 4,500 | | " " | |
| 14-15 | | 6" | 0.0 | 4,400 | | " " | |
| 15-16 | | 12" | 264 | 4,300 | | Strong Petroleum Odor and Staining | |
| 16-17 | | 12" | 0.0 | 4,800 | | No Staining or Odors | |
| 17-18 | | 12" | 0.0 | 4,700 | | " " | |
| 18-19 | | 12" | 0.0 | 5,100 | | " " | |
| 19-20 | | 12" | 0.0 | 4,200 | | " " | |
| GROUNDWATER ENCOUNTERED | | | | NOTES: RI-SB-2D1213 @ 900; RI-SB-2D55.3 @ 850 | | | |
| DATE | DEPTH | WELL INSTALLED | WELL ID | | | | |
| 5/30/2017 | 20' | YES | MW-2 | | | | |

|  LaBella Associates Engineering Architecture Environmental Planning 300 Pearl Street, Suite 130 Buffalo, NY 14202 | | TEST BORING LOG | | | | BORING: RI-SB-3 | |
|---|------------|--|------------------------|--------------------------|---------------|--|---|
| | | 1660 Niagara Street Buffalo, New York Remedial Investigation | | | | Sheet 1 of 1 JOB: 2161447 Checked by: | |
| CONTRACTOR: LaBella LLC | | | | | | TIME: 915 to 945 | |
| DRILLER: Matt Pepe | | | | | | DATUM: | |
| LABELLA REPRESENTATIVE: J Dombrowski | | | | START DATE: 5/30/2017 | | END DATE: 5/30/2017 | |
| TYPE OF DRILL RIG: | | | | | | DRIVE SAMPLER TYPE: | |
| AUGER SIZE AND TYPE: | | | | | | INSIDE DIAMETER: ~ 1.8-Inch | |
| OVERBURDEN SAMPLING METHOD: Direct Push | | | | | | OTHER: | |
| DEPTH (FT) | BLOW COUNT | SAMPLE | | | | REMARKS | VISUAL CLASSIFICATION |
| | | SAMPLE RECOVERY | PID FIELD SCREEN (PPM) | RAD COUNT | STRATA CHANGE | | |
| 0-1 | | 1.2" | 0.0 | 4,400 | | No Staining or Odors | 0' – 9.5' Brown Silty Clay with Trace Concrete, Gravel, Brick, and Rock 9.5' – 10' Brownish-Red Silty Clay (MP,MS,M) 10' – 12' Brownish-Gray Silty Clay (HS,MP,Wet) 12' – 14' Brownish-Gray Silty Clay (MS, HP, Wet) 14' – 20' Brown Silty Clay (MP, MS, Wet) |
| 1-2 | | 1.2" | 0.0 | 4,100 | | " " | |
| 2-3 | | 1.2" | 0.0 | 3,800 | | " " | |
| 3-4 | | 1.2" | 0.0 | 4,400 | | " " | |
| 4-5 | | 1.2" | 0.0 | 4,200 | | " " | |
| 5-6 | | 2.8" | 0.0 | 4,600 | | " " | |
| 6-7 | | 2.8" | 0.0 | 4,500 | | " " | |
| 7-8 | | 2.8" | 0.0 | 4,100 | | " " | |
| 8-9 | | 2.8" | 0.0 | 4,400 | | " " | |
| 9-10 | | 2.8" | 0.0 | 4,500 | | " " | |
| 10-11 | | 10" | 0.0 | 4,500 | | " " | |
| 11-12 | | 10" | 0.0 | 4,100 | | " " | |
| 12-13 | | 10" | 0.0 | 5,100 | | " " | |
| 13-14 | | 10" | 0.0 | 5,000 | | " " | |
| 14-15 | | 10" | 0.0 | 3,800 | | " " | |
| 15-16 | | 10" | 0.0 | 4,500 | | " " | |
| 16-17 | | 10" | 0.0 | 4,600 | | " " | |
| 17-18 | | 10" | 0.0 | 4,800 | | " " | |
| 18-19 | | 10" | 0.0 | 4,700 | | " " | |
| 19-20 | | 10" | 0.0 | 4,500 | | " " | |
| GROUNDWATER ENCOUNTERED | | | | NOTES: RI-SB-3D910 @ 930 | | | |
| DATE | DEPTH | WELL INSTALLED | WELL ID | | | | |
| 5/30/2017 | 20' | YES | MW-3 | | | | |

|  LaBella Associates Engineering Architecture Environmental Planning 300 Pearl Street, Suite 130 Buffalo, NY 14202 | | TEST BORING LOG | | | | BORING: RI-SB-4 | |
|---|------------|--|------------------------|--------------------------|---------------|--|---|
| | | 1660 Niagara Street Buffalo, New York Remedial Investigation | | | | Sheet 1 of 1 JOB: 2161447 Checked by: | |
| CONTRACTOR: LaBella LLC | | | | | | TIME: 950 to 1015 | |
| DRILLER: Matt Pepe | | | | | | DATUM: | |
| LABELLA REPRESENTATIVE: J Dombrowski | | | | START DATE: 5/30/2017 | | END DATE: 5/30/2017 | |
| TYPE OF DRILL RIG: | | | | | | DRIVE SAMPLER TYPE: | |
| AUGER SIZE AND TYPE: | | | | | | INSIDE DIAMETER: ~ 1.8-Inch | |
| OVERBURDEN SAMPLING METHOD: Direct Push | | | | | | OTHER: | |
| DEPTH (FT) | BLOW COUNT | SAMPLE | | | | REMARKS | VISUAL CLASSIFICATION |
| | | SAMPLE RECOVERY | PID FIELD SCREEN (PPM) | RAD COUNT | STRATA CHANGE | | |
| 0-1 | | 0.16" | 0.0 | 4,500 | | No Staining or Odors | 0' – 4.5' Brown Silty Clay with Trace Gravel, Brick, Rock, Crushed Concrete 4.5' – 5' Brown Silty Clay with Trace Gravel (MP, MS, M) 5' – 15' Brownish-Black Silty Clay with Trace Gravel (LP, LS, Sat) |
| 1-2 | | 0.16" | 0.0 | 4,300 | | " " | |
| 2-3 | | 0.16" | 0.0 | 4,500 | | " " | |
| 3-4 | | 0.16" | 0.0 | 4,200 | | " " | |
| 4-5 | | 0.16" | 0.0 | 4,100 | | " " | |
| 5-6 | | 2.4" | 0.0 | 4,500 | | " " | |
| 6-7 | | 2.4" | 0.0 | 4,800 | | " " | |
| 7-8 | | 2.4" | 0.0 | 4,400 | | " " | |
| 8-9 | | 2.4" | 0.0 | 4,300 | | " " | |
| 9-10 | | 2.4" | 0.0 | 4,300 | | " " | |
| 10-11 | | 0" | - | - | | " " | |
| 11-12 | | 0" | - | - | | " " | |
| 12-13 | | 0" | - | - | | " " | |
| 13-14 | | 0" | - | - | | " " | |
| 14-15 | | 0" | - | - | | " " | |
| 15-16 | | 2.4" | 0.0 | 4,500 | | " " | |
| 16-17 | | 2.4" | 0.0 | 4,700 | | " " | |
| 17-18 | | 2.4" | 0.0 | 4,700 | | " " | |
| 18-19 | | 2.4" | 0.0 | 4,500 | | " " | |
| 19-20 | | 2.4" | 0.0 | 4,500 | | " " | |
| GROUNDWATER ENCOUNTERED | | | | NOTES: RI-SB-4D12 @ 1000 | | | |
| DATE | DEPTH | WELL INSTALLED | WELL ID | | | | |
| 5/30/2017 | 20' | YES | MW-4 | | | | |

|  LaBella Associates Engineering Architecture Environmental Planning 300 Pearl Street, Suite 130 Buffalo, NY 14202 | | TEST BORING LOG | | | | BORING: RI-SB-5 | |
|---|------------|--|------------------------|-----------------------------|---------------|--|---|
| | | 1660 Niagara Street Buffalo, New York Remedial Investigation | | | | Sheet 1 of 1 JOB: 2161447 Checked by: | |
| CONTRACTOR: LaBella LLC | | | | | | TIME: 1145 to 1215 | |
| DRILLER: Matt Pepe | | | | | | 1215 | |
| LABELLA REPRESENTATIVE: J Dombrowski | | | | START DATE: 5/30/2017 | | END DATE: 5/30/2017 | |
| DATE: 5/30/2017 | | | | | | DATUM: | |
| TYPE OF DRILL RIG: | | | | DRIVE SAMPLER TYPE: | | | |
| AUGER SIZE AND TYPE: | | | | INSIDE DIAMETER: ~ 1.8-Inch | | | |
| OVERBURDEN SAMPLING METHOD: Direct Push | | | | OTHER: | | | |
| DEPTH (FT) | BLOW COUNT | SAMPLE | | | | REMARKS | VISUAL CLASSIFICATION |
| | | SAMPLE RECOVERY | PID FIELD SCREEN (PPM) | RAD COUNT | STRATA CHANGE | | |
| 0-1 | | 2.4" | 0.0 | 4,700 | | No Staining or Odors | 0' – 9' Brown Silty Clay with Trace Rock, Gravel, Wood, and Organics (LP, LS, M) 9' – 14' Brownish-Gray Silty Sand (LP,LS, Wet) 14' – 20' Gray Silty Sand (MP, MS, Sat) |
| 1-2 | | 2.4" | 0.0 | 4,300 | | " " | |
| 2-3 | | 2.4" | 0.0 | 4,500 | | " " | |
| 3-4 | | 2.4" | 0.0 | 5,200 | | " " | |
| 4-5 | | 2.4" | 0.0 | 4,500 | | " " | |
| 5-6 | | 2.4" | 0.0 | 4,400 | | " " | |
| 6-7 | | 2.4" | 0.0 | 3,800 | | " " | |
| 7-8 | | 2.4" | 0.0 | 4,500 | | " " | |
| 8-9 | | 2.4" | 0.0 | 4,200 | | " " | |
| 9-10 | | 2.4" | 0.0 | 4,300 | | " " | |
| 10-11 | | 0.12" | 0.0 | 3,900 | | " " | |
| 11-12 | | 0.12" | 0.0 | 4,400 | | " " | |
| 12-13 | | 0.12" | 0.0 | 4,500 | | " " | |
| 13-14 | | 0.12" | 0.0 | 4,400 | | " " | |
| 14-15 | | 0.12" | 0.0 | 4,500 | | " " | |
| 15-16 | | 6" | 0.0 | 4,400 | | " " | |
| 16-17 | | 6" | 0.0 | 4,100 | | " " | |
| 17-18 | | 6" | 0.0 | 4,200 | | " " | |
| 18-19 | | 6" | 0.0 | 4,400 | | " " | |
| 19-20 | | 6" | 0.0 | 4,700 | | " " | |
| GROUNDWATER ENCOUNTERED | | | | NOTES: RI-SB-5D1314 @ 1200 | | | |
| DATE | DEPTH | WELL INSTALLED | WELL ID | | | | |
| 5/30/2017 | 20' | YES | MW-5 | | | | |

|  LaBella Associates Engineering Architecture Environmental Planning 300 Pearl Street, Suite 130 Buffalo, NY 14202 | | TEST BORING LOG | | | | BORING: RI-SB-6 | |
|---|------------|--|------------------------|--------------------------|---------------|--|---|
| | | 1660 Niagara Street Buffalo, New York Remedial Investigation | | | | Sheet 1 of 1 JOB: 2161447 Checked by: | |
| CONTRACTOR: LaBella LLC | | | | | | TIME: 1220 to 1240 | |
| DRILLER: Matt Pepe | | | | | | 1240 | |
| LABELLA REPRESENTATIVE: J Dombrowski | | | | START DATE: 5/30/2017 | | END DATE: 5/30/2017 | |
| DATE: 5/30/2017 | | | | | | DATUM: | |
| TYPE OF DRILL RIG: | | | | | | DRIVE SAMPLER TYPE: | |
| AUGER SIZE AND TYPE: | | | | | | INSIDE DIAMETER: ~ 1.8-Inch | |
| OVERBURDEN SAMPLING METHOD: Direct Push | | | | | | OTHER: | |
| DEPTH (FT) | BLOW COUNT | SAMPLE | | | | REMARKS | VISUAL CLASSIFICATION |
| | | SAMPLE RECOVERY | PID FIELD SCREEN (PPM) | RAD COUNT | STRATA CHANGE | | |
| 0-1 | | 4" | 0.0 | 4,400 | | No Staining or Odors | 0' – 9' Brown Silty Clay with Trace Gravel, Brick, Concrete, and Asphalt (LP, LS, M) 9' – 20' Brown Silty Clay (MP, MS, Wet) |
| 1-2 | | 4" | 0.0 | 4,300 | | " " | |
| 2-3 | | 4" | 0.0 | 5,200 | | " " | |
| 3-4 | | 4" | 0.0 | 4,800 | | " " | |
| 4-5 | | 4" | 0.0 | 4,700 | | " " | |
| 5-6 | | 2.4" | 0.0 | 4,300 | | " " | |
| 6-7 | | 2.4" | 0.0 | 4,600 | | " " | |
| 7-8 | | 2.4" | 0.0 | 4,700 | | " " | |
| 8-9 | | 2.4" | 0.0 | 4,100 | | " " | |
| 9-10 | | 2.4" | 0.0 | 4,400 | | " " | |
| 10-11 | | 0.0" | - | - | | - | |
| 11-12 | | 0.0" | - | - | | - | |
| 12-13 | | 0.0" | - | - | | - | |
| 13-14 | | 0.0" | - | - | | - | |
| 14-15 | | 0.0" | - | - | | - | |
| 15-16 | | 0.0" | - | - | | - | |
| 16-17 | | 0.0" | - | - | | - | |
| 17-18 | | 0.0" | - | - | | - | |
| 18-19 | | 0.0" | - | - | | - | |
| 19-20 | | 0.0" | - | - | | - | |
| GROUNDWATER ENCOUNTERED | | | | NOTES: RI-SB-6D12 @ 1230 | | | |
| DATE | DEPTH | WELL INSTALLED | WELL ID | | | | |
| 5/30/2017 | 20' | YES | MW-6 | | | | |

|  LABELLA Associates 300 Pearl Street, Suite 130 Buffalo, NY 14202 | | TEST BORING LOG 1660 Niagara Street Buffalo, New York Remedial Investigation | | | BORING: RI-SB- 7 Sheet 1 of 1 JOB: 2161447 Checked by: | |
|--|------------|--|------------------------|--|---|---|
| | | CONTRACTOR: LaBella LLC DRILLER: Matt Pepe LABELLA REPRESENTATIVE: J Dombrowski | | START DATE: 8/18/2017 END DATE: 8/18/2017 | | TIME: 915 to 950 DATUM: |
| TYPE OF DRILL RIG: 6620 DT AUGER SIZE AND TYPE: OVERBURDEN SAMPLING METHOD: Direct Push | | | | DRIVE SAMPLER TYPE: INSIDE DIAMETER: ~ 1.8-Inch OTHER: | | |
| DEPTH (FT) | BLOW COUNT | SAMPLE | | | REMARKS | VISUAL CLASSIFICATION |
| | | SAMPLE RECOVERY | PID FIELD SCREEN (PPM) | STRATA CHANGE | | |
| 0-1 | | 4" | 0.0 | | No Staining or Odors | 0' – 5' Brownish Black Silty Clay with Trace Gravel and Cement (MP, MS, M) 5' – 7' Brownish Black Silty Clay with Trace Gravel (MP, MS, M) 7' – 10' Gray Silty Clay (MP, MS, M) 10' -11' Gray Silty Clay (MP, MS, M) 11' – 13' Gray Silty Clay with Green Streaks (MP, MS, M) 13' – 15.5' Gray Silty Clay (LP, LS, Wet) 15.5' – 20' Gray Silty Clay (LP, LS, Sat) |
| 1-2 | | 4" | 0.0 | | " " | |
| 2-3 | | 4" | 0.0 | | " " | |
| 3-4 | | 4" | 0.0 | | " " | |
| 4-5 | | 4" | 0.0 | | " " | |
| 5-6 | | 4" | 0.0 | | " " | |
| 6-7 | | 4" | 0.0 | | " " | |
| 7-8 | | 4" | 0.0 | | " " | |
| 8-9 | | 4" | 0.0 | | " " | |
| 9-10 | | 4" | 0.0 | | " " | |
| 10-11 | | 12" | 0.1 | | Metalic Odor | |
| 11-12 | | 12" | 0.1 | | " " | |
| 12-13 | | 12" | 0.1 | | " " | |
| 13-14 | | 12" | 0.0 | | No Staining or Odors | |
| 14-15 | | 12" | 0.0 | | " " | |
| 15-16 | | 1" | 0.0 | | " " | |
| 16-17 | | 1" | 0.0 | | " " | |
| 17-18 | | 1" | 0.0 | | " " | |
| 18-19 | | 1" | 0.0 | | " " | |
| 19-20 | | 1" | 0.0 | | " " | |
| GROUNDWATER ENCOUNTERED | | | | NOTES: Groundwater encountered at 13 ft bgs. | | |
| DATE | DEPTH | WELL INSTALLED | WELL ID | | | |
| 8/18/2017 | 13 | YES | RI-MW-7 | | | |



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-1

SHEET 1 OF 1

JOB: 2161447

CHKD BY:

CONTRACTOR: LaBella LLC

OPERATOR: Mike Windrel, Jr.

LABELLA REPRESENTATIVE: JLD

TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:

GROUND SURFACE ELEVATION NA

START DATE:

START TIME: 800

DATUM:

NA

END TIME:

850

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 12 | 0-2 | 0.5' | 0.0' - 0.5' Crushed Concrete Backfill Material 0.5' - 4' Brown Silty Clay with Trace Gravel, Brick, and Concrete 4' - 10' Brownish Red Clay 10' - 12' Brownish Gray Silty Clay with Organics Note: Sample Collected - RI-TP-1-SS1 @ 8:30 DUP Collected - TOC 815 | 0 | 7,100 | No Staining/Odors |
| | 2-4 | 4' | | 0 | 6,500 | No Staining/Odors |
| | 4-6 | | | 0 | 7,500 | No Staining/Odors |
| | 6-8 | | | 0 | 10,000 | No Staining/Odors |
| | 8-10 | 10' | | 0 | 6,400 | No Staining/Odors |
| | 10-12 | | | 0 | 6,100 | No Staining/Odors |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
- BGS = Below the Ground Surface
- NA = Not Applicable

TEST PIT: **TP-1**



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTAN

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-2

SHEET 1 OF 1

JOB: 2161447

CHKD BY:

CONTRACTOR: LaBella LLC
OPERATOR: Mike Windrel, Jr.
LABELLA REPRESENTATIVE: JLD
TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 5/18/17 START TIME: 855

DATUM: NA
END TIME: 930

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 12 | 0-2 | 0.5' | 0 - 0.5' Concrete Backfill Material 0.5' - 4' Brownish Black Silty Clay with Trace Gravel, Brick, Slag, and Wood (LP, LS, M) 4' - 4.5' Red Fill Material - Crushed Brick 4.5' - 8' Brownish Black Silty Clay with Trace Gravel, Brick, Slag, Wood (LP, LS, Wet) 8' - 12' Brownish Gary Clay (LP, HS, Wet) | 0 | 6,500 | No Staining/Odors |
| | 2-4 | | | 0 | 7,000 | No Staining/Odors |
| | 4-6 | 4' 4.5' | | 0 | 7,500 | No Staining/Odors |
| | 6-8 | | | 0 | 8,000 | No Staining/Odors |
| | 8-10 | 8' | | 0 | 7,500 | No Staining/Odors |
| | 10-12 | | | 0 | 7,500 | No Staining/Odors |
| | | | Note: @ approximately 6', water began trickling into excavation Sample Collected - RI-TP-2D1012 @ 930 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 - 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

TEST PIT: TP-2



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTAN

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-3

SHEET 1 OF 1

JOB: 2161447

CHKD BY:

CONTRACTOR: LaBella LLC
OPERATOR: Mike Windrel, Jr.
LABELLA REPRESENTATIVE: JLD
TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 5/18/17 START TIME: 930

DATUM: NA
END TIME: 950

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 6 | 0-2 | 0.5' | 0' - 0.5' Concrete Backfill Material 0.5' - 3' Brown Silty Clay with Trace Gravel, Brick, Slag, and Wood (LP, LS, M) 3' - 3.5' Red Crushed Brick 3.5' - 4' Brownish Black Silty Clay with Trace Gravel (LP, LS, Wet) 4' - 6' Red Clay (HP, MS, Wet) | 0 | 7,100 | No Staining/Odors |
| | 2-4 | 3' 3.5' 4' | | 0 | 7,500 | No Staining/Odors |
| | 4-6 | | | 0 | 9,500 | No Staining/Odors |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Note: Water began entering the excavation at approximately 6'
Sample Collected - RI-TP-3D34 @ 1000
DUP 2 Collected here - TOC 945

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 - 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

TEST PIT: **TP-3**



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTAN

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-4

SHEET 1 OF 1

JOB: 2161447

CHKD BY:

CONTRACTOR: LaBella LLC

OPERATOR: Mike Windrel, Jr.

