AOC #1
REMEDIAL ACTION WORK PLAN

for the

BROWNFIELD CLEANUP PROGRAM

at the

FORMER ONEIDA KNIFE PLANT
LOT 1
Kenwood Avenue
City of Sherrill, Oneida County, New York
NYSDEC Site No. C633077

Prepared for:

ONEIDA, LTD.
163-181 Kenwood Avenue
Oneida, New York 13421

Prepared by:

PLUMLEY ENGINEERING

8232 Loop Road
Baldwinsville, New York 13027
(315) 638-8587
Project No. 2015025

September 2017
Revised December 2017

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1.0 INTRODUCTION

The former Oneida Knife Plant, Lot 1 (Site) is located on Kenwood Avenue in the City of Sherrill, Oneida County, New York. The property was formerly used for manufacturing silverware in factory facilities owned by Oneida Silversmiths, Inc. (Oneida). The Site is a 2.9-acre parcel of land that includes the northerly and oldest portion of the former Oneida Knife Plant. The factory facilities on the Site were razed in 2014. The remainder of the former Oneida facilities to the south (Lot 2) includes the newer portion of the factory on 17.6 acres, purchased by Omega Wire, Inc. in 2006, and is currently an active copper wire drawing mill.

A cleanup of the site is being performed by Oneida, Ltd. under the New York State Department of Environmental Conservation (DEC) Brownfield Cleanup Program (BCP). A Remedial Action Work Plan (RAWP)[1] was prepared and approved by the DEC for AOCs #1, #2, #3, #5 and #6. The RAWP described the remedial excavation program proposed and implemented for the Site. Construction work for these AOCs was completed during the summer of 2015. Remedial excavation of target soils in the Trench #2 area impacted with chlorinated volatile organic compounds (cVOCs) at AOC #1 was not successful in the removal of all the impacted soil. Therefore, the DEC requested that additional investigation and remediation of AOC #1 be undertaken.[2]

Plumley Engineering prepared a Work Plan for an expanded remedial investigation of AOC #1, dated July 22, 2016. The Work Plan was subsequently revised to address comments received from the DEC and was resubmitted on September 22, 2016. Final approval of the Work Plan was provided via letter dated October 31, 2016.

The objective of the investigation was to more fully evaluate the extent of subsurface cVOCs as the contaminants of concern for use in detailing a remediation plan for AOC #1. The investigation was completed in the fall of 2016 and a Supplemental Investigation Report (SIR) of the work, dated January 2017, was prepared and submitted to the DEC. In accordance with the

[1] *Remedial Action Work Plan for the Brownfield Cleanup Program at the Former Oneida Knife Plant,* prepared by Plumley Engineering, P.C., dated April 2013.

[2] Letter from the Department dated June 10, 2016.

recommendations made in the SIR and as detailed in a February 24, 2017 letter from Plumley Engineering, six additional soil borings and one groundwater monitoring well were completed in AOC #1 in March 2017 to complete the investigation. Soil and groundwater samples were collected in conjunction with the drilling work. Refer to the attached *Boring Logs* and *Laboratory Reports* for additional information.

Soil and groundwater conditions in AOC #1 relevant to remediation are summarized based on all completed investigation activities to date. Refer to the SIR for additional information. A proposed remediation plan for AOC #1 is described herein.

2.0 SITE CONDITIONS

2.1 Subsurface Geology

The subsurface geology in AOC #1 is summarized below. Refer to *Figure 1 – Boring Location Plan*, *Figure 2 – Geologic Column, Figure 3 – North to South Cross-Section A-A'*, *Figure 4 – North to South Cross-Section B-B'*, *Figure 5 – West to East Cross-Sections C-C' and D-D'* and *Figure 6 – West to East Cross-Sections E-E' and F-F'* for additional details.

- The surficial soil is a mixed unit of granular sand or sand and gravel fill, cohesive silt and fine sand or silty clay. These soils have a combined thickness of 7 to 13 feet, commonly about 8 feet.