LABELLA REPRESENTATIVE: JLD

TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:

GROUND SURFACE ELEVATION NA

START DATE: 5/18/17

START TIME: 1030

DATUM: NA

END TIME: 1100

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|--|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 10 | 0-2 | 0.5' | 0' - 0.5' Concrete Backfill Material 0.5' - 3' Brownish Black Silty Clay with Trace Gravel, Brick, Wood, and Slag (LP, LS, M) 3' - 6' Brownish Red Silty Clay with Trace Gravel, Brick, Wood, and Slag (LP, LS, Sat) 6' - 9' Brownish Red Clay (HP, MS, Wet) 9' - 10' Brownish Gray Silty Sand (MP, LS, Wet) | 0 | 6,500 | No Staining/Odors |
| | 2-4 | 3' | | 0 | 7,100 | No Staining/Odors |
| | 4-6 | 6' | | 0 | 8,500 | No Staining/Odors |
| | 6-8 | 9' | | 0 | 9,500 | No Staining/Odors |
| | 8-10 | | | 0 | 7,000 | No Staining/Odors |
| | | | | | 0 | 7,100 |
| | | | Note: Could not advance further than 10' due to water entering the excavation Sample Collected - RI-TP-4/SS2 @ 1040 | | | |
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GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 - 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

TEST PIT: **TP-4**



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTAN

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-5
SHEET 1 OF 1
JOB: 2161447
CHKD BY:

CONTRACTOR: LaBella LLC TEST PIT LOCATION:
OPERATOR: Mike Windrel, Jr. GROUND SURFACE ELEVATION NA DATUM: NA
LABELLA REPRESENTATIVE: JLD START DATE: 5/18/17 START TIME: 1130 END TIME: 1200
TYPE OF EQUIPMENT: Track Mounted Excavator

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 12 | 0-2 | 0.5' | 0' - 0.5' Concrete Backfill Material 0.5' - 2' Brownish Black Silty Clay with Trace Gravel, Brick, Slag, Wood (LP, LS,M) 2' - 3' Brownish Red Fill Material (Crushed Brick) 3' - 4' Brownish Black Silty Clay with Trace Gravel, Brick, Slag, and Wood (MP, LS, M) 4' - 8' Brownish Red Clay (HS, MP, M) 8' - 12' Brownish Gray Mottled Sandy Silt (MP, MS, Wet) | 0 | 6,500 | No Staining/Odors |
| | 2-4 | 2' | | 0 | 7,100 | No Staining/Odors |
| | 4-6 | 3' | | 0 | 8,400 | No Staining/Odors |
| | 6-8 | 4' | | 0 | 9,100 | No Staining/Odors |
| | 8-10 | 8' | | 0 | 7,000 | No Staining/Odors |
| | 10-12 | | | 0 | 7,100 | No Staining/Odors |
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Note: Sample Collected - RI-TP-5D34 @ 1115

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 - 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

TEST PIT: TP-5



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTAN

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-6

SHEET 1 OF 1

JOB: 2161447

CHKD BY:

CONTRACTOR: LaBella LLC

OPERATOR: Mike Windrel, Jr.

LABELLA REPRESENTATIVE: JLD

TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:

GROUND SURFACE ELEVATION NA

START DATE: 5/18/17

START TIME: 1200

DATUM: NA

END TIME: 1230

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 12 | 0-2 | | 0' - 0.5' Concrete Backfill Material 0.5' - 2' Brownish Black Silty Clay with Trace Gravel, Brick, Slag, Wood (LP, LS,M) 2' - 3' Brownish Red Fill Material (Crushed Brick) 3' - 4' Brownish Black Silty Clay with Trace Gravel, Brick, Slag, and Wood (MP, LS, M) 4' - 8' Brownish Red Clay (HS, MP, M) 8' - 12' Brownish Gray Mottled Sandy Silt (MP, MS, Wet) | 0 | 6,500 | No Staining/Odors |
| | 2-4 | | | 0 | 7,100 | No Staining/Odors |
| | 4-6 | | | 0 | 8,000 | No Staining/Odors |
| | 6-8 | | | 0 | 5,900 | No Staining/Odors |
| | 8-10 | | | 0 | 6,000 | No Staining/Odors |
| | 10-12 | | | 0 | 6,100 | No Staining/Odors |
| | | | Note: Water entering excavation @ approximately 6 ft bgs Sample Collected - RI-TP-6D1112 @ 1145 | | | |
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GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 - 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

TEST PIT: **TP-6**



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTAN

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-7
SHEET 1 OF 1
JOB: 2161447
CHKD BY:

CONTRACTOR: LaBella LLC TEST PIT LOCATION:
OPERATOR: Mike Windrel, Jr. GROUND SURFACE ELEVATION NA DATUM: NA
LABELLA REPRESENTATIVE: JLD START DATE: 5/18/17 1230 END TIME: 1245
TYPE OF EQUIPMENT: Track Mounted Excavator

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|--|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 4 | 0-2 | | 0'-0.5' Concrete Backfill Material 0.5' - 4' Brownish Black Silty Clay with Trace Gravel, Brick, Wood, and Slag | 0 | 8,100 | No Staining/Odors |
| | 2-4 | | | 0 | 8,000 | No Staining/Odors |
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Note: Water began to enter excavation at 4 ft bgs
Sample Collected - RI-TP-7D34 @ 1215

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
- BGS = Below the Ground Surface
- NA = Not Applicable

TEST PIT: **TP-7**



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-8

SHEET 1 OF 1

JOB: 2161447

CHKD BY:

| | | |
|--|-----------------------------|------------------|
| CONTRACTOR: LaBella LLC | TEST PIT LOCATION: | DATUM: NA |
| OPERATOR: Mike Windrel, Jr. | GROUND SURFACE ELEVATION NA | END TIME: 1300 |
| LABELLA REPRESENTATIVE: JLD | START DATE: 5/18/17 | START TIME: 1245 |
| TYPE OF EQUIPMENT: Track Mounted Excavator | | |

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|-------------------------|-------------------------|---|---------------------------------|---------------------------------|---------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 4 | 0-2 | | 0' - 4' Brown Silty Clay with Trace Gravel and Brick Note: Encountered a concrete pad and could not advance further than 4 ft bgs. Strong "paint" odor as soon as we broke through the ground surface. Sample Collected - RI-TP-8-SS3 @ 1245 | 17.9 | 6,500 | Strong "Paint" Odor |
| | 2-4 | | | 2.3 | 5,500 | No Staining/Odors |
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GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 - 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

TEST PIT: **TP-8**



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-9
SHEET 1 OF 1
JOB: 2161447
CHKD BY:

| | | |
|--|------------------------------|------------------|
| CONTRACTOR: LaBella LLC | TEST PIT LOCATION: | DATUM: NA |
| OPERATOR: Mike Windrel, Jr. | GROUND SURFACE ELEVATION: NA | END TIME: 1320 |
| LABELLA REPRESENTATIVE: JLD | START DATE: 5/18/17 | START TIME: 1300 |
| TYPE OF EQUIPMENT: Track Mounted Excavator | | |

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|--|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 4 | 0-2 | | 0' - 3' Brown Silty Clay with Trace Gravel, Brick, and Wood 3' - 4' Brownish Red Silty Clay with Large Rocks. | 0 | 6,500 | No Staining/Odors |
| | 2-4 | | | 0 | 8,000 | No Staining/Odors |
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Note: Encountered a large boulders in the bottom of excavation and could not advance further than 4 ft bgs.
Sample Collected - RI-TP-9D23 @ 1315

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
- BGS = Below the Ground Surface
- NA = Not Applicable

TEST PIT: **TP-9**



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-10
SHEET 1 OF 1
JOB: 2161447
CHKD BY:

CONTRACTOR: LaBella LLC TEST PIT LOCATION:
OPERATOR: Mike Windrel, Jr. GROUND SURFACE ELEVATION NA DATUM: NA
LABELLA REPRESENTATIVE: JLD START DATE: 5/18/17 START TIME: 1330 END TIME: 1400
TYPE OF EQUIPMENT: Track Mounted Excavator

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|--|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 5 | 0-2 | | 0' - 4' Brown Silty Clay with Trace Gravel 4' - 5' Brownish Red Silty Clay with Large Rocks | 0 | 6,100.0 | No Staining/Odors |
| | 2-4 | | | 0 | 7,100.0 | No Staining/Odors |
| | 5 | | | 0 | 6,500 | No Staining/Odors |
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Note: Encountered a large boulders in the bottom of excavation and could not advance further than 5 ft bgs. Water began entering the excavation @ approximately 4 ft bgs. Sample Collected - RI-TP-10/SS4 @ 1345

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 - 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

TEST PIT: TP-10



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTAN

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-11

SHEET 1 OF 1

JOB: 2161447

CHKD BY:

CONTRACTOR: LaBella LLC

OPERATOR: Mike Windrel, Jr.

LABELLA REPRESENTATIVE: JLD

TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:

GROUND SURFACE ELEVATION NA

START DATE: 5/18/17

START TIME: 1415

DATUM:

NA

END TIME:

1440

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 8 | 0-2 | | 0' - 4' Brown Silty Clay with Trace Gravel, Brick, Wood, Organics, Large Rocks (LP, LS, M) | 0 | 7,000 | No Staining/Odors |
| | 2-4 | | 4' - 7' Brownish Red Silty Clay with Trace Gravel, Brick, Large Rocks, and Organics (LP, LS, Wet) | 0 | 7,000 | No Staining/Odors |
| | 4-6 | | 7' - 8' Brownish Red Silty Clay with Trace Gravel, Large Bricks, and Boulders (LP, LS, Sat | 0 | 8,500 | No Staining/Odors |
| | 6-8 | | | 0 | 8,100 | No Staining/Odors |
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Note: Water began entering the excavation @ approximately 7-8 ft bgs. Concrete foundation located within the southeast portion of the excavation.
Sample Collected - RI-TP-11D78 @ 1415

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 - 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

TEST PIT: **TP-11**



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTAN

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-12
SHEET 1 OF 1
JOB: 2161447
CHKD BY:

CONTRACTOR: LaBella LLC TEST PIT LOCATION:
OPERATOR: Mike Windrel, Jr. GROUND SURFACE ELEVATION NA DATUM: NA
LABELLA REPRESENTATIVE: JLD START DATE: 5/18/17 START TIME: 1445 END TIME: 1500
TYPE OF EQUIPMENT: Track Mounted Excavator

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 12 | 0-2 | | 0' - 8' Brownish Black Silty Clay with Trace Gravel, Brick, Slag, Wood (LS, LP, M) 8' - 11' Brownish Gray Mottled Silty Clay (MP, MS, Wet) 11'-12' Gray Clay (MP, HS, Wet) Note: Groundwater entering the excavation heavily from the south portion of excavation. Sample Collected - RI-TP-12D1112 | 0 | 6,500 | No Staining/Odors |
| | 2-4 | | | 0 | 6,100 | No Staining/Odors |
| | 4-6 | | | 0 | 5,200 | No Staining/Odors |
| | 6-8 | | | 0 | 7,100 | No Staining/Odors |
| | 8-10 | | | 0 | 7,000 | No Staining/Odors |
| | 10-12 | | | 0 | 6,300 | No Staining/Odors |
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GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 - 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

TEST PIT: **TP-12**



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTAN

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-13

SHEET 1 OF 1

JOB: 2161447

CHKD BY:

CONTRACTOR: LaBella LLC

TEST PIT LOCATION:

OPERATOR: Mike Windrel, Jr.

GROUND SURFACE ELEVATION NA

DATUM: NA

LABELLA REPRESENTATIVE: JLD

START DATE: 5/18/17

START TIME: 1500

END TIME: 1530

TYPE OF EQUIPMENT: Track Mounted Excavator

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|-------------------------|-------------------------|--|---------------------------------|---------------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 2 | 0-2 | | 0' - 2' Brown Silty Clay with Trace Gravel and Brick | 0 | 6,500 | No Staining/Odors |
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Note: Hit a concrete foundation at approximately 2 ft bgs.
Sample Collected - RI-TP-13/SS-5 @ 1530

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
- BGS = Below the Ground Surface
- NA = Not Applicable

TEST PIT: TP-13



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-14

SHEET 1 OF 1

JOB: 2161447

CHKD BY:

CONTRACTOR: LaBella LLC

OPERATOR: Mike Windrel, Jr.

LABELLA REPRESENTATIVE: JLD

TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:

GROUND SURFACE ELEVATION NA

START DATE: 5/18/17

START TIME: 1540

DATUM: NA

END TIME: 1550

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|-------------------------|-------------------------|--|---------------------------------|---------------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 2 | 0-2 | | 0' - 2' Brown Silty Clay with Trace Gravel and Brick | 0 | 6,300 | No Staining/Odors |
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Note: Hit a concrete foundation at approximately 2 ft bgs.
Sample Collected - RI-TP-14/SS-6 @ 1600

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 - 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

TEST PIT: **TP-14**



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-15
SHEET 1 OF 1
JOB: 2161447
CHKD BY:

CONTRACTOR: LaBella LLC TEST PIT LOCATION:
OPERATOR: Mike Windrel, Jr. GROUND SURFACE ELEVATION NA DATUM: NA
LABELLA REPRESENTATIVE: JLD START DATE: 5/18/17 START TIME: 1415 END TIME: 1440
TYPE OF EQUIPMENT: Track Mounted Excavator

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|--|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 8 | 0-2 | | 0' - 6' Brown Silty Clay with Trace Gravel, Brick, Wood, and Boulders (LP, LS M) 6' - 8' Brownish Gray Mottled Silty Clay (MS, MP, Wet) | 0 | 6,500 | No Staining/Odors |
| | 2-4 | | | 0 | 7,000 | No Staining/Odors |
| | 4-6 | | | 0 | 8,100 | No Staining/Odors |
| | 6-8 | | | 0 | 7,500 | No Staining/Odors |
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Note: Large boulders encountered at the bottom of the excavation. Water entering the excavation at approximately 6 ft bgs.
Sample Collected - RI-TP-15D46 @ 1615

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 - 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

TEST PIT: TP-15



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-8 RE
SHEET 1 OF 1
JOB: 2161447
CHKD BY:

CONTRACTOR: LaBella LLC
OPERATOR: Mike Windrel, Jr.
LABELLA REPRESENTATIVE: JLD
TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 7/27/17 START TIME: 1230

DATUM: NA
END TIME: 1420

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 10 | 0-2 | | 0' - 4' Previously Excavated Material from 5/18/2017 4' - 6' Brown Red Slag Material 6' - 8.5' Gray Sandy Clay with Trace Gravel | 0 | 7,050 | No Staining/Odors |
| | 2-4 | | | 0 | 7,300 | No Staining/Odors |
| | 4-6 | | | 0 | 8,500 | No Staining/Odors |
| | 6-8 | | | 0 | 7,800 | No Staining/Odors |
| | 8-10 | | | 0 | 7,000 | No Staining/Odors |
| | | | Notes: Brown Red Slag was a very hard material. Needed to switch out bucket attachment for hammer. Water entered excavation @ Approx. 6 ft bgs. Sample collected - RI-TP-8D68 @ 1415 | | | |
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GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
- BGS = Below the Ground Surface
- NA = Not Applicable

TEST PIT: **TP-8 RE**



300 PEARL STREET, BUFFALO, NY
 ENVIRONMENTAL ENGINEERING CONSULTAN

PROJECT
 1660 Niagara Street
 Buffalo, New York
 Remedial Investigation

TEST PIT: RI-TP-16
 SHEET 1 OF 1
JOB: 2161447
 CHKD BY:

| | | |
|--|-----------------------------|------------------|
| CONTRACTOR: LaBella LLC | TEST PIT LOCATION: | |
| OPERATOR: Mike Windrel, Jr. | GROUND SURFACE ELEVATION NA | DATUM: NA |
| LABELLA REPRESENTATIVE: JLD | START DATE: 7/27/17 | START TIME: 1000 |
| TYPE OF EQUIPMENT: Track Mounted Excavator | | END TIME: 1030 |

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 8 | 0-2 | | 0' - 2' Brown Silty Clay with Trace Gravel & Brick (LP, LS, M) 2' - 4' Brown Silty Clay with Trace Gravel, Brick, Shale, Crushed Concrete, & Asphalt (MS, M) 4' - 8' Brownish Gray Silty Clay with Trace Gravel (MP, MS, Wet) | 0 | 6,800 | No Staining/Odors |
| | 2-4 | | | 0 | 7,800 | No Staining/Odors |
| | 4-6 | | | 0 | 8,200 | No Staining/Odors |
| | 6-8 | | | 0 | 7,800 | No Staining/Odors |
| | | | Notes: No water was observed entering the excavation. This test pit is within five feet of Monitoring Well RI-MW-5. Sample Collected - RI-TP-16/SS7 @ 1000 Sample Collected - RI-TP-16D24 @ 1015 | | | |

GENERAL NOTES

- STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
- WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER

ND = Non Detect
 BGS = Below the Ground Surface
 NA = Not Applicable

TEST PIT: **TP-16**



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTAN

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-17
SHEET 1 OF 1
JOB: 2161447
CHKD BY:

CONTRACTOR: LaBella LLC
OPERATOR: Mike Windrel, Jr.
LABELLA REPRESENTATIVE: JLD
TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 7/27/17 START TIME: 1040

DATUM: NA
END TIME: 1110

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 6 | 0-2 | | 0' - 3' Brown Silty Clay with Trace Gravel & Brick (MP, MS, M) 3' - 4' Brownish Black silty Clay with Trace Gravel, Brick, and Rock (MP, MS, M) 4' - 5.5' Brownish Red Silty Clay (MP, MS, M) | 0 | 6,800 | No Staining/Odors |
| | 2-4 | | | 0 | 7,100 | No Staining/Odors |
| | 4-6 | | | 0 | 8,500 | No Staining/Odors |
| | | | Notes: Water began entering excavation @ 5.5 ft bgs. Sample Collected - RI-TP-17/SS8 @ 1045 Sample Collected - RI-TP017D24 @ 1100 | | | |

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER

ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

TEST PIT: TP-17



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-18
SHEET 1 OF 1
JOB: 2161447
CHKD BY:

CONTRACTOR: LaBella LLC
OPERATOR: Mike Windrel, Jr.
LABELLA REPRESENTATIVE: JLD
TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 7/27/17 START TIME: 1115

DATUM: NA
END TIME: 1145

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|--|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 6 | 0-2 | | 0' - 5' Brown Silty Clay with Trace Gravel, Brick, Concrete, Rock, & Slag (LP, LS, M) 5' - 6' Brownish Red Silty Clay with Trace Gravel (MP, MS, M) | 0 | 7,600 | No Staining/Odors |
| | 2-4 | | | 0 | 5,500 | No Staining/Odors |
| | 4-6 | | | 0 | 7,800 | No Staining/Odors |
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Notes: Unknown odor noted throughout excavation; However, all soil screened has no direct odor. Water entered excavation @ 5 ft bgs.
Sample Collected - RI-TP-18/SS9 @ 1115
Sample Collected - RI-TP-18D56 @ 1130

GENERAL NOTES
 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
 ND = Non Detect
 BGS = Below the Ground Surface
 NA = Not Applicable

TEST PIT: TP-18



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTAN

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-19
SHEET 1 OF 1
JOB: 2161447
CHKD BY:

CONTRACTOR: LaBella LLC TEST PIT LOCATION:
OPERATOR: Mike Windrel, Jr. GROUND SURFACE ELEVATION NA DATUM: NA
LABELLA REPRESENTATIVE: JLD START DATE: 7/27/17 START TIME: 1445 END TIME: 1545
TYPE OF EQUIPMENT: Track Mounted Excavator

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|--|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 6 | 0-2 | | 0' - 0.6' Brown Silty Clay with Trace Gravel, Rock, & Glass (LP, LS, M) 0.6' - 1.5' Light Brown Silty Clay with Trace Gravel and Brick (LP, LS, M) 1.5' - 4' Brownish Red Slag Matrerial 4' - 6' Brown Gray Silty Clay with Trace Gravel (MP, MS, Wet) | 0 | 5,800 | No Staining/Odors |
| | 2-4 | | | 0 | 5,500 | No Staining/Odors |
| | 4-6 | | | 0 | 7,800 | Slight Sweet Odor on Water that Entered Excavation |
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Notes: Brown Red Slag was a very hard material. Needed to switch out bucket attachment for hammer.
Unknown odor observed while breaking up slag material. Sweet odor was observed in the first bucket of clay material below slag.
Sample Collected - RI-TP-19/SS10 @ 1500
Sample Collected - RI-TP19D68 @ 1530

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
- BGS = Below the Ground Surface
- NA = Not Applicable

TEST PIT: **TP-19**



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-20
SHEET 1 OF 1
JOB: 2161447
CHKD BY:

| | | |
|--|-----------------------------|-----------------|
| CONTRACTOR: LaBella LLC | TEST PIT LOCATION: | DATUM: NA |
| OPERATOR: Mike Windrel, Jr. | GROUND SURFACE ELEVATION NA | END TIME: 845 |
| LABELLA REPRESENTATIVE: JLD | START DATE: 7/28/17 | START TIME: 800 |
| TYPE OF EQUIPMENT: Track Mounted Excavator | | |

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|---------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 7.5 | 0-2 | | 0' - 2' Brown Silty Clay with Trace Gravel, Brick, Slag, and Rock 2' - 4' Brownish Red Slag Material Mixed with Brick 4' - 7.5' Gray Silty Clay with Trace Gravel | 1.9 | 5,800 | No Staining/Odors |
| | 2-4 | | | 30.6 | 5,000 | Strong "Paint" Odor |
| | 4-6 | | | 0.3 | 7,400 | No Staining/Odors |
| | 6-8 | | | 0.7 | 7,300 | No Staining/Odors |
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Notes: Encountered the slag material @ 2' and observed paint odor in the soil beneath the slag. Odor was fairly strong but disipates quickly.
 Sample Collected - RI-TP-20/SS11 @ 815
 Sample Collected - RI-TP-20D12 @ 830 (MS/MSD Collected Here)
 Sample Collected - RI-TP-20D67 @ 845

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER

ND = Non Detect
 BGS = Below the Ground Surface
 NA = Not Applicable

TEST PIT: TP-20



300 PEARL STREET, BUFFALO, NY
 ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
 1660 Niagara Street
 Buffalo, New York
 Remedial Investigation

TEST PIT: RI-TP-21
 SHEET 1 OF 1
JOB: 2161447
 CHKD BY:

CONTRACTOR: LaBella LLC
 OPERATOR: Mike Windrel, Jr.
 LABELLA REPRESENTATIVE: JLD
 TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:
 GROUND SURFACE ELEVATION NA
 START DATE: 7/28/17 START TIME: 855

DATUM: NA
 END TIME: 930

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|--|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 7.5 | 0-2 | | 0' - 1' Brown Silty Clay with Trace Gravel, Brick, Rock, and Slag (LP, LS, M) 1' - 3' Grayish Red Silty Clay Material with Trace Gravel (MP, MS, M) 3' - 4.5' Brownish Red Slag Material with Brick 4.5' - 7.5' Gray Silty Clay with Trace Gravel (MP, MS, Wet) Notes: Water entered excavation @ about 6 ft bgs. Slag material was broken up with the bucket. Sample Collected - RI-TP-21/SS12 @ 900 Sample Collected - RI-TP-21D67 @ 915 | 0.1 | 7,400 | No Staining/Odors |
| | 2-4 | | | 0 | 7,800 | No Staining/Odors |
| | 4-6 | | | 0 | 6,400 | No Staining/Odors |
| | 6-8 | | | 0 | 6,800 | No Staining/Odors |
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GENERAL NOTES
 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER
 ND = Non Detect
 BGS = Below the Ground Surface
 NA = Not Applicable

TEST PIT: **TP-21**



300 PEARL STREET, BUFFALO, NY
 ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
 1660 Niagara Street
 Buffalo, New York
 Remedial Investigation

TEST PIT: RI-TP-22
 SHEET 1 OF 1
 JOB: 2161447
 CHKD BY:

CONTRACTOR: LaBella LLC
 OPERATOR: Mike Windrel, Jr.
 LABELLA REPRESENTATIVE: JLD
 TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:
 GROUND SURFACE ELEVATION NA
 START DATE: 7/28/17 START TIME: 1015

DATUM: NA
 END TIME: 1105

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 7 | 0-2 | | 0' - 1.5' Brown Silty Clay with Trace Gravel, Brick, Asphalt, and Slag (LP, LS, M) 1.5' - 5' Brownish Red Slag Material 5' - 7' Gray Silty Clay with Trace Gravel (MP, MS, M) | 0 | 6,500 | No Staining/Odors |
| | 2-4 | | | 0 | 7,400 | No Staining/Odors |
| | 4-6 | | | 0 | 6,500 | No Staining/Odors |
| | 6-8 | | | 0 | 6,400 | No Staining/Odors |
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Notes: Slag material encountered at 1.5 ft bgs. Brown red slag was a very hard material. Needed to switch out bucket attachment for hammer.
 Sample Collected - RI-TP-22/SS13 @ 1015
 Sample Collected - RI-TP22D56 @ 1045

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 - 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
 BGS = Below the Ground Surface
 NA = Not Applicable

TEST PIT: TP-22



300 PEARL STREET, BUFFALO, NY
 ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
 1660 Niagara Street
 Buffalo, New York
 Remedial Investigation

TEST PIT: RI-TP-23
 SHEET 1 OF 1
JOB: 2161447
 CHKD BY:

CONTRACTOR: LaBella LLC TEST PIT LOCATION:
 OPERATOR: Mike Windrel, Jr. GROUND SURFACE ELEVATION NA DATUM: NA
 LABELLA REPRESENTATIVE: JLD START DATE: 7/28/17 START TIME: 1145 END TIME: 1200
 TYPE OF EQUIPMENT: Track Mounted Excavator

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|-------------------------|-------------------------|--|---------------------------------|---------------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 7 | 0-2 | | 0' - 6' Brown Silty Clay with Trace Gravel, Brick, and Rock (LP, LS, M) 6' - 7' Gray Silty Clay with Trace Gravel (MP, MS, Wet) | 0 | 6,500 | No Staining/Odors |
| | 2-4 | | | 0 | 7,000 | No Staining/Odors |
| | 4-6 | | | 0 | 7,100 | No Staining/Odors |
| | 6-8 | | | 0 | 6,800 | No Staining/Odors |
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Notes: Water entered excavation @ About 5 ft bgs.
 Sample Collected - RI-TP-23/SS14 @ 1150
 Sample Collected - RI-TP-23D67 @ 1200

GENERAL NOTES
 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER
 ND = Non Detect
 BGS = Below the Ground Surface
 NA = Not Applicable

TEST PIT: **TP-23**



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-24

SHEET 1 OF 1
JOB: 2161447
CHKD BY:

CONTRACTOR: LaBella LLC
OPERATOR: Mike Windrel, Jr.
LABELLA REPRESENTATIVE: JLD
TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 7/28/17 START TIME: 1215

DATUM: NA
END TIME: 1320

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|----------------------|----------------------|---|------------------------|------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 8 | 0-2 | | 0' - 3' Brown Silty Clay with Trace Gravel, Brick, Rock, and Slag (LP, LS, M) 3' - 4' Brown Shale Material & a Piece of Clay Tile Pipe 4' - 6' Brownish Red Silty Clay with Trace Gravel (MP, MS, M) 6' - 7.5' Brownish Red Slag Material - Crushed 7.5' - 8' Gray Silty Clay (LP, LS, Wet) | 0 | 6,400 | No Staining/Odors |
| | 2-4 | | | 0 | 7,500 | No Staining/Odors |
| | 4-6 | | | 0 | 9,700 | No Staining/Odors |
| | 6-8 | | | 0 | 7,400 | No Staining/Odors |
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Notes: Bagged and screened sample @ 3-4 ft bgs that contained strong paint odor - No PID reading. The clay tile pipe that was uncovered had a strong paint odor and a PID reading of 16.8 ppm. Water entered excavation @ 7.5 ft bgs. Water was measured at 40".
Sample Collected - RI-TP-24/SS15 @ 1220
Sample Collected - RI-TP-24D34 @ 1245
Sample Collected - RI-TP-24D78 @ 1315

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
 - 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
BGS = Below the Ground Surface
NA = Not Applicable

TEST PIT: TP-24



300 PEARL STREET, BUFFALO, NY
 ENVIRONMENTAL ENGINEERING CONSULTANT

PROJECT
 1660 Niagara Street
 Buffalo, New York
 Remedial Investigation

TEST PIT: RI-TP-25

SHEET 1 OF 1
JOB: 2161447
 CHKD BY:

CONTRACTOR: LaBella LLC
 OPERATOR: Mike Windrel, Jr.
 LABELLA REPRESENTATIVE: JLD
 TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:
 GROUND SURFACE ELEVATION NA
 START DATE: 7/28/17 START TIME: 1330

DATUM: NA
 END TIME: 1430

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|-------------------------|-------------------------|--|---------------------------------|---------------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 8 | 0-2 | | 0' - 2' Brown Silty Clay with Trace Gravel and Brick (LP, LS, M) 2' - 3.5' Brownish Red Slag Material 3.5' - 6.5' GraySandy Clay (LP, LS, Wet) 6.5' - 8' Gray Silty Clay with Trace Gravel (MP, MS, Wet) | 0 | 7,200 | No Staining/Odors |
| | 2-4 | | | 0 | 7,400 | No Staining/Odors |
| | 4-6 | | | 0 | 8,900 | No Staining/Odors |
| | 6-8 | | | 0 | 7,700 | No Staining/Odors |
| | | | Notes: Encountered slag material @ 2 ft bgs. Had to switch out bucket attachment for hammer. 19" of water in excavation. Water began entering excavation @ about 4 ft bgs. Sample Collected - RI-TP-25/SS16 @ 1400 Sample Collected - RI-TP-25D67 @ 1430 | | | |
| | | | | | | |
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GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED. FLUCTUATIONS OF GROUNDWATER

ND = Non Detect
 BGS = Below the Ground Surface
 NA = Not Applicable

TEST PIT: TP-25



300 PEARL STREET, BUFFALO, NY
ENVIRONMENTAL ENGINEERING CONSULTANTS

PROJECT
1660 Niagara Street
Buffalo, New York
Remedial Investigation

TEST PIT: RI-TP-26
SHEET 1 OF 1
JOB: 2161447
CHKD BY:

CONTRACTOR: LaBella LLC
OPERATOR: Mike Windrel, Jr.
LABELLA REPRESENTATIVE: JLD
TYPE OF EQUIPMENT: Track Mounted Excavator

TEST PIT LOCATION:
GROUND SURFACE ELEVATION NA
START DATE: 7/28/17 START TIME: 1445

DATUM: NA
END TIME: 1515

| DEPTH (FEET) | SAMPLE | | VISUAL CLASSIFICATION | PID FIELD SCREEN (PPM) | RAD FIELD SCREEN (CPM) | REMARKS |
|--------------|-------------------------|-------------------------|--|---------------------------------|---------------------------------|-------------------|
| | SAMPLE NO. AND DEPTH | STRATA CHANGE (FEET) | | | | |
| 8 | 0-2 | | 0' - 2' Brown Silty Clay with Trace Gravel (LP, LS, M) 2' - 3' Brownish Black Silty Clay with Slag & Asphalt (LP, LS, M) 3' - 5' Brownish Red Slag Material - Crushed 5' - 8' Gray Silty Clay with Trace Gravel (LP, LS, Wet) | 0 | 8,500 | No Staining/Odors |
| | 2-4 | | | 0 | 8,200 | No Staining/Odors |
| | 4-6 | | | 0 | 7,200 | No Staining/Odors |
| | 6-8 | | | 0 | 7,500 | No Staining/Odors |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Notes: Water encountered @ bbout 6 ft bgs.
Sample Collected - RI-TP-26/SS17 @ 1450
Sample Collected - RI-TP-26D56 @ 1510

GENERAL NOTES

- 1) STRATIFICATION LINES REPRESENT APPROXIMATE BOUNDARY BETWEEN SOIL TYPES, TRANSITIONS MAY BE GRADUAL.
- 2) WATER LEVEL READINGS HAVE BEEN MADE AT TIMES AND UNDER CONDITIONS STATED, FLUCTUATIONS OF GROUNDWATER
- ND = Non Detect
- BGS = Below the Ground Surface
- NA = Not Applicable

TEST PIT: **TP-26**

**2020 NYSDEC
REMEDIAL INVESTIGATION**



Department of Environmental Conservation

SOIL BORING LOG

BORING NO: 1675-MW-1

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

SHEET: 1 of 2

CLIENT: NYSDEC

SITE NO.: C915299A

DRILLING CONTRACTOR: TREC Environmental

BORING LOCATION:

GROUNDWATER:

CASING SAMPLER CORE TUBE

DATE STARTED: 09/14/20

DATE TIME LEVEL TYPE

TYPE Macrocore

DATE FINISHED: 09/15/20

DIA.

2"

DRILLER: Eric Hamman

WT.

--

GEOLOGIST: Steven Moeller

FALL

--

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | |
|------------|----------------------------|-----|----------|-------|----------------------------|---------------------|--|-------|-----------|-----|--|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | | |
| | | | | | | | | | Soil | BHS | |
| 1 | [Cross-hatched pattern] | | Hand dug | 100% | Brown | | 8" loamy Topsoil with angular gravel and slag | Fill | 0.0 | N/A | |
| 2 | | | | | | | Clayey soil with gray slag. Water seeps into hole at approximately 2.5 feet depth. | | | | |
| 3 | | | | | | | Silty Clay, firm. Possibly reworked. | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | [Cross-hatched pattern] | 1 | 2.0" MC | 7% | Brown | Moist | Silty Clay, plastic, trace angular gravel. Possibly Reworked. | Fill | 0.0 | N/A | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | [Diagonal hatched pattern] | 2 | 2.0" MC | 48% | Brown to Dark Gray | Moist to Very Moist | 0.5' same as above | ML-CH | 0.0 | N/A | |
| 10 | | | | | | | Silty Clay, very plastic, with trace orange mottles | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | [Diagonal hatched pattern] | 3 | 2.0" MC | 85% | Gray to Dark Gray | Moist to Very Moist | 2' Silty Clay, very plastic, with orange mottles | ML-CH | 0.0 | N/A | |
| 14 | | | | | | | Silty Clay, plastic, firmer than above, no mottles | | | | |
| 15 | | | | | | | | | | | |
| 16 | | | | | | | | | | | |
| 17 | [Dotted pattern] | 4 | 2.0" MC | 55% | Dark Gray to Reddish Brown | Very Moist to Wet | 1.2' same as above | ML-CL | 0.0 | N/A | |
| 18 | | | | | | | 1' Silty Clay to Silty Clay Fine Sand, plastic | | | | |
| 19 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |

End of Boring @ 32' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;

SITE NO.: C915299A

2"φ PVC monitoring well 1675-MW-1 installed in borehole;

BORING NO.: 1675-MW-1

BHS = Bag Headspace NR = Not Recorded



Department of Environmental Conservation

SOIL BORING LOG

BORING NO: 1675-MW-1

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

SHEET: 2 of 2

CLIENT: NYSDEC

SITE NO.: C915299A

DRILLING CONTRACTOR: TREC Environmental

BORING LOCATION:

GROUNDWATER: CASING SAMPLER CORE TUBE

DATE STARTED: 09/14/20

DATE TIME LEVEL TYPE TYPE Macrocore

DATE FINISHED: 09/15/20

DIA. 2"

DRILLER: Eric Hamman

WT. --

GEOLOGIST: Steven Moeller

FALL --

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | |
|------------|-----------|-----|---------|-------|-----------------------|-------------------|---|-------|-----------|-----|--|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | | |
| | | | | | | | | | Soil | BHS | |
| 21 | [Pattern] | 5 | 2.0" MC | 58% | Gray to Reddish Brown | Very Moist to Wet | Interlayered Silty Clay, Silty Fine Sand & Clayey Silty Fine Sand, trace rounded gravel | ML-SM | 6.1 | N/A | |
| 22 | | | | | | | | | | | |
| 23 | | | | | | | | | | | |
| 24 | | | | | | | | | | | |
| 25 | [Pattern] | 6 | 2.0" MC | 65% | Grayish Brown | Wet | Same as above but more Silty Sand | ML-SM | 5.6 | N/A | |
| 26 | | | | | | | | | | | |
| 27 | | | | | | | | | | | |
| 28 | | | | | | | | | | | |
| 29 | [Pattern] | 7 | 2.0" MC | 83% | Gray | Wet | 8" Silty Fine Sand with Fine Gravel | SM-GM | 9.9 | N/A | |
| 30 | | | | | | | | | | | |
| 31 | | | | | | | | | | | |
| 32 | | | | | | | | | | | |
| 33 | | | | | | | | | | | |
| 34 | | | | | | | | | | | |
| 35 | | | | | | | | | | | |
| 36 | | | | | | | | | | | |
| 37 | | | | | | | | | | | |
| 38 | | | | | | | | | | | |
| 39 | | | | | | | | | | | |
| 40 | | | | | | | | | | | |

End of Boring @ 32' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;
2"φ PVC monitoring well 1675-MW-1 installed in borehole;
BHS = Bag Headspace NR = Not Recorded

SITE NO.: C915299A

BORING NO.: 1675-MW-1



Department of
Environmental
Conservation

SOIL BORING LOG

BORING NO: 1675-MW-2

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

SHEET: 1 of 1

CLIENT: NYSDEC

SITE NO.: C915299A

DRILLING CONTRACTOR: TREC Environmental

BORING LOCATION:

GROUNDWATER: CASING SAMPLER CORE TUBE

DATE STARTED: 09/14/20

| DATE | TIME | LEVEL | TYPE | TYPE | | Macrocore | | |
|------|------|-------|------|------|--|-----------|--|--|
| | | | | DIA. | | 2" | | |
| | | | | WT. | | -- | | |
| | | | | FALL | | -- | | |

DATE FINISHED: 09/15/20

DRILLER: Eric Hamman

GEOLOGIST: Steven Moeller

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | |
|------------|----------------------------|-----|----------|-------|---------------|--------------|---|-------|-----------|-----|------------------------------------|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | | |
| | | | | | | | | | Soil | BHS | |
| 1 | [Cross-hatched pattern] | | Hand dug | 100% | Gray to Black | Moist to Wet | 8" asphaltic pavement | Fill | | | |
| 2 | | | | | Black | | 4' fine to medium brown sand | | | | |
| 3 | | | | | | | Gravel to sand sized cinders, trace silt sized material | | | | |
| 4 | | | | | | | Sand and gravel/cindery material | | | | |
| 5 | | | | | | | | | | | |
| 6 | [Cross-hatched pattern] | 1 | 2.0" MC | 33% | Black | Moist to Wet | Fall in | Fill | 0.0 | N/A | |
| 7 | | | | | | | | | | | |
| 8 | | | | | Dk Gray | | 2" Silty Clay | | | | |
| 9 | | | | | Dark Gray | | Wet (tube full of water) | | | | Silty Clay, very plastic, no odors |
| 10 | [Diagonal hatched pattern] | 2 | 2.0" MC | 18% | | Moist | Silty Clay, very firm, slightly plastic, with trace orange & gray mottles, no odors | ML-CL | 0.0 | N/A | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |
| 14 | [Diagonal hatched pattern] | 3 | 2.0" MC | 85% | Reddish Brown | Moist to Wet | Silty Clay, very firm, with trace gray mottles | ML-CL | 0.0 | N/A | |
| 15 | | | | | | | | | | | |
| 16 | | | | | | | | | | | |
| 17 | | | | | | | | | | | |
| 18 | [Diagonal hatched pattern] | 4 | 2.0" MC | 100% | Reddish Brown | Moist to Wet | Silty Clay, very firm, with trace gray mottles | ML-CL | 0.0 | N/A | |
| 19 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |

End of Boring @ 20' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;
2"φ PVC monitoring well 1675-MW-2 installed in borehole;
BHS = Bag Headspace NR = Not Recorded

SITE NO.: C915299A

BORING NO.: 1675-MW-2



Department of
Environmental
Conservation

SOIL BORING LOG

BORING NO: SB-1

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

SHEET: 1 of 2

CLIENT: NYSDEC

SITE NO.: C915299A

DRILLING CONTRACTOR: TREC Environmental

BORING LOCATION:

GROUNDWATER:

CASING SAMPLER CORE TUBE

DATE STARTED: 09/16/20

DATE TIME LEVEL TYPE

TYPE Macrocore

DATE FINISHED: 09/16/20

DIA.

2"

DRILLER: Eric Hamman

WT.