- A unit comprised of slightly to moderately graded fine-medium sand, little to some gravel and with trace-little silt, underlies the surficial soils. This unit averages about 4 feet thick and typically occurs at depths of 8 to 12 feet below grade, correlative with the elevation of the current Oneida Creek channel.

- A relatively soft, plastic, silty clay underlies the gravelly sand unit. The thickness of the unit ranges from 2 to 12.5 feet throughout most of the area and averages 6 feet, occurring at an average depth of 12 to 18 below grade.

- A second sandy soil comprised of graded sand and gravel with trace or little silt occurs beneath the clay unit. The unit is bedded and interpreted as a fluvial channel deposit. It varies in thickness from 2 to 6 feet and averages 3.5 feet. This unit is also underlain by a relatively stiff silty clay, sometimes containing laminations of silt and fine sand. This lower clay unit was encountered at an average depth of 22 feet, forming the terminal unit sampled in most of the investigation borings.

- Deeper stratigraphy data, discussed in the SIR, indicate fine-grained cohesive soils and till underlie the lower clay.

- The water table occurs at depths of approximately 6 to 8 feet below grade, positioned at or above the top of the upper sandy soil. Therefore, the entire layered sequence beneath the surficial unit is below the water table. A large difference in permeability and hydraulic conductivity is expected between the sandy lithologies and the silty clay units. For brevity, reference is made to the more permeable sandy units as the upper and lower pervious units and the upper and lower clay units.

- The vertical investigation in most of the borings was terminated in the upper portions of the lower clay unit. The lower clay unit in the investigated area correlates well through the sections, likely indicating it is a continuous unit. The lower pervious unit maintains its stratigraphic position between the clay units through the area with relatively uniform to gradually changing thicknesses. The upper pervious unit displays a lateral pinch-out relation with the upper clay unit in places.

- The groundwater flow direction in AOC #1 was determined to be northerly, based on topographic considerations and groundwater contours determined during the remedial investigation. Refer to *Table 1 – Monitoring Well and Groundwater Elevation Data for AOC #1 Wells*, *Figure 7 – Soil and Groundwater Data in Upper Units* and *Figure 8 – Soil and Groundwater Data in Lower Units* for additional information.

2.2 Soil Contamination

A total of 23 borings (22 soil borings and 1 monitoring well) were completed for the AOC #1 supplemental investigation, with soil samples collected from various depths and geologic units

for analytical work from all borings. Analytical results for borings completed and discussed in the SIR are summarized in *Table 2 – Summary of November 2016 Soil Analytical Results, AOC #1 Borings – Detected Compounds Only*. Analytical results for follow-up borings completed in March 2017 are summarized in *Table 3 – Summary of March 2017 Soil Analytical Results, AOC #1 Borings – Detected Compounds Only*.

All samples were analyzed for VOCs using EPA Method 8260. The VOC concentrations are compared to the project cleanup criteria in the summary tables. Total VOC concentrations and compliance characteristics are plotted for the shallow and deeper soil unit sequences (sandy pervious and underlying clay units) on Figures 7 and 8, respectively. Compounds exceeding the recommended soil cleanup objectives (SCOs) for Protection of Groundwater[3] included four cVOCs: tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroehene (DCE) and vinyl chloride (VC). There were no exceedances of individual compound SCOs for these compounds in twenty-seven (43%) of the samples. Fourteen (22%) of the samples had compound exceedances by factors of less than approximately x10. Sixteen (25%) of the samples had compound exceedances by factors greater than x10 and less than x100. Six (10%) of the samples had exceedances by factors of approximately x100+.

The following comments are provided regarding the lateral and vertical extent of cVOCs within the subsurface:

- Delineations (isopleths) of the horizontal extent of soil impact in the shallow and lower sequences, incorporating data from all completed borings, are provided on Figures 7 and 8. The cVOCs were detected present at concentrations greater than SCOs in both the upper and lower pervious units in the Trench #2 area and the area north (downgradient) of Trench #2 (Figures 7 and 8).