--

GEOLOGIST: Steven Moeller

FALL

--

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | |
|------------|-------------------------|-----|---------|-------|---------------|-----------------------|--|-------|-----------|-----|--|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | | |
| | | | | | | | | | Soil | BHS | |
| 1 | [Cross-hatched pattern] | 1 | 2.0" MC | 45% | Brown to Gray | Dry to Slightly Moist | Angular gravel & slag, a little loamy soil matrix, slight burnt odor | Fill | 1.8 | 7.8 | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | [Cross-hatched pattern] | 2 | 2.0" MC | 45% | Brown to Gray | Dry to Slightly Moist | 1' same as above, slight burnt odor | Fill | N/A | 0.7 | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | [Cross-hatched pattern] | 3 | 2.0" MC | 18% | Dark Brown | Moist | Sand to angular fine gravel sized slag | Fill | 0.0 | N/A | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | [Cross-hatched pattern] | 4 | 2.0" MC | 15% | Gray & Brown | Slightly Moist | Fall in, slightly burnt odor | Fill | 0.0 | N/A | |
| 13 | | | | | | | | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 16 | [Dotted pattern] | 5 | 2.0" MC | 0% | Gray | Wet at Bottom | Fall in | Fill | N/A | N/A | |
| 17 | | | | | | | | | | | |
| 18 | | | | | | | | | | | |
| 19 | | | | | | | | | | | |
| 20 | [Dotted pattern] | 5 | 2.0" MC | 0% | Gray | Wet | A little Silty Clay Fine Sand, very slightly plastic, sticky. Possibly native. | ML-SM | N/A | N/A | |
| 13 | | | | | | | | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |

End of Boring @ 24' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;

SITE NO.: C915299A

BHS = Bag Headspace NR = Not Recorded

BORING NO.: SB-1



NEW YORK
STATE OF
OPPORTUNITY
Department of
Environmental
Conservation

SOIL BORING LOG

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

CLIENT: NYSDEC

DRILLING CONTRACTOR: TREC Environmental

GROUNDWATER:

| DATE | TIME | LEVEL | TYPE | TYPE | CASING | SAMPLER | CORE | TUBE |
|------|------|-------|------|------|--------|-----------|------|------|
| | | | | DIA. | | Macrocore | | |
| | | | | WT. | | -- | | |
| | | | | FALL | | -- | | |

BORING NO: SB-1

SHEET: 2 of 2

SITE NO.: C915299A

BORING LOCATION:

DATE STARTED: 09/16/20

DATE FINISHED: 09/16/20

DRILLER: Eric Hamman

GEOLOGIST: Steven Moeller

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | |
|---------------|--------|-----|------------|-------|------------------|--------|--|-------|-----------|------|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | |
| | | | | | | | | | Soil | BHS |
| 21 | | 6 | 2.0" MC | 100% | Gray | Wet | Silty Clay Fine Sand | ML-SM | | |
| 22 | | | | | Gray | Wet | Fine Sand, trace to some coarse sand & fine gravel, NAPL present from 21.4' - 22' | SM-GM | | |
| 23 | | | | | Reddish Brown | Moist | Silty Clay, slightly firm, plastic, sticky | ML-CL | N/A | 75.4 |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 | | | | | | | | | | |
| 29 | | | | | | | | | | |
| 30 | | | | | | | | | | |
| 31 | | | | | | | | | | |
| 32 | | | | | | | | | | |
| 33 | | | | | | | | | | |
| 34 | | | | | | | | | | |
| 35 | | | | | | | | | | |
| 36 | | | | | | | | | | |
| 37 | | | | | | | | | | |
| 38 | | | | | | | | | | |
| 39 | | | | | | | | | | |
| 40 | | | | | | | | | | |

End of Boring @ 24' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;

BHS = Bag Headspace NR = Not Recorded

SITE NO.: C915299A

BORING NO.: SB-1



NEW YORK
STATE
Department of
Environmental
Conservation

SOIL BORING LOG

BORING NO: 1660-MW-3R

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

SHEET: 1 of 2

CLIENT: NYSDEC

SITE NO.: C915299A

DRILLING CONTRACTOR: TREC Environmental

BORING LOCATION:

GROUNDWATER: CASING SAMPLER CORE TUBE

DATE STARTED: 09/14/20

DATE TIME LEVEL TYPE TYPE Macrocore

DATE FINISHED: 09/14/20

DIA. 2"

DRILLER: Eric Hamman

WT. --

GEOLOGIST: Steven Moeller

FALL --

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | |
|------------|----------------------------|-----|---------|-------|---------------------------|-----------------------|---|--------|-----------|-----|--|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | | |
| | | | | | | | | | Soil | BHS | |
| 1 | [Cross-hatched pattern] | 1 | 2.0" MC | 73% | Brown | Dry to Slightly Moist | 6" Topsoil, loamy - orange demarcation layer | Fill | 0.0 | N/A | |
| 2 | | | | | Brown | | 18" reworked loamy sand & gravel, some black material intermixed | | | | |
| 3 | | | | | Brown | | Same as above with more clay, orange & black material intermixed in it | | | | |
| 4 | | | | | | | | | | | |
| 5 | [Diagonal hatched pattern] | 2 | 2.0" MC | 78% | Reddish Brown | Moist | 6" clay intermixed with sand & gravel 2" sandy/gravelly cindery material | Fill ? | N/A | N/A | |
| 6 | | | | | Reddish Brown | | Silty Clay, trace fine rounded gravel. This soil is thought to be reworked. | | | | |
| 7 | | | | | Grayish Reddish Brown | Moist | 1' Silty Clay, slightly more moist than above | ML-CL | | | |
| 8 | [Diagonal hatched pattern] | 3 | 2.0" MC | 73% | Gray to Reddish Brown | Moist | Silty Clay, firm to slightly plastic, trace gravel | ML-CL | N/A | N/A | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | Bottom 8" has gray silty fine sand stringers | | | | |
| 12 | [Diagonal hatched pattern] | 4 | 2.0" MC | 100% | | | Top 1.2' is probably fall in (not described) | ML-CL | N/A | N/A | |
| 13 | | | | | Gray | Moist | Silty Clay, more plastic, with orange mottling - some areas have more silty fine sand | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | Dark Gray | | 1.8' same as above but becomes dark gray | | | | |
| 16 | [Dotted pattern] | 5 | 2.0" MC | 90% | Dark Gray to Reddish Gray | Wet | Silty Clay with fine sand, and some sandier intermixed layers | ML-SM | N/A | N/A | |
| 17 | | | | | | | | | | | |
| 18 | | | | | | | | | | | |
| 19 | | | | | Light Gray | Wet | Last 8" Silty Fine Sand | ML-SM | | | |
| 20 | | | | | | | | | | | |

End of Boring @ 28' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;
2"φ PVC monitoring well 1660-MW-3R installed in borehole;
BHS = Bag Headspace NR = Not Recorded

SITE NO.: C915299A

BORING NO.: 1660-MW-3R



Department of Environmental Conservation

SOIL BORING LOG

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

BORING NO: 1660-MW-3R

CLIENT: NYSDEC

SHEET: 2 of 2

DRILLING CONTRACTOR: TREC Environmental

SITE NO.: C915299A

GROUNDWATER:

BORING LOCATION:

| DATE | TIME | LEVEL | TYPE | TYPE | CASING | SAMPLER | CORE | TUBE |
|------|------|-------|------|------|--------|-----------|------|------|
| | | | | DIA. | | Macrocore | | |
| | | | | WT. | | 2" | | |
| | | | | FALL | | -- | | |

DATE STARTED: 09/14/20

DATE FINISHED: 09/14/20

DRILLER: Eric Hamman

GEOLOGIST: Steven Moeller

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | | |
|------------|--------|-----|---------|-------|-----------------------|--------|---|-------|-----------|-----|---|-------|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | | | |
| | | | | | | | | | Soil | BHS | | |
| 21 | | 6 | 2.0" MC | 100% | | Wet | Top similar to last sample. Possible fall in. | | 0.8 | N/A | | |
| 22 | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | |
| 24 | | | | | | | Reddish Brown | | | | Bottom 4" Sand & Gravel, slight petroleum odor | SM-GM |
| 25 | | 7 | 2.0" MC | 50% | Grayish Reddish Brown | Wet | Fall in. Few inches of Silty Sand & Gravel, slight petroleum odor | SM-GM | 2.4 | N/A | | |
| 26 | | | | | | | | | | | | |
| 27 | | | | | | | Reddish Brown | | | | Bottom 3" Silty Clay, very firm, appears to be varved | ML-CL |
| 28 | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | |
| 33 | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| 36 | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

End of Boring @ 28' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;

SITE NO.: C915299A

2"φ PVC monitoring well 1660-MW-3R installed in borehole;

BORING NO.: 1660-MW-3R

BHS = Bag Headspace NR = Not Recorded



Department of Environmental Conservation

SOIL BORING LOG

BORING NO: 1660-MW-5R

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

SHEET: 1 of 2

CLIENT: NYSDEC

SITE NO.: C915299A

DRILLING CONTRACTOR: TREC Environmental

BORING LOCATION:

GROUNDWATER: CASING SAMPLER CORE TUBE

DATE STARTED: 09/14/20

| DATE | TIME | LEVEL | TYPE | TYPE | | Macrocore | | |
|------|------|-------|------|------|--|-----------|--|--|
| | | | | DIA. | | 2" | | |
| | | | | WT. | | -- | | |
| | | | | FALL | | -- | | |

DATE FINISHED: 09/14/20

DRILLER: Eric Hamman

GEOLOGIST: Steven Moeller

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | |
|------------|-------------------------|-----|---------|-------|-----------------------|--------|---|-------|-----------|-----|-------|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | | |
| | | | | | | | | | Soil | BHS | |
| 1 | [Cross-hatched pattern] | 1 | 2.0" MC | 83% | Brown | N/A | 6" Topsoil, loamy (this boring location is where the cover system was installed. Should be 1' thick.) | Fill | N/A | N/A | |
| 2 | | | | | Brown | N/A | Silty clay intermixed with gravel, cinders, coal, brick | | | | |
| 3 | | | | | | | - 6" layer of black coal area 6" from bottom of zone | | | | |
| 4 | | | | | Grayish Reddish Brown | Moist | - 5" silty clay, firm. Likely reworked. | | | | |
| 5 | [Cross-hatched pattern] | 2 | 2.0" MC | 50% | Reddish Brown | N/A | 6" same as end of last sample | Fill | N/A | N/A | |
| 6 | | | | | | | 4" sand, gravel, brick, cinder | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | Grayish Reddish Brown | Moist | Silty Clay, firm, trace fine gravel | | | | ML-CL |
| 9 | [Dotted pattern] | 3 | 2.0" MC | 50% | Gray | Wet | Silty Clay to Silty Fine Sand, trace orange mottles, sticky in silty sand areas | ML-SM | N/A | N/A | |
| 10 | | | | | | | | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | [Dotted pattern] | 4 | 2.0" MC | 0% | | | No recovery | | N/A | N/A | |
| 14 | | | | | N/A | N/A | | | | | |
| 15 | | | | | | | | | | | |
| 16 | | | | | | | | | | | |
| 17 | [Dotted pattern] | 5 | 2.0" MC | 0% | | | No recovery | | N/A | N/A | |
| 18 | | | | | N/A | N/A | | | | | |
| 19 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |

End of Boring @ 28' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;
 2"φ PVC monitoring well 1660-MW-5R installed in borehole;
 BHS = Bag Headspace NR = Not Recorded

SITE NO.: C915299A

BORING NO.: 1660-MW-5R



Department of Environmental Conservation

SOIL BORING LOG

BORING NO: 1660-MW-5R

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

SHEET: 2 of 2

CLIENT: NYSDEC

SITE NO.: C915299A

DRILLING CONTRACTOR: TREC Environmental

BORING LOCATION:

GROUNDWATER: CASING SAMPLER CORE TUBE

DATE STARTED: 09/14/20

DATE TIME LEVEL TYPE TYPE Macrocore

DATE FINISHED: 09/14/20

DIA. 2"

DRILLER: Eric Hamman

WT. --

GEOLOGIST: Steven Moeller

FALL --

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | | |
|------------|-------------------|-----|---------|-------|---------------|--|---|-------|-----------|-----|--|--|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | | | |
| | | | | | | | | | Soil | BHS | | |
| 21 | | 6 | 2.0" MC | 100% | Dark Gray | Wet | Silty Clay with Fine Sand, very plastic, soupy | ML-SM | 1.0 | N/A | | |
| 22 | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | |
| 24 | | 7 | 2.0" MC | 100% | Dark Gray | | Bottom 8" is fine to medium Sand, trace rounded gravel. Brown coal tar at bottom of sampler in dark gray sand, strong odor. 856 ppm on PID. | SM-GM | 148 | N/A | | |
| 25 | Dark Gray & Brown | | | | Wet | 20" NAPL impregnated Sand & Gravel, strong coal tar odor | SM-GM | | | | | |
| 26 | | | | | | | | | | | | |
| 27 | | | | | Reddish Brown | | 28" Silty Clay, very firm, dense, varved | ML-CL | | | | |
| 28 | | | | | | | | | | | | |
| 29 | | | | | | | | | | | | |
| 30 | | | | | | | | | | | | |
| 31 | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | |
| 33 | | | | | | | | | | | | |
| 34 | | | | | | | | | | | | |
| 35 | | | | | | | | | | | | |
| 36 | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

End of Boring @ 28' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;

SITE NO.: C915299A

2"φ PVC monitoring well 1660-MW-5R installed in borehole;

BHS = Bag Headspace NR = Not Recorded

BORING NO.: 1660-MW-5R



SOIL BORING LOG

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation
CLIENT: NYSDEC
DRILLING CONTRACTOR: TREC Environmental
GROUNDWATER: _____
DATE: _____
TIME: _____
LEVEL: _____
TYPE: _____
TYPE: _____
DIA. _____
WT. _____
FALL _____

BORING NO: 1660-MW-8
SHEET: 1 of 2
SITE NO.: C915299A
BORING LOCATION: _____
DATE STARTED: 09/16/20
DATE FINISHED: 09/16/20
DRILLER: Eric Hamman
GEOLOGIST: Steven Moeller
REVIEWED BY: _____

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | |
|------------|-------------------------|-----|---------|-------|--------------|-----------------------|--|-------|-----------|-----|--|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | | |
| | | | | | | | | | Soil | BHS | |
| 1 | [Cross-hatched pattern] | 1 | 2.0" MC | 50% | Gray | Dry to Slightly Moist | Sand and gravel sized slag, little brown loamy soil matrix | Fill | 0.0 | N/A | |
| 2 | | | | | Rusty Brown | - 3" soil & slag | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | [Cross-hatched pattern] | 2 | 2.0" MC | 68% | Brown | Dry to Slightly Moist | 2.3' same as above | Fill | 1.1 | N/A | |
| 6 | | | | | Black | Moist to Wet | - 0.4' angular sand & gravel sized slag in gray silty clayey sand matrix | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | [Cross-hatched pattern] | 3 | 2.0" MC | 65% | Black & Gray | Dry | 1.6' fall in | Fill | 0.0 | N/A | |
| 10 | | | | | Black | Moist | 1' Sand & Gravel in a Silty Clay matrix. Possibly reworked. | | | | |
| 11 | | | | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | [Cross-hatched pattern] | 4 | 2.0" MC | 33% | N/A | N/A | 1.3' Fall in | Fill | N/A | N/A | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 16 | | | | | | | | | | | |
| 17 | [Cross-hatched pattern] | 5 | 2.0" MC | 100% | | Wet | 0.8' Fall in | Fill | 0.0 | N/A | |
| 18 | | | | | Dark Gray | Moist | Silt and Fine Sand, peaty content at 18.4'. Depth to contact undertain due to only fall in in the previous sample. | ML-SM | | | |
| 19 | | | | | Brown | Moist | - 1.5' same as above but becomes browner and contains Gastropod shells | | | | |
| 20 | | | | | | | | | | | |

End of Boring @ 36' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;
 2"φ PVC monitoring well 1660-MW-8 installed in borehole;
 BHS = Bag Headspace NR = Not Recorded

SITE NO.: C915299A
BORING NO.: 1660-MW-8



NEW YORK
STATE OF
OPPORTUNITY
Department of
Environmental
Conservation

SOIL BORING LOG

BORING NO: 1660-MW-8

PROJECT: 31 Tonawanda Street Off-Site - Remedial Investigation

SHEET: 2 of 2

CLIENT: NYSDEC

SITE NO.: C915299A

DRILLING CONTRACTOR: TREC Environmental

BORING LOCATION:

GROUNDWATER:

CASING SAMPLER CORE TUBE

DATE STARTED: 09/16/20

| DATE | TIME | LEVEL | TYPE | TYPE | | Macrocore | | |
|------|------|-------|------|------|--|-----------|--|--|
| | | | | DIA. | | 2" | | |
| | | | | WT. | | -- | | |
| | | | | FALL | | -- | | |

DATE FINISHED: 09/16/20

DRILLER: Eric Hamman

GEOLOGIST: Steven Moeller

REVIEWED BY:

| DEPTH FEET | SAMPLE | | | | DESCRIPTION | | | | | | | |
|------------|-----------|-----|---------|-------|---------------|--------|--|-------|-----------|--|-------|--|
| | STRATA | NO. | TYPE | % REC | COLOR | MOIST. | MATERIAL DESCRIPTION | USCS | PID (ppm) | | | |
| | | | | | | | | | Soil | BHS | | |
| 21 | [Pattern] | 6 | 2.0" MC | 15% | Dark Gray | Wet | Silty Fine Sand and Gravel, trace clay | SM-GM | | | | |
| 22 | | | | | Gray | | Silty Clayey Sand and Gravel with visible reddish brown NAPL and a coal tar odor | SM-GM | N/A | 304.5 | | |
| 23 | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | |
| 25 | [Pattern] | 7 | 2.0" MC | 5% | Gray | Wet | 0.2' same as above. The only sample recovered was in the macrocore sampler tip. 1.2' of liner tube was NAPL stained. | SM-GM | | | | |
| 26 | | | | | | | | | | N/A | 390.4 | |
| 27 | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | |
| 29 | [Pattern] | 8 | 2.0" MC | 100% | Gray | Wet | Silty Fine Sand, trace clay with Gastropod shells, and a woody piece, friable to slightly plastic, slightly sticky at top. Depth to contact uncertain due to poor recovery in previous sample. | ML-SM | | | | |
| 30 | | | | | | | | | | 72.4 | 692.7 | |
| 31 | | | | | | | | | | - 1" thick sandy stringer at 31.8' with NAPL | | |
| 32 | | | | | Reddish Brown | Moist | 0.2' Silty Clay | ML-CL | | | | |
| 33 | [Pattern] | 9 | 2.0" MC | 13% | Gray | Wet | 6" Silty Sand heavily impacted with NAPL | ML-SM | | | | |
| 34 | | | | | | | | | | N/A | N/A | |
| 35 | | | | | | | | | | | | |
| 36 | | | | | | | | | | | | |
| 37 | | | | | | | | | | | | |
| 38 | | | | | | | | | | | | |
| 39 | | | | | | | | | | | | |
| 40 | | | | | | | | | | | | |

End of Boring @ 36' bgs

COMMENTS: Boring performed with a Geoprobe 6620 DT tracked direct-push rig;

SITE NO.: C915299A

2"φ PVC monitoring well 1660-MW-8 installed in borehole;

BORING NO.: 1660-MW-8

BHS = Bag Headspace NR = Not Recorded

**FORMER BUFFALO GAS LIGHT/
IROQUOIS GAS CORPORATION
SITE NO. 915351**

**2022 GEI CONSULTANTS, INC.
SITE CHARACTERIZATION REPORT**

Boring Location
NORTHING: 1,067,341 **EASTING:** 1,063,933 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 582.17
LOCATION: P-Site

BORING
MW-BGL-1
PAGE 1 of 2


Drilling Information
DATE START / END: 11/11/2021 - 11/11/2021 **TOTAL DEPTH (FT):** 28.0
CONTRACTOR: Nothnagle **DRILLER:** Tom Mangefreda **LOGGED BY:** M. Cummings
EQUIPMENT: Hand/Geoprobe 7822DT **BORING METHOD:** Hand/Geoprobe
AUGER ID/OD: 4.25 in / N/A **CASING ID/OD:** 2 in / 2 in
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft):
GENERAL NOTES: Top of Riser Elevation: 581.74'

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|----------------|-------------------|--|---|---|
| | | | Sample No. | Type | Depth (ft) | Pen./Rec. (in) | Blow Count or RQD | | | |
| 580 | 5 | | 1 | | 4 to 8 | 48/30 | | OVM=0.0 | Hand clear to 5.0' bgs. FILL Reddish-brown silty clay with trace fine sand and fine angular gravel. Moist throughout (reworked native material) | - Flush mount surface casing - 2" dia. schedule 40 PVC well riser - Cement/bentonite grout - 3/8" dia. bentonite chips |
| 575 | | | 2 | | 8 to 12 | 48/48 | | OVM=0.1 | | |
| 570 | | | 3 | | 12 to 16 | 48/48 | | OVM=0.0 | | |
| 565 | | | 4 | | 16 to 20 | 48/48 | | OVM=0.0 | | |
| 560 | | | 5 | | 20 to 24 | 48/48 | | OVM=0.0 | | |
| | | | | | | | | Lacustrine Clay Reddish-brown silty clay with trace fine sand and fine angular gravel, stiff, low plasticity fines, moist throughout. | | |
| | | | | | | | | Lacustrine Clay , as above, moist. | | |
| | | | | | | | | Lacustrine Clay , as above, moist. | - 2" dia. schedule 40 PVC well screen #00N Filter Sand | |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620

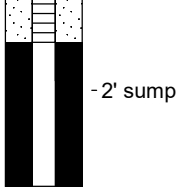


GEI Consultants, Inc.
 100 Sylvan Parkway
 Suite 400
 Buffalo, NY 14228

GLASTONBURY - GEOTECHNICAL BORING LOG.02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Boring Location
NORTHING: 1,067,341 **EASTING:** 1,063,933 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 582.17
LOCATION: P-Site

BORING
MW-BGL-1
PAGE 2 of 2

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|-----------------|-------------------|--|---|---------------------------|
| | | | Sample No. | Type | Depth (ft) | Pen./ Rec. (in) | Blow Count or RQD | | | |
| 25 | | | 6 | | 24 to 28 | 48/48 | | OVM=0.0 |  <p>-2' sump</p> | |
| 555 | | | | | | | | | | |
| 30 | | | | | | | | End of Boring at 28 feet | | |
| 550 | | | | | | | | Samples to Alpha Analytical: 16-20' below ground surface (566.17-562.17' elev.) | | |
| 35 | | | | | | | | | | |
| 545 | | | | | | | | | | |
| 40 | | | | | | | | | | |
| 540 | | | | | | | | | | |
| 45 | | | | | | | | | | |
| 535 | | | | | | | | | | |
| 50 | | | | | | | | | | |
| 530 | | | | | | | | | | |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620



GEI Consultants, Inc.
 100 Sylvan Parkway
 Suite 400
 Buffalo, NY 14228

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Boring Location
NORTHING: 1,067,421 **EASTING:** 1,063,786 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 576.88
LOCATION: P-Site

BORING
MW-BGL-3
PAGE 1 of 2


Drilling Information
DATE START / END: 11/9/2021 - 11/9/2021 **TOTAL DEPTH (FT):** 28.0
CONTRACTOR: Nothnagle **DRILLER:** Tom Mangefreda **LOGGED BY:** M. Cummings
EQUIPMENT: Hand/Geoprobe 7822DT **BORING METHOD:** Hand/Geoprobe
AUGER ID/OD: 4.25 in / N/A **CASING ID/OD:** 2 in / 2 in
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft):
GENERAL NOTES: Top of Riser Elevation: 579.82'

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|----------------|-------------------|-------------|--|--|
| | | | Sample No. | Type | Depth (ft) | Pen./Rec. (in) | Blow Count or RQD | | | |
| 575 | 5 | | 1 | | 4 to 8 | 48/48 | | OVM=0.5 | Hand clear to 5.0' bgs. FILL Reddish-brown silty clay with coarse angular limestone gravel, weathered concrete pieces, moist. Locally mottled with black silty clay, firm to hard. | - Flush mount surface casing - 2" dia. schedule 40 PVC well riser Cement/bentonite grout |
| 570 | | | 2 | | 8 to 12 | 48/48 | | OVM=0.1 | | |
| 565 | 15 | | 3 | | 12 to 16 | 48/0 | | OVM=-- | No recovery 12-16' interval. | - 2" dia. schedule 40 PVC well screen - #00N Filter Sand |
| 560 | | | 4 | | 16 to 20 | 48/21 | | OVM=20 | | |
| 555 | 20 | | 5 | | 20 to 24 | 48/48 | | OVM=0.0 | Lacustrine Clay Reddish-brown silty clay with trace fine sand and fine angular gravel, stiff, low plasticity fines, moist throughout. | - 2' sump - 3/8" dia. bentonite chips |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620


GEI Consultants, Inc.
 100 Sylvan Parkway
 Suite 400
 Buffalo, NY 14228

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Boring Location
NORTHING: 1,067,421 **EASTING:** 1,063,786 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 576.88
LOCATION: P-Site

BORING
MW-BGL-3
PAGE 2 of 2

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|-----------------|-------------------|-------------|---|-----------------------------|
| | | | Sample No. | Type | Depth (ft) | Pen./ Rec. (in) | Blow Count or RQD | | | |
| 25 | | | 6 | | 24 to 28 | 48/48 | | OVM=0.0 | | - 3/8" dia. bentonite chips |
| 550 | | | | | | | | | | |
| | | | | | | | | | End of Boring at 28 feet | |
| | | | | | | | | | Samples to Alpha Analytical: 17-19' below ground surface (559.88' to 561.88' elev.) | |
| | | | | | | | | | Samples for forensics (Meta Env.) 18-19' below ground surface (560.88' to 559.88' elev.) | |
| 30 | | | | | | | | | | |
| 545 | | | | | | | | | | |
| 35 | | | | | | | | | | |
| 540 | | | | | | | | | | |
| 40 | | | | | | | | | | |
| 535 | | | | | | | | | | |
| 45 | | | | | | | | | | |
| 530 | | | | | | | | | | |
| 50 | | | | | | | | | | |
| 525 | | | | | | | | | | |

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620



GEI Consultants, Inc.
 100 Sylvan Parkway
 Suite 400
 Buffalo, NY 14228

Boring Location
NORTHING: 1,067,490 **EASTING:** 1,064,648 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 585.76
LOCATION: Lower Scajaquada Creek Area

BORING
MW-LSC-1
PAGE 1 of 2

Drilling Information
DATE START / END: 11/1/2021 - 11/1/2021 **TOTAL DEPTH (FT):** 24.0
CONTRACTOR: Nothnagle **DRILLER:** Tom Mangefreda **LOGGED BY:** E. Wood
EQUIPMENT: Hand/Geoprobe 7822DT **BORING METHOD:** Hand/Geoprobe
AUGER ID/OD: 4.25 in / N/A **CASING ID/OD:** 2 in / 2 in
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft):
GENERAL NOTES: Top of Riser Elevation: 585.69'

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|-----------------|-------------------|-------------|---|--|
| | | | Sample No. | Type | Depth (ft) | Pen./ Rec. (in) | Blow Count or RQD | | | |
| 585 | | | 1 | | 0 to 5 | 60/ | | OVM=0.4 | Topsoil | - Flush mount surface casing - 2" dia. schedule 40 PVC well riser Cement/bentonite grout - 3/8" dia. bentonite chips - 2" dia. schedule 40 PVC well screen - #00N Filter Sand |
| | 5 | | 2 | | 5 to 8 | 36/19 | | OVM=0.2 | FILL Brown/dark brown, fine grained to medium grained sand, trace organics, 1'x1' sandstone blocks from 3' to 5', dry Brown silty sand, fine grained to medium grained, well rounded, well sorted, moist Medium gravel, slag, red brick fragments, some black gravel (wet, no odors) Reddish brown silty clay, trace small gravel, dry | |
| 580 | | | 3 | | 8 to 12 | 48/39 | | OVM=0.0 | 4" seam of black, coarse-grained poorly-sorted, angular sand and fine gravel Transitions to reddish-brown silty clay, trace fine gravel Black coarse grained, poorly sorted, angular, sand and fine gravel Reddish brown silty clay, trace small gravel, dry. | |
| 575 | | | 4 | | 12 to 16 | 48/24 | | OVM=0.1 | Black fine grained to coarse grained sand with fine gravel, some cinders and possible coal, trace Red brick fragments, saturated, some medium gravel, angular | |
| | 15 | | 5 | | 16 to 20 | 48/41.5 | | OVM=0.2 | | |
| 570 | | | | | | | | OVM=0.3 | Native Alluvium Gray silty clay, little fine grained sand, trace wood/organic material, saturated (4"), increasing fine grained sand at 18' Gray silty clay, organic material (roots, wood, plant material) noted, saturated | |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620



GEI Consultants, Inc.
 100 Sylvan Parkway
 Suite 400
 Buffalo, NY 14228

GLASTONBURY - GEOTECHNICAL BORING LOG.02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Boring Location
NORTHING: 1,067,490 **EASTING:** 1,064,648 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 585.76
LOCATION: Lower Scajaquada Creek Area

BORING
MW-LSC-1
PAGE 2 of 2

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|-----------------|-------------------|-------------|--|---------------------------|
| | | | Sample No. | Type | Depth (ft) | Pen./ Rec. (in) | Blow Count or RQD | | | |
| 565 | | | 6 | | 20 to 24 | 48/42 | | OVM=0.2 | <p>- 2' sump - 3/8" dia. bentonite chips</p> | |
| | | | | | | | | OVM=0.1 | | |
| | 25 | | | | | | | | End of Boring at 24 feet | |
| 560 | | | | | | | | | <u>Samples to Alpha Analytical:</u> 13-15' below ground surface (572.76 to 570.76' elev.) 22-24' below ground surface (563.76' to 561.76' elev.) | |
| | 30 | | | | | | | | | |
| 555 | | | | | | | | | | |
| | 35 | | | | | | | | | |
| 550 | | | | | | | | | | |
| | 40 | | | | | | | | | |
| 545 | | | | | | | | | | |
| | 45 | | | | | | | | | |

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620



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 100 Sylvan Parkway
 Suite 400
 Buffalo, NY 14228

Boring Location
NORTHING: 1,067,487 **EASTING:** 1,064,471 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 582.46
LOCATION: Lower Scajaquada Creek Area

BORING
MW-LSC-2
PAGE 1 of 2


Drilling Information
DATE START / END: 11/1/2021 - 11/1/2021 **TOTAL DEPTH (FT):** 40.0
CONTRACTOR: Nothnagle **DRILLER:** Tom Mangefreda **LOGGED BY:** E. Wood
EQUIPMENT: Hand/Geoprobe 7822DT **BORING METHOD:** Hand/Geoprobe
AUGER ID/OD: 4.25 in / N/A **CASING ID/OD:** 2 in / 2 in
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft):
GENERAL NOTES: Top of Riser Elevation: 585.35'

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|----------------|-------------------|-------------|---|--|
| | | | Sample No. | Type | Depth (ft) | Pen./Rec. (in) | Blow Count or RQD | | | |
| 580 | 5 | | 1 | | 0 to 5 | 60/ | | | Topsoil FILL Organics, root material, dry, trace silty clay Gray/red brown silty clay, dry | - stickup protective casing |
| | | | | | 5 to 8 | 36/31 | | OVM=0.1 | Gray silt, little clay, trace fine grained gravel, well sorted, trace angular gravel, slug at 4' | |
| | | | | | 8 to 12 | 48/48 | | OVM=0.0 | Reworked native reddish brown silty clay, angular fine gravel, firm, moist | |
| | | | | | 12 to 16 | 48/35 | | OVM=0.3 | FILL as above, red brown reworked native to 9.5' then loose brown silty sand, bricks, angular, fine grained gravel, cinders, slag | |
| | | | | | 16 to 20 | 48/30 | | OVM=0.5 | Loose cindery fill, saturated, top of clay at ~15' bgs, black, slight septic-like odor, no sheen or other odors | |
| 565 | 20 | | 5 | | 20 to 24 | 48/45 | | OVM=0.2 | Native Alluvium firm to hard, medium plasticity, light gray grading to gray brown at 20' bgs | - 2" dia. schedule 40 PVC well riser Cement/bentonite grout |
| | | | | | | | | OVM=1.5 | Moist, firm, gray-brown | |
| 560 | | | | | | | | OVM=0.2 | Sandy silt with little low plasticity fines, firm, wood pieces, shells | - 3/8" dia. bentonite chips - #00N Filter Sand |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620


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 100 Sylvan Parkway
 Suite 400
 Buffalo, NY 14228

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Boring Location
NORTHING: 1,067,487 **EASTING:** 1,064,471 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 582.46
LOCATION: Lower Scajaquada Creek Area

BORING
MW-LSC-2
PAGE 2 of 2

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|-----------------|-------------------|--|---|--|
| | | | Sample No. | Type | Depth (ft) | Pen./ Rec. (in) | Blow Count or RQD | | | |
| 555 | 25 | | 6 | | 24 to 28 | 48/12 | | OVM=0.0 | Gray silty sand with gravel, saturated top 6", becoming moist, fine to medium angular gravel, no visual impacts | <p>-2" dia. schedule 40 PVC well screen</p> <p>-2' sump</p> <p>3/8" dia. bentonite chips</p> |
| 30 | | | 7 | | 28 to 32 | 48/1 | | Slough from above, little red-brown clay in shoe (1") with staining and moderate coal tar-like odor Lacustrine Clay Reddish brown silty clay, little fine sand, low plasticity fines, moist, firm, no visual impacts | | |
| 550 | | | 8 | | 32 to 36 | 48/38 | | OVM=59.4 | | |
| 35 | | | 9 | | 36 to 40 | 48/44 | | | | |
| 40 | | | | | | | | | End of Boring at 40 feet | |
| 540 | | | | | | | | | <u>Samples to Alpha Analytical:</u> 18-20' below ground surface (564.46 to 562.46' elev.) | |
| 535 | | | | | | | | | | |
| 530 | | | | | | | | | | |

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620



GEI Consultants, Inc.
 100 Sylvan Parkway
 Suite 400
 Buffalo, NY 14228

Boring Location
NORTHING: 1,067,270 **EASTING:** 1,064,263 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 584.19
LOCATION: Lower Scajaquada Creek Area

BORING
MW-LSC-3
PAGE 1 of 2

Drilling Information
DATE START / END: 11/1/2021 - 11/8/2021 **TOTAL DEPTH (FT):** 32.0
CONTRACTOR: Nothnagle **DRILLER:** Tom Mangefreda **LOGGED BY:** E. Wood
EQUIPMENT: Hand/Geoprobe 7822DT **BORING METHOD:** Hand/Geoprobe
AUGER ID/OD: 4.25 in / N/A **CASING ID/OD:** 2 in / 2 in
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft):
GENERAL NOTES: Top of Riser Elevation: 586.95'

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|----------------|-------------------|---------------------|-------------------------------------|---|
| | | | Sample No. | Type | Depth (ft) | Pen./Rec. (in) | Blow Count or RQD | | | |
| | | | 1 | | 0 to 4 | 48/ | | | | - stickup protective casing |
| 580 | 5 | | 2 | | 4 to 8 | 48/26 | | OVM=0.2 OVM=1.7 | | - 2" dia. schedule 40 PVC well riser |
| 575 | 10 | | 3 | | 8 to 12 | 48/44 | | OVM=2.0 OVM=88.4 | | - Cement/bentonite grout |
| 570 | 15 | | 4 | | 12 to 16 | 48/38 | | OVM=16.2 OVM=3.1 | | - 3/8" dia. bentonite chips |
| 565 | 20 | | 5 | | 16 to 20 | 48/48 | | OVM=1.1 OVM=19.1 | | - 2" dia. schedule 40 PVC well screen (1) |
| | | | 6 | | 20 to 24 | 48/42 | | OVM=0.1 OVM=1.1 | | - #00N Filter Sand |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.


CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620


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 Suite 400
 Buffalo, NY 14228

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Boring Location
NORTHING: 1,067,270 **EASTING:** 1,064,263 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 584.19
LOCATION: Lower Scajaquada Creek Area


BORING
MW-LSC-3
PAGE 2 of 2

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|-----------------|-------------------|---|--|--|
| | | | Sample No. | Type | Depth (ft) | Pen./ Rec. (in) | Blow Count or RQD | | | |
| 560 | 25 | | 7 | | 24 to 28 | 48/47 | | OVM=0.3 | <p>Lacustrine Clay Reddish brown silty clay, trace fine sand, (locally high plasticity), moist</p> <p>OVM=0.6</p> <p>Same as above, little fine to coarse angular sand, trace angular small gravel, saturated</p> <p>OVM=0.4</p> <p>OVM=0.5</p> |  <p>- 3/8" dia. bentonite chips</p> |
| | | | 8 | | 28 to 32 | 48/ | | | | |
| 555 | 30 | | | | | | | | | |
| | | | | | | | | | | |
| 550 | 35 | | | | | | | End of Boring at 32 feet | <p>(1) Longer well screen selected to monitor groundwater in fill with solvent odor and material above clay.</p> | |
| | | | | | | | | <p>Samples to Alpha Analytical:</p> <p>11-12' below ground surface (573.19 to 571.19' elev.)</p> <p>22-24' below ground surface (562.19 to 560.19' elev.)</p> | | |
| 545 | 40 | | | | | | | | | |
| 540 | 45 | | | | | | | | | |
| 535 | 50 | | | | | | | | | |
| 530 | | | | | | | | | | |

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620



GEI Consultants, Inc.
 100 Sylvan Parkway
 Suite 400
 Buffalo, NY 14228

Boring Location
NORTHING: 1,067,415 **EASTING:** 1,064,262 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 582.37
LOCATION: Lower Scajaquada Creek Area

BORING
MW-LSC-4
PAGE 1 of 2

Drilling Information
DATE START / END: 11/8/2021 - 11/8/2021 **TOTAL DEPTH (FT):** 32.0
CONTRACTOR: Nothnagle **DRILLER:** Tom Mangefreda **LOGGED BY:** M. Cummings
EQUIPMENT: Hand/Geoprobe 7822DT **BORING METHOD:** Hand/Geoprobe
AUGER ID/OD: 4.25 in / N/A **CASING ID/OD:** 2 in / 2 in
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft):
GENERAL NOTES: Top of Riser Elevation: 582.13'

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|----------------|-------------------|-------------|--|---------------------------------------|
| | | | Sample No. | Type | Depth (ft) | Pen./Rec. (in) | Blow Count or RQD | | | |
| 580 | | | 1 | | 0 to 4 | 48/ | | | Topsoil | - Flush mount surface casing |
| 580 | 5 | | 2 | | 4 to 8 | 48/32 | OVM=0.0 | | FILL Brown silt, sand, fine grained to medium grained, well rounded, rounded, gravel fine to coarse, subrounded to angular, cobbles | |
| 575 | | | | | | | OVM=0.0 | | Black silty sand, fine grained to coarse grained, dry, organics, medium gravel, slag and black coal, root material | - 2" dia. schedule 40 PVC well riser |
| 575 | 10 | | 3 | | 8 to 12 | 48/6 | | | Brown silty clay fill, fabric or fiber materials at 4.25', brick fragments, trace small angular gravel and cinders, dry Very low recovery, some material as above (4-8'), some black to gray silty clay with fine grained sand at end 1", moist | Cement/bentonite grout |
| 570 | | | 4 | | 12 to 16 | 48/44 | OVM=0.1 | | Native Alluvium Dark gray to black silty clay, moist | |
| 570 | 15 | | | | | | OVM=0.1 | | Dark gray to black, some olive color | |
| 570 | | | | | | | | | Clayey silt, trace fine grained sand, saturated at 14.5' | |
| 565 | | | 5 | | 16 to 20 | 48/34 | OVM=0.1 | | Same as above, dark gray to black clayey silt, trace fine grained sand | - 3/8" dia. bentonite chips |
| 565 | 20 | | | | | | OVM=0.1 | | Silty fine gravel, sand with gastropod shells, moist | |
| 565 | | | | | | | | | Silty fine to coarse grained sand, some wood material upper 6", gastropod shells throughout, saturated | - 2" dia. schedule 40 PVC well screen |
| 560 | | | 6 | | 20 to 24 | 48/44 | OVM=0.2 | | Root organics at 22' | #00N Filter Sand |
| 560 | | | | | | | OVM=0.4 | | | |

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CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620



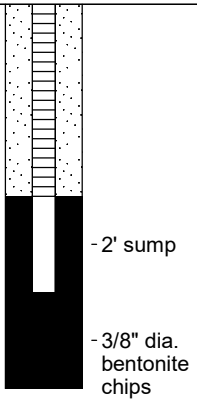
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100 Sylvan Parkway
Suite 400
Buffalo, NY 14228

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Boring Location
NORTHING: 1,067,415 **EASTING:** 1,064,262 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 582.37
LOCATION: Lower Scajaquada Creek Area

BORING
MW-LSC-4
PAGE 2 of 2

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|-----------------|-------------------|-------------|--|---------------------------|
| | | | Sample No. | Type | Depth (ft) | Pen./ Rec. (in) | Blow Count or RQD | | | |
| 25 | | | 7 | | 24 to 28 | 48/47 | | OVM=55.6 | Grades to small gravel, angular and more coarse grained sand at 24' Dark brown fine to coarse grained sand and gravel, silt, coal tar-like odors throughout, angular small to medium grained, liquid tar-like material present, saturated | |
| 555 | | | 8 | | 28 to 32 | 48/19 | | OVM=80.4 | | |
| 30 | | | | | | | | OVM=1.9 | Lacustrine Clay Reddish brown silty clay with trace fine angular gravel, dry, tar-like material impacts and odors on outside of clay only. | |
| 550 | | | | | | | | OVM=1.7 | Reddish brown silty clay as above, trace fine grained sand, low plasticity fines, stiff, moist | |
| 550 | | | | | | | | | End of Boring at 32 feet | |
| 35 | | | | | | | | | <u>Samples to Alpha Analytical:</u> 20-22' below ground surface (562.37' to 560.37' elev.) 24-28' below ground surface (558.37' to 556.37' elev.) | |
| 545 | | | | | | | | | <u>Samples for forensics (Meta Env.)</u> 24-25' below ground surface (558.37' to 557.37' elev.) | |
| 40 | | | | | | | | | | |
| 540 | | | | | | | | | | |
| 45 | | | | | | | | | | |
| 535 | | | | | | | | | | |
| 50 | | | | | | | | | | |
| 530 | | | | | | | | | | |



GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620



GEI Consultants, Inc.
100 Sylvan Parkway
Suite 400
Buffalo, NY 14228

Boring Location
NORTHING: 1,067,445 **EASTING:** 1,064,113 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 582.72
LOCATION: Lower Scajaquada Creek Area

BORING
MW-LSC-5
PAGE 1 of 2


Drilling Information
DATE START / END: 1/4/2022 - 1/4/2022 **TOTAL DEPTH (FT):** 42.0
CONTRACTOR: Nothnagle **DRILLER:** Tom Mangefreda **LOGGED BY:** M. Cummings
EQUIPMENT: Hand/Geoprobe 7822DT **BORING METHOD:** Hand/Geoprobe
AUGER ID/OD: 4.25 in / N/A **CASING ID/OD:** 2 in / 2 in
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft):
GENERAL NOTES: Top of Riser Elevation: 582.46'

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|----------------|-------------------|---|---|--------------------------------------|
| | | | Sample No. | Type | Depth (ft) | Pen./Rec. (in) | Blow Count or RQD | | | |
| 580 | 5 | | 1 | | 5 to 8 | 36/3 | | | Hand to start to 11' bgs, breaks gravel, concrete. Advance augers to 5.0' without sampling. | - Flush mount surface casing |
| 575 | 10 | | 2 | | 10 to 14 | 48/13 | OVM=0.0 | FILL Loose angular crushed limestone gravel, moist | Steady grinding at 8.5' bgs (likely concrete basement flooring) grind through 6" then advance HSA to 10 bgs without sampling. | - 2" dia. schedule 40 PVC well riser |
| 570 | 15 | | 3 | | 14 to 18 | 48/37 | OVM=0.0 | Native Alluvium Gray to light gray silty fine sand, little black wood pieces, firm, moist throughout | | Cement/bentonite grout |
| 565 | 20 | | 4 | | 18 to 22 | 48/42 | OVM=0.0 | Gray fine sand and silt with little low plasticity fines, moist throughout, rootlets bottom 6", firm | | |
| 560 | 26 | | 5 | | 22 to 26 | 48/48 | OVM=2.7 | Gray to dark gray clayey silt with trace fine sand, shell fragments (white) at 21' with few shells, scattered throughout, little peat and cobbles Gray silty fine sand, saturated, soft, slight petroleum odor | | - 3/8" dia. bentonite chips |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620