- The Trench #2 area is concluded to be a source location for solvent impact to the subsurface soil and groundwater. Historical information indicated a "pit" at this location

[3]New York Codes, Rules and Regulations, Title 6 (6NYCRR) Part 375-6 *Remedial Program Soil Cleanup Objectives*.

in the former Building 2K area where solvent degreasing operations were reported to have taken place. Relatively high-level soil impact at and below the water table were observed during the Trench #2 excavation, and the supplemental investigation provides further documentation of impacts. There is an overall lateral continuity of the layered sequence from this area northward (Figures 3 and 4). The groundwater flow direction is northward (Figure 7). Adjective groundwater transport of cVOCs from this area is a probable migration mechanism producing a dissolved phase plume northward and likely contributed to soil impacts.

- Soil data obtained from the March 2017 drilling activities is summarized as follows:

  - Four of the borings (B-51, B-52, B-53 and B-54) were completed to provide additional delineation of the plume in the eastern downgradient area. Refer to the attached *Boring Logs* for additional information. Soil samples were screened with a photoionization detection (PID) meter. No field indicators of impact were noted at B-51. Three soil samples collected from the lower and upper pervious units and the lower clay unit at B-51 had no reported VOC exceedances (Table 3). Some relatively low PID meter readings [1 to 41 parts per million (ppm)] were recorded in the upper pervious unit at B-52. No field indicators were noted in the underlying clay units at B-51 and B-52. Three soil samples collected from the pervious soils and one from an upper clay unit at B-52 had no reported VOC exceedances. Relatively high PID meter readings (440 to 700 ppm) were recorded in the upper pervious unit at boring B-53. High PID meter readings (230 to 2,000 ppm) were variously reported in both the upper and lower pervious units and in the intervening upper clay unit at B-54 (these borings are located closer to the Trench #2 source area). Analytical results (Table 2) reported cVOC exceedances variously involving PCE, TCE, DCE and VC in the upper pervious unit at B-53 and upper clay unit at both B-53 and B-54. No VOC exceedances were reported in the samples from the lower pervious unit at B-53 or B-54. A total VOC concentration of 12.19 milligrams per kilogram (mg/kg) was reported for the lower clay unit sample from B-54, with the cleanup criteria exceeded for PCE and TCE (Table 3).

- Two borings were completed to provide additional plume delineation in the western downgradient area (B-55 and B-56). PID meter readings of 33 to 145 ppm were recorded in the upper pervious unit and readings of 22 to 34 ppm were recorded in the underlying upper clay unit at B-55, located closer to the Trench #2 source area. No field indicators were recorded in the lower sequence at B-55. No elevated PID meter readings or other field indicators were recorded in any of the soils at B-56. A soil sample from the upper pervious unit at B-55 had a total VOC concentration of 5.03 mg/kg, exceeding cleanup criteria for DCE and VC (Table 3). Soil samples from the lower pervious unit at both B-55 and B-56 were compliant with cleanup criteria.

- MW-5D was completed on the downgradient end of the contaminant plume with a well screen installed in the lower sequence (Figures 7 and 8). PID meter detections at MW-5D were recorded in the upper pervious unit (maximum 260 ppm) and the upper and lower portions of the upper clay unit (68 and 4.2 ppm, respectively). A sample from the top of the lower clay unit at MW-5D had a reported PCE at a concentration of 17.66 mg/kg, exceeding the cleanup criteria of 1.3 mg/kg.

- Soil impacts exceeding SCOs in the shallow pervious unit appear to comprise a larger area than in the lower pervious unit.

- A lateral pinch-out of the upper pervious unit in the upper clay appears to have blocked contaminant migration in the shallow sequence along the western edge of the area, encompassing the line of borings B-38, B-39 and B-42 (Section B-B', Figure 3; Section E-E', Figure 5). The bifurcated pattern of the downgradient portions of the shallow and deep pervious zone isopleths (Figure 7, Figure 8 and *Figure 9 – Remedial Site Plan – Proposed Sparge Wells*) appears to be a result of this.

- Interfingering of the upper pervious and clay units, resulting with the clay unit thinning or perhaps pinching out in places (e.g., B-41 on Section A-A', Figure 2; Section F-F', Figure 5), likely facilitated the vertical migration of contaminants into the lower pervious unit.

- The soil sample field PID meter screening and laboratory analytical results indicate the upper and lower clay units have also been impacted with cVOCs at concentrations exceeding SCOs in places (Figures 7 and 8). Impact in the upper clay unit appears to occur over a larger area than in the lower clay unit.

- No dense non-aqueous phase liquid (DNAPL) was observed in any of the borings, except for a thin sheen zone at B-43 in the base of the upper pervious unit at the Trench #2 area. Soil boring PID profile screening and soil sample results indicate a higher level of cVOCs in the base of the pervious units and in places, at the top of their underlying clay confining beds. No gross DNAPL impact was observed in the Trench #2 excavation completed in 2015. The cVOC concentrations in the soil samples are all well below the 10,000 mg/kg (1% of soil mass) guideline that would suggest the presence of DNAPL.[4]

2.3 Groundwater Data

VOC analytical data obtained for the four AOC #1 monitoring wells are summarized in *Table 4 – Summary of Groundwater Analytical Results, AOC #1 Monitoring Wells – Detected Compounds*. The most recent sampling and analysis results (total VOCs) are also plotted on Figures 7, 8 and 9. Groundwater contours derived using the water levels obtained on March 1, 2017 are also provided on Figures 7, 8 and 9. Monitoring well as-built and groundwater elevation data are provided in Table 3.

A groundwater flow direction toward the north-northeast is indicated. Most of the contaminant detections include the same four chlorinated hydrocarbons as detected in the soil samples. Considering the most recent results, total VOC concentrations range from 43 micrograms per liter (µg/L) at TW-3R, located cross-gradient from the Trench #2 source area, to 3,071 µg/L at downgradient well TW-2R. Individual compound concentrations exceed groundwater standards by factors of 2 to 2+ orders of magnitude.[5]

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[4] *Estimating the Potential for DNAPL at Superfund Sites*, EPA Publication 9355.4-07FS, January 1992.

[5] DEC Division of Water, Technical and Operational Guidance Series (TOGS) 1.1.1, *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.*

2.4 Conclusions

The information regarding plume conditions obtained from the supplemental investigation supports the following main conclusions:

- The Trench #2 location was a source area of solvent release to the subsurface soils and groundwater.

- Two sequences of relatively pervious sand-rich soil underlain by silty clay units below the water table correlate through the AOC. These units are the "geologic framework" for the plume.

- VOC contaminant migration occurred distinctly northward from the Trench #2 area. The groundwater gradient indicates northerly flow directions. Soil impact occurs at greater concentrations laterally within the pervious units and at the top of the clay units.

- Contaminant migration impacts occur within the approximately same plan view area in both the upper and lower pervious units, with some deviation in the downgradient portion of the plume indicated (Figure 9). Higher levels of impact, specifically concentrations exceeding the SCOs by a factor of x10 or more, appear more widespread in the shallow pervious and clay units than in the deeper sequence.

- Gross DNAPL impacts have not been observed.

- The lower clay unit is a laterally continuous confining bed in the AOC. Deeper stratigraphy data indicate fine-grained cohesive soils and till underlie the lower clay and are expected to have afforded additional buffering to vertical contaminant migration.

3.0 REMEDIAL PLAN

3.1 Remedial Action Objectives and Standards, Criteria and Guidance

The cleanup objective is to remediate the soil and groundwater at the site to pre-spill conditions, to the extent practical. The applicable standards and guidance criteria are as follows:

- ***Soil:*** Protection of Groundwater Soil Cleanup Objectives (SCOs) in New York Codes, Rules and Regulations, Title 6, (6NYCRR) Part 375-6, *Remedial Program Soil Cleanup Objectives*.

- ***Groundwater:*** State groundwater standards, as summarized in the DEC Division of Water, Technical and Operational Guidance Series (TOGS) 1.1.1, *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*.

The cleanup will be completed in general conformance with the DEC Division of Environmental Remediation (DER) DER-10, *DEC Technical Guidance for Site Investigation and Remediation*, May 3, 2010.