GEI Consultants, Inc.
 100 Sylvan Parkway
 Suite 400
 Buffalo, NY 14228

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Boring Location
NORTHING: 1,067,445 **EASTING:** 1,064,113 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 582.72
LOCATION: Lower Scajaquada Creek Area

BORING
MW-LSC-5
PAGE 2 of 2

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification | WELL CONSTRUCTION DETAILS |
|------------|------------|--------------------------------------|--------------------|------|------------|-----------------|-------------------|-------------------|--|---|
| | | | Sample No. | Type | Depth (ft) | Pen./ Rec. (in) | Blow Count or RQD | | | |
| 555 | 25 | | 6 | | 26 to 30 | 48/32 | | OVM=2.7 | As above, saturated, then 6", wood fragments from 28.5-30', coarse fine sand, silt, slight coal-tar like odor, gray clay in shoe with tar-like material staining, firm, 1' red clay in very bottom of shoe | -2" dia. schedule 40 PVC well screen -#00N Filter Sand |
| 550 | 30 | | 7 | | 30 to 34 | 48/24 | | OVM=26 OVM=0.4 | | |
| 545 | 35 | | 8 | | 34 to 38 | 48/48 | | OVM=0.0 | Silty red clay with trace fine angular gravel, firm, medium to high plasticity, slight coal-tar like odor in top 1.5' As above, little coal tar present on shoe only, likely resulting from withdrawing sampling assembly through impacted interval above, little red clay in sampler | -2' sump |
| 540 | 40 | | 9 | | 38 to 42 | 48/2 | | OVM=0.0 | | |
| 530 | 45 | | | | | | | | End of Boring at 42 feet | -3/8" dia. bentonite chips |
| | 50 | | | | | | | | <u>Samples to Alpha Analytical:</u> 18-22' below ground surface (564.72 to 560.72 elev.) 26-30' below ground surface (556.72 to 552.72 elev.) | |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620


GEI Consultants, Inc.
 100 Sylvan Parkway
 Suite 400
 Buffalo, NY 14228

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/15/22

Boring Location
NORTHING: 1,067,369 **EASTING:** 1,063,785 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 563.2
LOCATION:

BORING
SED-BGL-1
 PAGE 1 of 1

Drilling Information
DATE START / END: 11/10/2021 - 11/10/2021 **TOTAL DEPTH (FT):** 11.5
CONTRACTOR: Nothnagle **DRILLER:** Kevin Busch **LOGGED BY:** E. Wood
EQUIPMENT: Barge/Geoprobe **BORING METHOD:** Geoprobe
AUGER ID/OD: N/A / N/A **CASING ID/OD:** 1.5 in / N/A
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft): Surface water elevation 573.0'
GENERAL NOTES: Barge measuring point 1.2' above surface water- 574.2'

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
 OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
 Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
 Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification |
|------------|------------|--------------------------------------|--------------------|------|------------|-----------------|------------------|---|---|
| | | | Sample No. | Type | Depth (ft) | Pen./ Rec. (in) | Lab Sample Depth | | |
| 560 | 5 | | 1 | | 0 to 4 | 48/24 | Alpha | OVM=0.3 | <p>Water Depth: 9.8'</p> <p>Samples to Alpha Analytical:</p> <p>0-0.5' below top of sediment (563.2' to 562.7' elev.)</p> <p>12-14' below MP (562.2' to 560.2' elev.)</p> <p>No forensics collected</p> |
| | | | 2 | | 4 to 8 | 48/48 | Alpha | OVM=0.4 | |
| | | | 3 | | 8 to 11.5 | 42/48 | | OVM=0.2 | |
| 555 | 10 | | | | | | OVM=0.3 | <p>As above, slightly more sand content, moist throughout.</p> <p>probe refusal at 11.5' bgs in lacustrine clay unit.</p> | |
| | | | | | | | OVM=0.2 | | |
| 550 | 15 | | | | | | OVM=0.1 | End of Boring at 11.5 feet | |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620



GEI Consultants, Inc.
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 Suite 400
 Buffalo, NY 14228

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/11/22

Boring Location
NORTHING: 1,067,768 **EASTING:** 1,063,771 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 567.6
LOCATION:

BORING
SED-LSC-1
PAGE 1 of 1

Drilling Information
DATE START / END: 11/9/2021 - 11/9/2021 **TOTAL DEPTH (FT):** 22.5
CONTRACTOR: Nothnagle **DRILLER:** Kevin Busch **LOGGED BY:** E. Wood
EQUIPMENT: Barge/Geoprobe **BORING METHOD:** Geoprobe
AUGER ID/OD: N/A / N/A **CASING ID/OD:** 1.5 in / N/A
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft): Surface water elevation 572.9'
GENERAL NOTES: Barge measuring point 1.2' above surface water- 574.1

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undistrubed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | Field Test Data | GRAPHIC LOG | Sample Description & Classification |
|------------|------------|--------------------------------------|--------------------|------|--------------|-----------------|-----------------|-------------|--|
| | | | Sample No. | Type | Depth (ft) | Pen./ Rec. (in) | | | |
| 565 | 5 | | 1 | | 0 to 2.5 | 30/3 | Alpha | OVM=0.4 | Recent Fluvial Deposits Black, very soft silt, very slight suspect petroleum-like odor, some fine grained to medium grained sand, subrounded, saturated, no sheen Same as above, no gravel present, suspect petroleum odors still present |
| | | | 2 | | 2.5 to 6.5 | 48/5 | | OVM=0.1 | |
| 560 | 10 | | 3 | | 6.5 to 10.5 | 48/28 | Alpha | OVM=43.1 | Same as above, some fine grained to coarse grained sand, trace medium angular/subangular gravel, black, stronger petroleum-like odor, saturated with sheen Historic Alluvial Deposits Transition to reddish/gray silt with clay, some fine sand in bottom 3", very slight suspect petroleum odor Dark brown to gray sand, fine grained to coarse grained, subrounded to angular with silt and small medium angular gravel, saturated, petroleum sheen and odors present Gray silty sand with fine grained to coarse grained sand and gravel, odors, saturated, dark brown staining and suspect tar-like material in core catcher |
| | | | 4 | | 10.5 to 14.5 | 48/22 | | OVM=18.8 | |
| 555 | 15 | | 5 | | 14.5 to 18.5 | 48/33 | Meta | OVM=13.6 | 3" coarse alluvium (fine gravel and coarse sand) Lacustrine Clay Reddish brown silty clay, trace fine grained to coarse grained sand and fine gravel, subrounded, moist Same as above, slight septic/organic odor. |
| | | | 6 | | 18.5 to 22.5 | 48/ | | OVM=2.7 | |
| 550 | 20 | | | | | | | OVM=0.8 | End of Boring at 22.5 feet |
| | | | | | | | | | |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620


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GLASTONBURY - GEOTECHNICAL BORING LOG 02 2101620 NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT 4/11/22

Boring Location
NORTHING: 1,067,693 **EASTING:** 1,063,840 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 568.0
LOCATION: _____

BORING
SED-LSC-2
PAGE 1 of 1

Drilling Information
DATE START / END: 11/9/2021 - 11/9/2021 **TOTAL DEPTH (FT):** 20.0
CONTRACTOR: Nothnagle **DRILLER:** Kevin Busch **LOGGED BY:** E. Wood
EQUIPMENT: Barge/Geoprobe **BORING METHOD:** Geoprobe
AUGER ID/OD: N/A / N/A **CASING ID/OD:** 1.5 in / N/A
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft): Surface water elevation 572.9'
GENERAL NOTES: Barge measuring point 1.2' above surface water- 574.1'

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | GRAPHIC LOG | Sample Description & Classification | | | | | | | | | | | |
|------------|------------|--------------------------------------|--------------------|------|------------|-----------------|---------------|-------------------------------------|------------------------|------------------|-----------------|--|--|--|--|--|--|--|--|
| | | | Sample No. | Type | Depth (ft) | Pen./ Rec. (in) | | | | Lab Sample Depth | Field Test Data | | | | | | | | |
| | | | 1 | | 0 to 5 | 60/2 | Alpha | | | | | | | | | | | | |
| 565 | 5 | | 2 | | 5 to 8 | 36/15 | | | OVM=108.2 | | | | | | | | | | |
| 560 | | | 3 | | 8 to 12 | 48/31 | Meta Alpha | | OVM=199.4 OVM=101.6 | | | | | | | | | | |
| 555 | 10 | | 4 | | 12 to 16 | 48/18 | | | OVM=20.7 | | | | | | | | | | |
| | 15 | | 5 | | 16 to 20 | 48/48 | | | OVM=0.4 OVM=0.2 | | | | | | | | | | |
| 550 | 20 | | | | | | | | | | | | | | | | | | |
| 545 | | | | | | | | | | | | | | | | | | | |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620



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GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/11/22

Boring Location
NORTHING: 1,067,522 **EASTING:** 1,063,919 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 566.3
LOCATION: _____

BORING
SED-LSC-3
PAGE 1 of 1

Drilling Information
DATE START / END: 11/9/2021 - 11/9/2021 **TOTAL DEPTH (FT):** 21.5
CONTRACTOR: Nothnagle **DRILLER:** Kevin Busch **LOGGED BY:** E. Wood
EQUIPMENT: Barge/Geoprobe **BORING METHOD:** Geoprobe
AUGER ID/OD: N/A / N/A **CASING ID/OD:** 1.5 in / N/A
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft): Surface water elevation 572.9'
GENERAL NOTES: Barge measuring point 1.2' above surface water- 574.1'

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | Field Test Data | GRAPHIC LOG | Sample Description & Classification |
|------------|------------|--------------------------------------|--------------------|------|--------------|----------------|-----------------|-------------|--|
| | | | Sample No. | Type | Depth (ft) | Pen./Rec. (in) | | | |
| 565 | 5 | | 1 | | 0 to 5.5 | 66/5 | Alpha | OVM=2.4 | <p>Recent Fluvial Deposits Black silt, trace gravel and fine grained sand, subrounded, saturated with sheen and slight petroleum-like odor</p> <p>Water Depth: 6.6'</p> <p><u>Samples to Alpha Analytical:</u></p> <p>0-0.5' below top of sediment (567.5' to 567.0' elev.)</p> <p>13-16' below MP (561.1 to 558.1' elev.)</p> <p><u>Samples for forensics (Meta Env.)</u></p> <p>14-15' below MP (560.1 to 559.1' elev.)</p> |
| 560 | | | 2 | | 5.5 to 9.5 | 48/15 | Met | OVM=29.8 | |
| | | | | | | | pha | OVM=30.9 | |
| 555 | 10 | | 3 | | 9.5 to 13.5 | 48/13 | | OVM=398 | |
| | | | | | | | | OVM=100.2 | |
| 550 | 15 | | 4 | | 13.5 to 17.5 | 48/48 | | OVM=8.2 | <p>Lacustrine Clay Reddish brown silty clay, stiff, moist, moderate coal tar-like odor, no staining, slight sheen on water in core.</p> <p>Same as above, slightly gray color with slight coal tar-like odor</p> |
| | | | | | | | | OVM=27.2 | |
| | | | | | | | | OVM=1.2 | |
| 545 | 20 | | 5 | | 17.5 to 21.5 | 48/48 | | OVM=1.1 | Same as above, moist |
| | | | | | | | | | End of Boring at 21.5 feet |

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CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620


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GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/11/22

Boring Location
NORTHING: 1,067,408 **EASTING:** 1,063,987 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 564.7
LOCATION:

BORING
SED-LSC-4
PAGE 1 of 1

Drilling Information
DATE START / END: 11/10/2021 - 11/10/2021 **TOTAL DEPTH (FT):** 16.0
CONTRACTOR: Nothnagle **DRILLER:** Kevin Busch **LOGGED BY:** E. Wood
EQUIPMENT: Barge/Geoprobe **BORING METHOD:** Geoprobe
AUGER ID/OD: N/A / N/A **CASING ID/OD:** 1.5 in / N/A
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft): Surface water elevation 572.9'
GENERAL NOTES: Barge measuring point 1.2' above surface water- 574.1'

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | Field Test Data | GRAPHIC LOG | Sample Description & Classification | |
|------------|------------|--------------------------------------|--------------------|------|------------|-----------------|-----------------|---------------------|-------------------------------------|--|
| | | | Sample No. | Type | Depth (ft) | Pen./ Rec. (in) | | | | |
| | | | 1 | | 0 to 4 | 48/9 | Alpha | OVM=0.1 | | |
| | | | 2 | | 4 to 8 | 48/11 | Meta | OVM=4.4 | | |
| | | | 3 | | 8 to 12 | 48/48 | Alpha | OVM=0.4 | | |
| | | | 4 | | 12 to 16 | 48/48 | | OVM=12.0 OVM=0.2 | | |
| | | | | | | | | OVM=1.1 | | |

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PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620


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GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/11/22

Boring Location
NORTHING: 1,067,332 **EASTING:** 1,064,081 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 565.2
LOCATION: _____

BORING
SED-LSC-5
PAGE 1 of 1

Drilling Information
DATE START / END: 11/10/2021 - 11/10/2021 **TOTAL DEPTH (FT):** 17.0
CONTRACTOR: Nothnagle **DRILLER:** Kevin Busch **LOGGED BY:** E. Wood
EQUIPMENT: Barge/Geoprobe **BORING METHOD:** Geoprobe
AUGER ID/OD: N/A / N/A **CASING ID/OD:** 1.5 in / N/A
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft): Surface water elevation 572.9'
GENERAL NOTES: Barge measuring point 1.2' above surface water- 574.1'

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_p = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | | GRAPHIC LOG | Sample Description & Classification |
|------------|------------|--------------------------------------|--------------------|----------|------------|----------------|------------------|---|-------------------------------------|
| | | | Sample No. | Type | Depth (ft) | Pen./Rec. (in) | Lab Sample Depth | | |
| 565 | | | 1 | 0 to 1 | 12/8 | Alpha | OVM=8.3 | <p>Recent Fluvial Deposits- Black to reddish brown silty clay with fine grained to coarse grained sand, subangular, small subangular gravel, saturated Same as above, slight coal tar-like odor and sheen, decreasing sand and gravel content.</p> <p>Blebs of tar-like material and strong coal tar-like odor within sample core, saturated with sheen Black fine to medium silty sand, trace clay, sheen, saturated Same as above, tar-like material and coal tar-like odors</p> <p>Lacustrine Clay- Reddish brown silty clay, moist, slight gray seaming (6") with strong coal tar-like odors, sheen on exterior of core, slight coal tar odors on sampler and water likely from passing through impacted interval above.</p> <p>Trace small gravel at 10'. (dropstone?)</p> <p>No apparent impact.</p> <p>As above, with little fine grained to medium grained sand, moist</p> | |
| | | | 2 | 1 to 5 | 48/16 | | OVM=10.6 | | |
| | | | | | | | OVM=14.0 | | |
| 560 | 5 | | 3 | 5 to 9 | 48/34 | Meta | OVM=55.3 | | |
| | | | | | | Alpha | | | |
| | | | 4 | 9 to 13 | 48/48 | | OVM=1.0 | <p>End of Boring at 17 feet</p> | |
| 555 | 10 | | | | | | | | |
| | | | 5 | 13 to 17 | 48/48 | | OVM=0.0 | | |
| | | | | | | | OVM=7.6 | | |
| 550 | 15 | | | | | | | | |
| | | | | | | | | | |
| 545 | 20 | | | | | | | | |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

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PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620



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Suite 400
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GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/11/22

Boring Location
NORTHING: 1,067,382 **EASTING:** 1,064,317 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 564.7
LOCATION:

BORING
SED-LSC-6
 PAGE 1 of 1

Drilling Information
DATE START / END: 11/3/2021 - 11/3/2021 **TOTAL DEPTH (FT):** 16.0
CONTRACTOR: SJB **DRILLER:** Art Koske **LOGGED BY:** E. Wood
EQUIPMENT: Barge/Geoprobe **BORING METHOD:** Geoprobe
AUGER ID/OD: N/A / N/A **CASING ID/OD:** 3 in / N/A
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft): Surface water elevation 573.2'
GENERAL NOTES: Measuring point is water surface

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
 OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
 Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
 Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | Field Test Data | GRAPHIC LOG | Sample Description & Classification |
|--------------------------|------------|--------------------------------------|--------------------|------|------------|----------------|-----------------|-------------|---|
| | | | Sample No. | Type | Depth (ft) | Pen./Rec. (in) | | | |
| 560 555 550 545 | 5 | | 1 | | 0 to 2 | 24/1 | Alpha | OVM=0 | <p>Water Depth: 8.5'</p> <p><u>Samples to Alpha Analytical:</u></p> <p>0-0.5' below top of sediment (564.7' to 564.2 elev.)</p> <p>12-19' below MP (561.2' to 553.7' elev.)</p> <p><u>Samples for forensics (Meta Env.)</u></p> <p>12-19' below MP (561.2' to 553.7' elev.)</p> |
| | | | 2 | | 2 to 4 | 24/2 | | OVM=8.7 | |
| | | | 3 | | 4 to 6 | 24/10 | Meta | OVM=13 | |
| | | | 4 | | 6 to 8 | 24/6 | | OVM=18 | |
| | | | 5 | | 8 to 10 | 24/6 | | OVM=37 | |
| | | | 6 | | 10 to 12 | 24/12 | Alpha | OVM=18.3 | |
| | | | 7 | | 12 to 14 | 24/8 | | OVM=-- | |
| | | | 8 | | 14 to 16 | 24/0 | | OVM=-- | |
| End of Boring at 16 feet | | | | | | | | | |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620


GEI Consultants, Inc.
 100 Sylvan Parkway
 Suite 400
 Buffalo, NY 14228

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/11/22

Boring Location
NORTHING: 1,067,564 **EASTING:** 1,064,457 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 565.8
LOCATION: _____

BORING
SED-LSC-7
PAGE 1 of 1

Drilling Information
DATE START / END: 11/2/2021 - 11/2/2021 **TOTAL DEPTH (FT):** 16.0
CONTRACTOR: SJB **DRILLER:** Art Koske **LOGGED BY:** M. Cummings
EQUIPMENT: Barge/Geoprobe **BORING METHOD:** Geoprobe
AUGER ID/OD: N/A / N/A **CASING ID/OD:** 3 in / N/A
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft): Surface water elevation 573.8'
GENERAL NOTES: Measuring point is water surface

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_p = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | Field Test Data | GRAPHIC LOG | Sample Description & Classification |
|------------|------------|--------------------------------------|--------------------|------|------------|-----------------|-----------------|-------------|--|
| | | | Sample No. | Type | Depth (ft) | Pen./ Rec. (in) | | | |
| 565 | | | 1 | | 0 to 2 | 24/6 | Alpha | OVM=0.5 | <p>Water Depth: 8.0'</p> <p><u>Samples to Alpha Analytical:</u></p> <p>0-0.5' below top of sediment (565.8' to 565.3' elev.)</p> <p>12-18' below MP (561.8' to 553.8' elev.)</p> <p><u>Samples for forensics (Meta Env.)</u></p> <p>14-16' below MP (559.8' to 557.8' elev.)</p> |
| | | | 2 | | 2 to 4 | 24/0 | | | |
| | 5 | | 3 | | 4 to 6 | 24/11 | | OVM=6.9 | |
| 560 | | | 4 | | 6 to 8 | 24/11 | Meta | OVM=19.4 | |
| | | | 5 | | 8 to 10 | 24/16 | | OVM=18 | |
| | 10 | | 6 | | 10 to 12 | 24/5 | | OVM=10 | |
| 555 | | | 7 | | 12 to 14 | 24/12 | Alpha | | |
| | 15 | | 8 | | 14 to 16 | 24/2 | | | |
| 550 | | | | | | | | | End of Boring at 16 feet |
| | 20 | | | | | | | | |
| 545 | | | | | | | | | |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620


GEI Consultants, Inc.
 100 Sylvan Parkway
 Suite 400
 Buffalo, NY 14228

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/11/22

Boring Location
NORTHING: 1,067,750 **EASTING:** 1,064,582 **STATION:** N/A **OFFSET:** N/A
HORIZONTAL DATUM: NAD83 NY West Zone **STATION CENTERLINE:** N/A
VERTICAL DATUM: NAVD88 **GROUND SURFACE ELEVATION (FT):** 566.6
LOCATION:

BORING
SED-LSC-8
PAGE 1 of 1

Drilling Information
DATE START / END: 11/1/2021 - 11/1/2021 **TOTAL DEPTH (FT):** 12.2
CONTRACTOR: SJB **DRILLER:** Art Koske **LOGGED BY:** M. Cummings
EQUIPMENT: Barge/Geoprobe **BORING METHOD:** Geoprobe
AUGER ID/OD: N/A / N/A **CASING ID/OD:** 3 in / N/A
HAMMER TYPE: Direct Push **HAMMER WEIGHT (lbs):** N/A **HAMMER DROP (inch):** N/A
WATER LEVEL ELEVATIONS (ft): Surface water elevation 573.4'
GENERAL NOTES: Measuring point is water surface

ABBREVIATIONS: ID = Inside Diameter bpf = Blows per Foot U = Undisturbed Tube Sample WOR = Weight of Rods Q_p = Pocket Penetrometer Strength
OD = Outside Diameter mpf = Minute per Foot C = Rock Core WOH = Weight of Hammer S_v = Pocket Torvane Shear Strength
Pen. = Penetration Length S = Split Spoon V = Field Vane Shear RQD = Rock Quality Designation F_v = Field Vane Shear Strength
Rec. = Recovery Length DP = Direct Push Sample SC = Sonic Core OVM = Organic Vapor Meter NA, NM = Not Applicable, Not Measured

| Elev. (ft) | Depth (ft) | Casing Pen. (bpf) or Core Rate (mpf) | SAMPLE INFORMATION | | | | GRAPHIC LOG | Sample Description & Classification | |
|------------|------------|--------------------------------------|--------------------|------|--------------|----------------|--------------|-------------------------------------|---|
| | | | Sample No. | Type | Depth (ft) | Pen./Rec. (in) | | | Lab Sample Depth |
| 565 | 5 | | 1 | | 0 to 2.2 | 26.4/8 | Alpha | OVM=0.1 | <p>Recent Fluvial Deposits Medium angular to rounded gravel, organics, fine to coarse sand, saturated.</p> <p>black silty clay, saturated, slight petroleum-like odor.</p> <p>as above with petroleum-like odor.</p> <p>Historic Alluvium Gray clayey silt, moist, trace fine sand. Lacustrine Clay Reddish grey silty clay, trace fine sand.</p> |
| | | | 2 | | 2.2 to 4.2 | 24/3 | | OVM=1.4 | |
| | | | 3 | | 4.2 to 6.2 | 24/3 | Alpha & Meta | OVM=24.1 | |
| | | | 4 | | 6.2 to 8.2 | 24/7 | | OVM=11.1 | |
| | | | 5 | | 8.2 to 10.2 | 24/10 | | OVM=6.9 | |
| | | | 6 | | 10.2 to 12.2 | 24/12 | | OVM=4.7 | |
| 555 | 10 | | | | | | OVM=6.2 | <p>End of Boring at 12.2 feet</p> | |
| 550 | 15 | | | | | | | | |
| 545 | 20 | | | | | | | | |

Strata lines represent the approximate boundaries between soil types. Actual transitions may be gradual. Water level readings have been made at times stated. Water levels may be different at other times.