3.2 Overview Description of the Proposed Remediation Plan

The proposed technology approach is a groundwater sparging method developed and patented by Kerfoot Technologies, Inc. (KTI) which utilizes the following main components:

- An onsite ozone generator, hydrogen peroxide metering pump, tank and compressor system will provide a gaseous oxidant mixture ("*Perozone*") to inject below the water table for oxidizing the contaminants.

- Microporous sparge points 16 inches long, developed by KTI, will be installed as injection wells sealed below the water table, similar to conventional air sparge wells. *Perozone* is emitted from the sparge points and disperses in the aquifer matrix in the form of microbubbles.

- The ozone generating equipment, hydrogen peroxide batching, air (ozone) and liquid (hydrogen peroxide-water solution) injection compressor and pump systems with ancillary equipment, controllers and multiport manifolds, will be provided as a package shed system by KTI. Oxidant process equipment, piping and tubing is constructed of ozone and hydrogen peroxide- resistant materials.

- Sparge points installed in the target plume area will each be outfitted with access manholes. Separate tubing runs for the ozone gas and hydrogen peroxide liquid will be installed from the manifolds in the equipment shed to each sparge well. The ozone and hydrogen peroxide mixing in the sparge point diffusers will produce the *Perozone* microbubbles.

- A Programmable Logic Controller (PLC) and solenoid valves on the air and liquid manifolds are included to provide pulsed, sequential injection of *Perozone* to the sparge wells.

The following additional information regarding the KTI *Perozone* system and its proposed use at the site is provided below. Refer to the attached *Product Information* for system cut sheets.

- KTI has nearly 20 years of experience with the ozone system, with many successful applications. The combination of using an effective oxidant and microporous diffusers has proven to be an effective combination. By pulsing (cyclic on-off sparge point operation) and providing appropriately-sized microbubbles, the *Perozone* mixture enhances the process scrubbing capacity and gently pushes the bubbles through soil capillary pores. Significant channeling, as can occur with conventional sparging, is reduced or eliminated. It is a relatively simple system to operate.

- The *Perozone* is an effective oxidant mixture for cVOCs.

- The hydrogen peroxide usage involves dilute solutions of 8 to 10% with an estimated usage of approximately 50 gallons per week.

- The injection air flow rate is in the range of 1 to 3 cubic feet per minute (cfm). Sparge points are set to sequentially activate for 30-minute periods.

- The sparge points will be installed in the sandy lithologies comprising the pervious units. Treatment of both soil and groundwater throughout the pervious units and along the clay unit boundaries will be provided. Based on prior KTI reported experiences involving clay units, the *Perozone* is expected to penetrate several inches (±12) into the clay units.

- Fourteen upper pervious unit sparge points and eleven lower pervious unit sparge points are proposed in the plume area, assuming a radius of sparging influence of 12.5 feet. Refer to *Figure 9 – Remedial Site Plan – Proposed Sparge Wells* for locations. The radius of influence assumed is based on KTI's experience with similar site conditions and is considered conservative.

- There is no significant risk of displacing contaminated groundwater due to relatively low injection flow rates and pulsed mode of operation.

3.3 Construction Details

Installation

- Refer to *Figure 10 – Remediation Site Plan - System Layout* for the proposed system layout.

- Environmental contractors will be retained to install the necessary wells and equipment for the system. A KTI consultant will assist with the equipment procurement, installation details, onsite startup and training.

- A single phase, 200-amp electrical service will be installed at the site to provide electrical power for the system.

- The sparge wells will be installed by drilling and installation methods used for conventional monitoring wells. The sparge points, fitted with ¾-inch Schedule 80 polyvinyl chloride (PVC) riser pipe (with Viton O-rings), will be installed using temporary, minimum 4-inch diameter casing and the pull-back method. Borehole annulus sand packs around the sparge points and bentonite and grout borehole seals will be installed in accordance with specifications provided by KTI (refer to *Product Information*). Wellhead access curb boxes will be installed over each well.