CLIENT: National Fuel Gas
PROJECT NAME: National Fuel Lower Scajaquada Creek
CITY/STATE: Buffalo, New York
GEI PROJECT NUMBER: 2101620



GEI Consultants, Inc.
100 Sylvan Parkway
Suite 400
Buffalo, NY 14228

GLASTONBURY - GEOTECHNICAL BORING LOG 02_2101620_NATIONAL FUEL LOWER SCAJAQUADA CREEK SITE_EW.GPJ_NEW.GDT_4/1/22

**SCAJAQUADA EXPRESSWAY PROJECT
UNLISTED**

**1956 NEW YORK STATE
DEPARTMENT OF TRANSPORTATION**



SM 282 E 12/02

PSN 253 BORNUM 31
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-C-3
 LINE Baseline
 STA 454+61
 OFFSET 340 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK
 SCALED COORDINATES (N) 1,067,466.670 (E) 1,063,681.400 DATUM NAD83 SURF. ELEV. 571.11
 DATE START 12-NOV-1956 DATE FINISH 20-NOV-1956 DEPTH TO WATER SEE NOTE

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|------|-------|-------|---|------------------------------|
| | | | 0-6 | 6-12 | 12-18 | 18-24 | | |
| | 0.0 | | | | | | (0.00) Water - Black Rock Channel | |
| WOH | 5.0 | J1 | WOH | WOH | WOH | | (4.00) Black SILT , Some Sand And Organic Muck (W-NPL) | |
| WOH | | | | | | | | |
| WOH | | | | | | | | |
| WOH | | | | | | | | |
| WOH | 10.0 | J2 | WOH | WOH | WOH | | | |
| WOH | | | | | | | | |
| WOH | | | | | | | | |
| WOH | | | | | | | | |
| WOH | 15.0 | J3 | 7 | 8 | 9 | | (15.00) Red SAND , Trace Silt And Clay (W-LPL) | |
| 24 | | | | | | | | |
| 35 | | | | | | | | |
| 35 | | | | | | | | |
| 22 | | | | | | | (18.00) Red SILT , Some Clay, Trace Gravel And Fine Sand (M-PL) | |
| 19 | 20.0 | J4 | 5 | 6 | 8 | | | |
| 27 | | | | | | | | |
| 30 | | | | | | | | |
| 40 | | | | | | | | |
| 18 | | | | | | | (23.00) Red CLAY , Some Silt (M-PL) | |
| 18 | 25.0 | J5 | 1 | 1 | | | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989C
 Route 198 Ramp over I-190
 SHEET 1 OF 4 HOLE DH-B-C-3

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

PSN 253 BORNUM 31
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-C-3
 LINE Baseline
 STA 454+61
 OFFSET 340 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK SURF. ELEV. 571.11
 SCALED COORDINATES (N) 1,067,466.670 (E) 1,063,681.400 DATUM NAD83 DEPTH TO WATER SEE NOTE
 DATE START 12-NOV-1956 DATE FINISH 20-NOV-1956
 CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|------|-------|-------|---|------------------------------|
| | | | 0-6 | 6-12 | 12-18 | 18-24 | | |
| 19 | 25.0 | | | | 1 | | (25.00) Red CLAY , Some Silt (M-PL) | |
| 20 | | | | | | | | |
| 16 | | | | | | | | |
| 16 | | | | | | | | |
| 15 | 30.0 | J6 | 1 | 1 | 1 | | | |
| 19 | | | | | | | | |
| 23 | | | | | | | | |
| 21 | | | | | | | | |
| 33 | | | | | | | | |
| 21 | 35.0 | J7 | 1 | 1 | 2 | | | |
| 35 | | | | | | | | |
| 41 | | | | | | | | |
| 41 | | | | | | | | |
| 54 | | | | | | | (38.00) Red SILT , Some Clay, Trace Gravel And Fine Sand (M-PL) | |
| 31 | 40.0 | J8 | 1 | 2 | 2 | | | |
| 37 | | | | | | | | |
| 42 | | | | | | | | |
| 71 | | | | | | | | |
| 71 | | | | | | | | |
| 55 | 45.0 | J9 | 2 | 2 | 3 | | | |
| 61 | | | | | | | | |
| 78 | | | | | | | | |
| 85 | | | | | | | | |
| 80 | | | | | | | | |
| 65 | 50.0 | J10 | 2 | 3 | | | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
UNOFFICIAL LOG
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989C
Route 198 Ramp over I-190
 SHEET 2 OF 4 HOLE DH-B-C-3

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

PSN 253 BORNUM 31
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-C-3
 LINE Baseline
 STA 454+61
 OFFSET 340 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK
 SCALED COORDINATES (N) 1,067,466.670 (E) 1,063,681.400 DATUM NAD83
 DATE START 12-NOV-1956 DATE FINISH 20-NOV-1956
 SURF. ELEV. 571.11
 DEPTH TO WATER SEE NOTE

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|------|-------|-------|---|------------------------------|
| | | | 0-6 | 6-12 | 12-18 | 18-24 | | |
| 85 | 50.0 | | | | 3 | | (50.00) Red SILT , Some Clay, Trace Gravel And Fine Sand (M-PL) | |
| 96 | | | | | | | | |
| 100 | | | | | | | | |
| 110 | | | | | | | | |
| 115 | 55.0 | J11 | 4 | 7 | 11 | | | |
| 195 | | | | | | | | |
| 165 | | | | | | | | |
| 177 | | | | | | | | |
| 245 | | | | | | | (58.00) Red CLAY , Some Silt (M-PL) | |
| 195 | 60.0 | J12 | 2 | 5 | 5 | | | |
| 219 | | | | | | | | |
| 221 | | | | | | | | |
| 211 | | | | | | | (62.00) Red SILT , Some Clay (M-PL) | |
| 213 | | | | | | | | |
| 145 | 65.0 | J13 | 2 | 4 | 4 | | | |
| 128 | | | | | | | | |
| 115 | | | | | | | | |
| 185 | | | | | | | (67.00) Gray SILT , Some Gravel And Sand, Trace Clay (D-LW) | |
| 245 | | | | | | | | |
| 115 | 70.0 | J14 | 13 | 31 | 55 | | | |
| 250 | | | | | | | | |
| 550 | | | | | | | | |
| 410 | | | | | | | | |
| 340 | | R1 | | | | | (73.66) Run #1 Drilled from 73'8" To 78'8" LIMESTONE , Fractured And Broken REC. 31" 51.7% 25 | |
| | 75.0 | | | | | | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
UNOFFICIAL LOG
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989C
Route 198 Ramp over I-190
 SHEET 3 OF 4 HOLE DH-B-C-3

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

PSN 253 BORNUM 31
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-C-3
 LINE Baseline
 STA 454+61
 OFFSET 340 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK SURF. ELEV. 571.11
 SCALED COORDINATES (N) 1,067,466.670 (E) 1,063,681.400 DATUM NAD83 DEPTH TO WATER SEE NOTE
 DATE START 12-NOV-1956 DATE FINISH 20-NOV-1956

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|---|----|----|----|------------------|--|
| | | | 0 | 6 | 12 | 18 | 24 | | |
| | 75.0 | | | | | | | | |
| | | R2 | | | | | | (78.66) | Run #2 Drilled from 78'8" To 83'8" LIMESTONE , Fractured And Broken REC. 35" 58.3% 38 |
| | 80.0 | | | | | | | | |

BOTTOM OF HOLE AT 83.66 ft

*Ground elevation is the surface of the Black Rock Channel.
 Groundwater elevation is the surface of the Black Rock Channel.
 Artesian condition encountered at 83.67 feet, flow of approximately
 1 gal/min, continued until all casing was pulled.*

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
UNOFFICIAL LOG
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989C
Route 198 Ramp over I-190

CONTRACT _____ CONTRACTOR Westville Engineering

SHEET 4 OF 4 HOLE DH-B-C-3

SM 282 E 12/02

PSN 253 BORNUM 32
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-C-4
 LINE Baseline
 STA 454+09
 OFFSET 332 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK
 SCALED COORDINATES (N) 1,067,403.730 (E) 1,063,686.550 DATUM NAD83 SURF. ELEV. 571.82
 DATE START 07-NOV-1956 DATE FINISH 12-NOV-1956 DEPTH TO WATER SEE NOTE
 CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|------|-------|-------|---|------------------------------|
| | | | 0-6 | 6-12 | 12-18 | 18-24 | | |
| | 0.0 | | | | | | (0.00) Water - Black Rock Channel | |
| WOH | | J1 | WOH | WOH | WOH | | (3.50) Black SILT , Some Clay And Organic Matter, Trace Sand (W-PL) | |
| WOH | 5.0 | | | WOH | | | | |
| WOH | | | | | | | | |
| 1 | | | | | | | | |
| 1 | | | | | | | | |
| 1 | | | | | | | | |
| 1 | 10.0 | J2 | WOH | WOH | WOH | | | |
| 1 | | | | WOH | | | | |
| 1 | | | | | | | | |
| 3 | | | | | | | | |
| 2 | | | | | | | | |
| 4 | 15.0 | J3 | 3 | 3 | 10 | | (15.00) Red CLAY , Some Silt (M-PL) | |
| 17 | | | | | | | | |
| 16 | | | | | | | | |
| 24 | | | | | | | | |
| 33 | | | | | | | | |
| 37 | 20.0 | J4 | 3 | 3 | 4 | | | |
| 29 | | | | | | | | |
| 33 | | | | | | | | |
| 33 | | | | | | | | |
| 26 | | | | | | | | |
| 22 | 25.0 | | | | | | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
UNOFFICIAL LOG
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989C
Route 198 Ramp over I-190
 SHEET 1 OF 4 HOLE DH-B-C-4

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

PSN 253 BORNUM 32
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-C-4
 LINE Baseline
 STA 454+09
 OFFSET 332 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK
 SCALED COORDINATES (N) 1,067,403.730 (E) 1,063,686.550 DATUM NAD83
 DATE START 07-NOV-1956 DATE FINISH 12-NOV-1956
 SURF. ELEV. 571.82 DEPTH TO WATER SEE NOTE

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|------|-------|-------|---|------------------------------|
| | | | 0-6 | 6-12 | 12-18 | 18-24 | | |
| 14 | 25.0 | J5 | 1 | 2 | 4 | | (25.00) Red CLAY , Some Silt (M-PL) | |
| 13 | | | | | | | | |
| 23 | | | | | | | (27.00) Red SILT , Some Clay, Trace Gravel And Fine Sand (M-PL) | |
| 22 | | | | | | | | |
| 26 | 30.0 | J6 | 1 | 1 | 2 | | | |
| 21 | | | | | | | | |
| 28 | | | | | | | | |
| 32 | | | | | | | | |
| 32 | | | | | | | | |
| 36 | 35.0 | J7 | 2 | 2 | 3 | | | |
| 25 | | | | | | | | |
| 31 | | | | | | | | |
| 36 | | | | | | | | |
| 36 | | | | | | | | |
| 37 | 40.0 | J8 | 2 | 3 | 4 | | | |
| 32 | | | | | | | | |
| 32 | | | | | | | | |
| 37 | | | | | | | | |
| 43 | | | | | | | (43.00) Red CLAY , Some Silt (M-PL) | |
| 48 | 45.0 | J9 | 2 | 4 | 5 | | | |
| 55 | | | | | | | | |
| 70 | | | | | | | | |
| 67 | | | | | | | | |
| 78 | | | | | | | | |
| 90 | 50.0 | | | | | | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989C
 Route 198 Ramp over I-190
 SHEET 2 OF 4 HOLE DH-B-C-4

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

PSN 253 BORNUM 32
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-C-4
 LINE Baseline
 STA 454+09
 OFFSET 332 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK
 SCALED COORDINATES (N) 1,067,403.730 (E) 1,063,686.550 DATUM NAD83
 DATE START 07-NOV-1956 DATE FINISH 12-NOV-1956
 SURF. ELEV. 571.82 DEPTH TO WATER SEE NOTE

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|----|----|----|---|------------------------------|
| | | | 0 | 6 | 12 | 18 | | |
| | | | 6 | 12 | 18 | 24 | | |
| 40 | 50.0 | J10 | 2 | 4 | 4 | | (50.00) Red SILT , Some Clay, Trace Gravel And Fine Sand (M-PL) | |
| 44 | | | | | | | | |
| 44 | | | | | | | | |
| 83 | | | | | | | | |
| 81 | 55.0 | J11 | 3 | 5 | 5 | | | |
| 85 | | J11A | 3 | 4 | 6 | | | |
| 87 | | | | | | | | |
| 109 | | | | | | | | |
| 170 | | | | | | | | |
| 105 | 60.0 | J12 | 3 | 6 | 5 | | | |
| 115 | | J12A | 3 | 4 | 4 | | | |
| 181 | | | | | | | | |
| 185 | | | | | | | (63.00) Red CLAY , Some Silt (M-PL) | |
| 145 | | | | | | | | |
| 115 | 65.0 | J13 | 2 | 3 | 3 | | | |
| 136 | | | | | | | | |
| 138 | | | | | | | | |
| 175 | | | | | | | | |
| 182 | | | | | | | | |
| 195 | 70.0 | J14 | 3 | 4 | 5 | | | |
| 173 | | | | | | | | |
| 239 | | | | | | | (71.00) Gray SAND , Some Gravel And Broken Limestone, Trace Silt (D-NW) | |
| 200 | | | | | | | | |
| 205 | | | | | | | | |
| 145 | 75.0 | J15 | 13 | 17 | | | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
UNOFFICIAL LOG
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989C
Route 198 Ramp over I-190
 SHEET 3 OF 4 HOLE DH-B-C-4

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

PSN 253 BORNUM 32
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-C-4
 LINE Baseline
 STA 454+09
 OFFSET 332 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK SURF. ELEV. 571.82
 SCALED COORDINATES (N) 1,067,403.730 (E) 1,063,686.550 DATUM NAD83 DEPTH TO WATER SEE NOTE
 DATE START 07-NOV-1956 DATE FINISH 12-NOV-1956

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|------|-------|-------|---|------------------------------|
| | | | 0-6 | 6-12 | 12-18 | 18-24 | | |
| 185 | 75.0 | R1 | | | 17 | | (75.00) \ Gray SAND , Some Gravel And Broken Limestone, Trace Silt (D-NW) (75.08) Run #1 Drilled from 75'1" To 80'1" LIMESTONE , Fractured And Broken REC. 23" 38.3% 34 | |
| | 80.0 | R2 | | | | | (80.08) Run #2 Drilled from 80'1" To 85'1" LIMESTONE , Fractured And Broken REC. 59" 98.3% 47 | |
| | 85.0 | | | | | | | |

BOTTOM OF HOLE AT 85.08 ft

Ground elevation is the surface of the Black Rock Channel.
 Groundwater elevation is the surface of the Black Rock Channel.
 No recovery for samples 11, 12 and 12A.

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989C
 Route 198 Ramp over I-190

CONTRACT _____ CONTRACTOR Westville Engineering

SHEET 4 OF 4 HOLE DH-B-C-4

SM 282 E 12/02

PSN 253 BORNUM 33
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-C-6
 LINE Baseline
 STA 452+97
 OFFSET 288 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK
 SCALED COORDINATES (N) 1,067,254.590 (E) 1,063,727.820 DATUM NAD83
 DATE START 20-NOV-1956 DATE FINISH 26-NOV-1956
 SURF. ELEV. 575.29 DEPTH TO WATER SEE NOTE

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|------|-------|-------|--|------------------------------|
| | | | 0-6 | 6-12 | 12-18 | 18-24 | | |
| 8 | 0.0 | | | | | | (0.00) Black SAND , Some Gravel, Cinders And Rubble - Fill Material (D-NW) | |
| 6 | | | | | | | | |
| 3 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | 5.0 | | | | | | | |
| 141 | | J1 | 5 | 101 | 200 | | | |
| 19 | | | | | | | (7.00) Gray SILT , Some Sand And Organic Matter, Trace Gravel Muck Seepage From Black Rock Channel (W-NPL) | |
| 5 | | | | | | | | |
| 7 | | | | | | | | |
| 5 | 10.0 | | | | | | | |
| 3 | | J2 | 1 | 2 | 2 | | | |
| 5 | | | | | | | | |
| 5 | | | | | | | | |
| 5 | | | | | | | | |
| 105 | 15.0 | J3 | WOH | WOH | WOH | | | |
| 21 | | | | | | | | |
| 16 | | | | | | | | |
| 26 | | | | | | | | |
| 21 | | | | | | | (19.00) Red CLAY , Some Silt (M-PL) | |
| 26 | 20.0 | | | | | | | |
| 22 | | J4 | 2 | 3 | 5 | | | |
| 28 | | | | | | | | |
| 29 | | | | | | | | |
| 31 | | | | | | | | |
| 39 | 25.0 | | | | | | (24.00) Red SILT , Some Clay, Trace Gravel And Fine Sand (M-PL) | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
UNOFFICIAL LOG
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989C
Route 198 Ramp over I-190
 SHEET 1 OF 4 HOLE DH-B-C-6

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

PSN 253 BORNUM 33
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-C-6
 LINE Baseline
 STA 452+97
 OFFSET 288 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK SURF. ELEV. 575.29
 SCALED COORDINATES (N) 1,067,254.590 (E) 1,063,727.820 DATUM NAD83 DEPTH TO WATER SEE NOTE
 DATE START 20-NOV-1956 DATE FINISH 26-NOV-1956

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|----|----|----|----|---|------------------------------|
| | | | 0 | 6 | 12 | 18 | 24 | | |
| | | | 6 | 12 | 18 | 24 | | | |
| 37 | 25.0 | J5 | 5 | 7 | 42 | | | (25.00) Red SILT , Some Clay, Trace Gravel And Fine Sand (M-PL) | |
| 140 | | | | | | | | (27.00) Red CLAY , Some Silt (M-PL) | |
| 45 | | | | | | | | | |
| 46 | | | | | | | | | |
| 57 | 30.0 | | | | | | | | |
| 44 | | J6 | 8 | 7 | 9 | | | | |
| 46 | | | | | | | | | |
| 58 | | | | | | | | | |
| 62 | | | | | | | | | |
| 59 | 35.0 | | | | | | | | |
| 61 | | J7 | 4 | 4 | 7 | | | | |
| 69 | | | | | | | | (37.00) Red SILT , Some Clay, Trace Gravel And Fine Sand (M-PL) | |
| 80 | | | | | | | | | |
| 82 | | | | | | | | | |
| 82 | 40.0 | | | | | | | | |
| 92 | | J8 | 7 | 8 | 9 | | | | |
| 99 | | | | | | | | | |
| 81 | | | | | | | | | |
| 83 | | | | | | | | | |
| 74 | 45.0 | | | | | | | | |
| 57 | | J9 | 6 | 8 | 11 | | | | |
| 65 | | | | | | | | | |
| 76 | | | | | | | | | |
| 79 | | | | | | | | | |
| 81 | 50.0 | | | | | | | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
UNOFFICIAL LOG
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989C
 Route 198 Ramp over I-190

CONTRACT _____ CONTRACTOR Westville Engineering

SHEET 2 OF 4 HOLE DH-B-C-6

SM 282 E 12/02

PSN 253 BORNUM 33
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-C-6
 LINE Baseline
 STA 452+97
 OFFSET 288 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK SURF. ELEV. 575.29
 SCALED COORDINATES (N) 1,067,254.590 (E) 1,063,727.820 DATUM NAD83 DEPTH TO WATER SEE NOTE
 DATE START 20-NOV-1956 DATE FINISH 26-NOV-1956
 CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|------|-------|-------|---|------------------------------|
| | | | 0-6 | 6-12 | 12-18 | 18-24 | | |
| 69 | 50.0 | J10 | 4 | 4 | 5 | | (50.00) Red SILT , Some Clay, Trace Gravel And Fine Sand (M-PL) | |
| 88 | | J10A | 3 | 5 | 6 | | | |
| 97 | | | | | | | | |
| 117 | | | | | | | | |
| 136 | 55.0 | J11 | 5 | 6 | 7 | | (57.00) Red CLAY , Some Silt (M-PL) | |
| 101 | | | | | | | | |
| 105 | | | | | | | | |
| 123 | | | | | | | | |
| 128 | | | | | | | | |
| 122 | 60.0 | J12 | 4 | 4 | 7 | | | |
| 115 | | | | | | | | |
| 120 | | | | | | | | |
| 129 | | | | | | | | |
| 152 | | | | | | | | |
| 155 | 65.0 | J13 | 3 | 4 | 7 | | | |
| 109 | | | | | | | | |
| 107 | | | | | | | | |
| 119 | | | | | | | | |
| 123 | | | | | | | | |
| 127 | 70.0 | J14 | 6 | 13 | 52 | | (70.00) Red CLAY , Some Silt, Trace Gravel (M-PL) | |
| 166 | | | | | | | | |
| 473 | | | | | | | | |
| | | R1 | | | | | (72.83) Run #1 Drilled from 72'10" To 75'1" LIMESTONE , Fractured And Broken REC. 13" 48.1% 8 | |
| | 75.0 | | | | | | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989C
 Route 198 Ramp over I-190
 SHEET 3 OF 4 HOLE DH-B-C-6

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

PSN 253 BORNUM 33
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-C-6
 LINE Baseline
 STA 452+97
 OFFSET 288 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK SURF. ELEV. 575.29
 SCALED COORDINATES (N) 1,067,254.590 (E) 1,063,727.820 DATUM NAD83 DEPTH TO WATER SEE NOTE
 DATE START 20-NOV-1956 DATE FINISH 26-NOV-1956
 CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|---|----|----|----|--|------------------------------|
| | | | 0 | 6 | 12 | 18 | 24 | | |
| | 75.0 | | | | | | | (75.08) Red SILT , Some Gravel And Clay (M-PL) | |
| | | R2 | | | | | | (76.33) Run #2 Drilled from 76'4" To 81'4" LIMESTONE , Fractured And Broken REC. 45" 75% 34 | |
| | 80.0 | | | | | | | | |

BOTTOM OF HOLE AT 81.33 ft

*Insufficient recovery for sample 10.
 Lost water while coring from 74.67 to 81.33 feet.*

| DATE | TIME | DEPTH ft | | | ARTESIAN HEAD HEIGHT ABOVE GROUND | FILLED WITH WATER AT END OF DAY |
|-----------|-------|----------|--------|-------|-----------------------------------|---------------------------------|
| | | HOLE | CASING | WATER | | |
| 26-Nov-56 | 15:00 | 81.33 | 72.00 | 7.00 | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
UNOFFICIAL LOG
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989C
 Route 198 Ramp over I-190
 SHEET 4 OF 4 HOLE DH-B-C-6

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE PH-B-F-2
 LINE Baseline
 STA 455+25
 OFFSET 182 ft LEFT

UNOFFICIAL LOG

PSN 253 BORNUM 64
 REGION 5
 COUNTY ERIE
 PIN

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK
 SCALED COORDINATES (N) 1,067,482.060 (E) 1,063,852.640 DATUM NAD83
 DATE START 12-NOV-1956 DATE FINISH 13-NOV-1956
 SURF. ELEV. 585.87
 DEPTH TO WATER SEE NOTE

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. in I. D. in WT OF HAMMER-SAMPLER lb HAMMER FALL-SAMPLER in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|------|-------|-------|---|------------------------------|
| | | | 0-6 | 6-12 | 12-18 | 18-24 | | |
| 55 | 0.0 | | | | | | (0.00) Cased Probing - No Samples Taken | |
| 29 | | | | | | | | |
| 21 | | | | | | | | |
| 18 | | | | | | | | |
| 11 | 5.0 | | | | | | | |
| 10 | | | | | | | | |
| 6 | | | | | | | | |
| 9 | | | | | | | | |
| 14 | | | | | | | | |
| 25 | 10.0 | | | | | | | |
| 27 | | | | | | | | |
| 35 | | | | | | | | |
| 31 | | | | | | | | |
| 30 | | | | | | | | |
| 27 | 15.0 | | | | | | | |
| 37 | | | | | | | | |
| 50 | | | | | | | | |
| 50 | | | | | | | | |
| 39 | | | | | | | | |
| 35 | 20.0 | | | | | | | |
| 43 | | | | | | | | |
| 48 | | | | | | | | |
| 49 | | | | | | | | |
| 49 | | | | | | | | |
| 51 | 25.0 | | | | | | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
UNOFFICIAL LOG
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989A
 Route 198 Ramp over Scajaquada Creek
 SHEET 1 OF 4 HOLE PH-B-F-2

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

PSN 253 BORNUM 64
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE PH-B-F-2
 LINE Baseline
 STA 455+25
 OFFSET 182 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK
 SCALED COORDINATES (N) 1,067,482.060 (E) 1,063,852.640 DATUM NAD83
 DATE START 12-NOV-1956 DATE FINISH 13-NOV-1956
 SURF. ELEV. 585.87 DEPTH TO WATER SEE NOTE

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. _____ I. D. _____ WT OF HAMMER-SAMPLER _____ lb HAMMER FALL-SAMPLER _____ in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|------|-------|-------|--|------------------------------|
| | | | 0-6 | 6-12 | 12-18 | 18-24 | | |
| 59 | 25.0 | | | | | | (25.00) Cased Probing - No Samples Taken | |
| 55 | | | | | | | | |
| 66 | | | | | | | | |
| 77 | | | | | | | | |
| 95 | 30.0 | | | | | | | |
| 112 | | | | | | | | |
| 140 | | | | | | | | |
| 159 | | | | | | | | |
| 179 | | | | | | | | |
| 197 | 35.0 | | | | | | | |
| 210 | | | | | | | | |
| 260 | | | | | | | | |
| 255 | | | | | | | | |
| 257 | | | | | | | | |
| 260 | 40.0 | | | | | | | |
| 350 | | | | | | | | |
| 323 | | | | | | | | |
| 240 | | | | | | | | |
| 250 | | | | | | | | |
| 200 | 45.0 | | | | | | | |
| 216 | | | | | | | | |
| 145 | | | | | | | | |
| 212 | | | | | | | | |
| 193 | | | | | | | | |
| 205 | 50.0 | | | | | | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989A
Route 198 Ramp over Scajaquada Creek

CONTRACT _____ CONTRACTOR Westville Engineering

SHEET 2 OF 4 HOLE PH-B-F-2

SM 282 E 12/02

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE PH-B-F-2
LINE Baseline
STA 455+25
OFFSET 182 ft LEFT

UNOFFICIAL LOG

PSN 253 **BORNUM** 64
REGION 5
COUNTY ERIE
PIN

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK
SCALED COORDINATES (N) 1,067,482.060 (E) 1,063,852.640 **DATUM** NAD83
DATE START 12-NOV-1956 **DATE FINISH** 13-NOV-1956
SURF. ELEV. 585.87 **DEPTH TO WATER** SEE NOTE

CASING O. D. 2 7/8 in I. D. 2 3/8 in **WT OF HAMMER-CASING** 300 lb **HAMMER FALL-CASING** 18 in
SAMPLER O. D. in I. D. in **WT OF HAMMER-SAMPLER** lb **HAMMER FALL-SAMPLER** in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|------|-------|-------|--|------------------------------|
| | | | 0-6 | 6-12 | 12-18 | 18-24 | | |
| 210 | 50.0 | | | | | | (50.00) Cased Probing - No Samples Taken | |
| 239 | | | | | | | | |
| 200 | | | | | | | | |
| 141 | | | | | | | | |
| 150 | 55.0 | | | | | | | |
| 161 | | | | | | | | |
| 154 | | | | | | | | |
| 150 | | | | | | | | |
| 157 | | | | | | | | |
| 172 | 60.0 | | | | | | | |
| 213 | | | | | | | | |
| 212 | | | | | | | | |
| 200 | | | | | | | | |
| 223 | | | | | | | | |
| 208 | 65.0 | | | | | | | |
| 178 | | | | | | | | |
| 183 | | | | | | | | |
| 185 | | | | | | | | |
| 186 | | | | | | | | |
| 200 | 70.0 | | | | | | | |
| 194 | | | | | | | | |
| 220 | | | | | | | | |
| 222 | | | | | | | | |
| 210 | | | | | | | | |
| 212 | 75.0 | | | | | | | |

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DRILL RIG OPERATOR _____
SOIL & ROCK DESCRIPTION H. Daniels
REG GEOTECHNICAL ENGINEER _____ **UNOFFICIAL LOG**
DATE APPROVED _____
RESIDENT ENGINEER _____
STRUCTURE NAME _____ **B.I.N.** 103989A
 Route 198 Ramp over Scajaquada Creek
SHEET 3 OF 4 **HOLE PH-B-F-2**

CONTRACT _____ **CONTRACTOR** Westville Engineering

SM 282 E 12/02

PSN 253 BORNUM 64
REGION 5
COUNTY ERIE
PIN

STATE OF NEW YORK
DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING BUREAU
SUBSURFACE EXPLORATION LOG



HOLE PH-B-F-2
LINE Baseline
STA 455+25
OFFSET 182 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK
SCALED COORDINATES (N) 1,067,482.060 (E) 1,063,852.640 DATUM NAD83
DATE START 12-NOV-1956 DATE FINISH 13-NOV-1956
SURF. ELEV. 585.87 DEPTH TO WATER SEE NOTE

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
SAMPLER O. D. in I. D. in WT OF HAMMER-SAMPLER lb HAMMER FALL-SAMPLER in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|---|----|----|--|------------------------------|
| | | | 0 | 6 | 12 | 18 | | |
| 226 | 75.0 | | | | | | (75.00) Cased Probing - No Samples Taken | |
| 223 | | | | | | | | |
| 220 | | | | | | | | |
| 229 | | | | | | | | |
| 262 | 80.0 | | | | | | | |
| 271 | | | | | | | | |
| 251 | | | | | | | | |
| 276 | | | | | | | | |
| 297 | | | | | | | | |
| 314 | 85.0 | | | | | | | |
| 375 | | | | | | | | |
| 800 | | R1 | | | | | (87.42) Run #1 Drilled from 87'5" To 92'5" LIMESTONE , Fractured And Broken REC. 53.5" 89.2% 41 | |
| | 90.0 | | | | | | | |

BOTTOM OF HOLE AT 92.42 ft

| DATE | TIME | DEPTH ft | | | ARTESIAN HEAD HEIGHT ABOVE GROUND | FILLED WITH WATER AT END OF DAY |
|-----------|-------|----------|--------|-------|-----------------------------------|---------------------------------|
| | | HOLE | CASING | WATER | | |
| 13-Nov-56 | 15:00 | 92.42 | 86.50 | 15.00 | | |

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DRILL RIG OPERATOR _____
SOIL & ROCK DESCRIPTION H. Daniels
REG GEOTECHNICAL ENGINEER _____
DATE APPROVED _____
RESIDENT ENGINEER _____
STRUCTURE NAME _____ B.I.N. 103989A
Route 198 Ramp over Scajaquada Creek
SHEET 4 OF 4 HOLE PH-B-F-2

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

PSN 253 BORNUM 65
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-F-4
 LINE Baseline
 STA 454+06
 OFFSET 120 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK
 SCALED COORDINATES (N) 1,067,341.450 (E) 1,063,913.330 DATUM NAD83 SURF. ELEV. 587.05
 DATE START 12-NOV-1956 DATE FINISH 15-NOV-1956 DEPTH TO WATER SEE NOTE

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|------|-------|-------|---|------------------------------|
| | | | 0-6 | 6-12 | 12-18 | 18-24 | | |
| 23 | 0.0 | | | | | | (0.00) Black SAND , Some Gravel, Cinders And Rubble, Trace Silt And Clay - Fill Material (D-LW) | |
| 35 | | | | | | | | |
| 16 | | | | | | | | |
| 13 | | | | | | | | |
| 15 | 5.0 | J1 | 5 | 7 | 7 | | | |
| 31 | | | | | | | | |
| 20 | | | | | | | | |
| 20 | | | | | | | | |
| 23 | | | | | | | | |
| 30 | 10.0 | J2 | 4 | 5 | | | | |
| 20 | | | | | | | | |
| 31 | | J2A | 5 | | | | (11.00) Red SILT , Some Clay (D-PW) | |
| 32 | | | | | | | | |
| 35 | | | | | | | (13.00) Red SILT , Some Clay (M-PL) | |
| 37 | 15.0 | J3 | 2 | 3 | 6 | | | |
| 36 | | | | | | | | |
| 39 | | | | | | | | |
| 36 | | | | | | | | |
| 37 | | | | | | | | |
| 40 | 20.0 | J4 | 2 | 8 | 5 | | | |
| 41 | | | | | | | | |
| 53 | | | | | | | | |
| 47 | | | | | | | | |
| 41 | | | | | | | | |
| 52 | 25.0 | | | | | | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
UNOFFICIAL LOG
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989A
Route 198 Ramp over Scajaquada Creek
 SHEET 1 OF 4 HOLE DH-B-F-4

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

PSN 253 BORNUM 65
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-F-4
 LINE Baseline
 STA 454+06
 OFFSET 120 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK SURF. ELEV. 587.05
 SCALED COORDINATES (N) 1,067,341.450 (E) 1,063,913.330 DATUM NAD83 DEPTH TO WATER SEE NOTE
 DATE START 12-NOV-1956 DATE FINISH 15-NOV-1956

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|------|-------|-------|---|------------------------------|
| | | | 0-6 | 6-12 | 12-18 | 18-24 | | |
| 31 | 25.0 | J5 | 3 | 5 | 5 | | (25.00) Red SILT , Some Clay (M-PL) | |
| 49 | | | | | | | | |
| 51 | | | | | | | | |
| 51 | | | | | | | | |
| 53 | 30.0 | J6 | 2 | 4 | 5 | | | |
| 55 | | | | | | | | |
| 53 | | | | | | | | |
| 62 | | | | | | | | |
| 65 | | | | | | | | |
| 73 | 35.0 | J7 | 2 | 3 | 3 | | | |
| 46 | | | | | | | | |
| 56 | | | | | | | | |
| 73 | | | | | | | | |
| 70 | | | | | | | | |
| 72 | 40.0 | J8 | 3 | 4 | 7 | | | |
| 72 | | | | | | | | |
| 116 | | | | | | | (40.00) Red SILT , Some Clay, Trace Gravel And Fine Sand (M-PL) | |
| 121 | | | | | | | | |
| 109 | | | | | | | | |
| 112 | 45.0 | J9 | 4 | 6 | 7 | | | |
| 103 | | | | | | | | |
| 137 | | | | | | | | |
| 148 | | | | | | | | |
| 150 | | | | | | | | |
| 127 | 50.0 | | | | | | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
UNOFFICIAL LOG
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989A
Route 198 Ramp over Scajaquada Creek
 SHEET 2 OF 4 HOLE DH-B-F-4

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-F-4
 LINE Baseline
 STA 454+06
 OFFSET 120 ft LEFT

UNOFFICIAL LOG

PSN 253 BORNUM 65
 REGION 5
 COUNTY ERIE
 PIN _____

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK
 SCALED COORDINATES (N) 1,067,341.450 (E) 1,063,913.330 DATUM NAD83 SURF. ELEV. 587.05
 DATE START 12-NOV-1956 DATE FINISH 15-NOV-1956 DEPTH TO WATER SEE NOTE

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|----|----|----|---|------------------------------|
| | | | 0 | 6 | 12 | 18 | | |
| | | | 6 | 12 | 18 | 24 | | |
| 141 | 50.0 | J10 | 4 | 5 | 7 | | (50.00) Red SILT , Some Clay, Trace Gravel And Fine Sand (M-PL) | |
| 183 | | | | | | | | |
| 173 | | | | | | | | |
| 187 | | | | | | | | |
| 178 | 55.0 | | | | | | | |
| 165 | | J11 | 3 | 4 | 8 | | | |
| 260 | | | | | | | | |
| 323 | | | | | | | | |
| 301 | | | | | | | | |
| 326 | 60.0 | | | | | | | |
| 221 | | J12 | 5 | 8 | 10 | | | |
| 270 | | | | | | | | |
| 290 | | | | | | | | |
| 270 | | | | | | | | |
| 271 | 65.0 | | | | | | | |
| 250 | | J13 | 4 | 5 | 7 | | | |
| 321 | | | | | | | | |
| 320 | | | | | | | | |
| 375 | | | | | | | (68.00) Red SILT , Some Clay (M-PL) | |
| 372 | 70.0 | | | | | | | |
| 333 | | J14 | 4 | 5 | | | | |
| 409 | | | | | | | | |
| 492 | | | | | | | | |
| 529 | | | | | | | | |
| 445 | 75.0 | | | | | | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
UNOFFICIAL LOG
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989A
Route 198 Ramp over Scajaquada Creek
 SHEET 3 OF 4 HOLE DH-B-F-4

CONTRACT _____ CONTRACTOR Westville Engineering

SM 282 E 12/02

PSN 253 BORNUM 65
 REGION 5
 COUNTY ERIE
 PIN _____

STATE OF NEW YORK
 DEPARTMENT OF TRANSPORTATION
 GEOTECHNICAL ENGINEERING BUREAU
 SUBSURFACE EXPLORATION LOG



HOLE DH-B-F-4
 LINE Baseline
 STA 454+06
 OFFSET 120 ft LEFT

UNOFFICIAL LOG

PROJECT SCAJAQUADA CREEK EXPRESSWAY DELAWARE PARK
 SCALED COORDINATES (N) 1,067,341.450 (E) 1,063,913.330 DATUM NAD83
 DATE START 12-NOV-1956 DATE FINISH 15-NOV-1956
 SURF. ELEV. 587.05 DEPTH TO WATER SEE NOTE

CASING O. D. 2 7/8 in I. D. 2 3/8 in WT OF HAMMER-CASING 300 lb HAMMER FALL-CASING 18 in
 SAMPLER O. D. 2 in I. D. 1 3/8 in WT OF HAMMER-SAMPLER 300 lb HAMMER FALL-SAMPLER 18 in

| CASING BLOWS/ft | DEPTH ft BELOW SURFACE | SAMPLE NO. | BLOWS ON SAMPLER in | | | | MOIST. CONT. (%) | DESCRIPTION OF SOIL AND ROCK |
|-----------------|------------------------|------------|---------------------|----|----|----|---|------------------------------|
| | | | 0 | 6 | 12 | 18 | | |
| | | | 6 | 12 | 18 | 24 | | |
| 294 | 75.0 | J15 | 2 | 4 | | | (75.00) Red SILT , Some Clay (M-PL) | |
| 317 | | | | | | | | |
| 340 | | | | | | | | |
| 381 | | | | | | | (78.00) Gray SILT , Some Gravel And Sand, Trace Clay (M-LPL) | |
| 369 | 80.0 | | | | | | | |
| 329 | | J16 | 18 | 14 | 13 | | | |
| 314 | | | | | | | | |
| 300 | | | | | | | | |
| 336 | | | | | | | (83.00) Gray GRAVEL , Some Clay, Trace Silt Gravel Consists Largely Of Broken Limestone (M-NPL) | |
| 371 | 85.0 | | | | | | | |
| 483 | | J17 | 9 | 5 | 5 | | | |
| 342 | | J18 | 5 | 13 | | | | |
| 482 | | R1 | | | | | (87.75) Run #1 Drilled from 87'9" To 92'9" LIMESTONE , Fractured And Broken REC. 46" 76.7% 23 | |
| | 90.0 | | | | | | | |

BOTTOM OF HOLE AT 92.75 ft

| DATE | TIME | DEPTH ft | | | ARTESIAN HEAD HEIGHT ABOVE GROUND | FILLED WITH WATER AT END OF DAY |
|-----------|-------|----------|--------|-------|-----------------------------------|---------------------------------|
| | | HOLE | CASING | WATER | | |
| 15-Nov-56 | 15:00 | 92.75 | 87.75 | 15.00 | | |

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DRILL RIG OPERATOR _____
 SOIL & ROCK DESCRIPTION H. Daniels
 REG GEOTECHNICAL ENGINEER _____
UNOFFICIAL LOG
 DATE APPROVED _____
 RESIDENT ENGINEER _____
 STRUCTURE NAME _____ B.I.N. 103989A
Route 198 Ramp over Scajaquada Creek
 SHEET 4 OF 4 HOLE DH-B-F-4

CONTRACT _____ CONTRACTOR Westville Engineering