- *Geoprobe* soil cores will be extracted from each proposed sparge well location and logged for lithology, visual/olfactory indicators and PID meter readings to obtain

additional information on the extent of impact and to verify positioning of the sparge points within and near the base of the targeted pervious units.

- Two-inch diameter conduit pipes will be installed to the wells and ozone and liquid oxidant tubing will be pulled through the conduits for connection at the injection well risers and to the appropriate equipment manifolds in the equipment shed. Air and liquid check valves are installed on the lines at the wellheads.

- The system will be set up to operate through winter conditions by installing the tubing conduits in shallow 18 to 24-inch deep trenches and/or by providing insulation over the conduits and injecting warm air into the conduits using a compressor in the equipment shed. The ozone lines also run warm, providing a heat source in the conduits.

- The equipment and stored dilute (10%) hydrogen peroxide batch tank will be in the locked equipment shed.

Operation

- The system will be set for full time "24-7" pulsed operation during the subsurface treatment phase of operation. Two wells will be activated at a time, for approximately 30 minutes**.** Full time operation of the system will continue until groundwater monitoring suggests compliance with groundwater standards has been met to the extent practical. The system will subsequently be shut down and a post-treatment monitoring plan will be implemented. Refer to Sections 5.0 and 6.0 for additional information.

- The PLC will allow for flexibility in selecting which wells go online and the cycle times. As groundwater quality data is gathered over time from the monitoring wells, changes may be made to "focus" treatment in different segments of the Site.

- The system is equipped with failsafe controls to shut down the system in the event of:

- Ozone leak in the plumbing system (via an ozone detection meter and switching installed in the shed).

- Blockage of the air or liquid lines resulting in increased operational pressures (via high pressure shut down switches).

- Compressor failure (via low pressure cut off switch) shuts off the ozone generation system.

- Depletion of hydrogen peroxide liquid supply in batch drum (via low level cutoff float).

- A total treatment period for the site of 1 to 2 years is anticipated.

- Periodic system inspections will be completed by trained personnel once per week the first month after startup and anticipated twice per month thereafter to assure proper operation, provide routine servicing and collect operating data. Inspections will include:

  - Replenishing the hydrogen peroxide feed tank.

  - Recording compressor and injection sparge point operating pressures.

  - Recording liquid flow rates, operating pressures and hydrogen peroxide usage rates.

  - Measuring the ozone concentration being generated.

  - Checking pulsed cycle operation timers and settings; system run time output.

  - Compressor, oxygen generator filter servicing.

4.0 CONSTRUCTION CONTROLS AND HEALTH AND SAFETY PLAN

Applicable construction facilities and controls, including Health and Safety Plan (HASP) provisions, will be in accordance with the April 2013 Site RAWP.

5.0 PERFORMANCE MONITORING PLAN

Four monitoring wells (TW-2R, TW-3R, MW-4 and MW-5D) are available for use in monitoring groundwater quality trends during the remediation at the Site (Figure 9). Wells TW-2R and TW-3R monitor the upper previous unit and wells MW-4 and MW-5 monitor the lower previous unit. Groundwater samples will be collected every three months (quarterly) following system startup and analyzed for VOCs using EPA Method 8260. Depth to groundwater measurements for the wells will be recorded in conjunction with the sampling. Dissolved oxygen (DO) and oxidation-reduction potential (ORP) will be measured at the wells to monitor oxidation processes. All monitoring wells will be sampled for VOCs prior to system startup, and DO and ORP readings will be obtained. DO and ORP will be included in all post-startup sampling events.

The results of the sampling events will be forwarded to the DEC for review. Tables summarizing the groundwater analytical results, DO and ORP readings, and groundwater elevation data will be provided, along with comments and recommendations regarding system operations. Graphs of the monitoring well data will be provided to allow the evaluation of trends.

The system will be shut down but left in an operable condition after the DEC and Project Engineer agree that sufficient treatment has been accomplished in the target area based on groundwater VOC data trends and the levels achieved. A post-treatment groundwater monitoring plan (quarterly frequency for a minimum of one year) will then be developed with the DEC and implemented. The objectives of the monitoring plan will be to evaluate compliance with groundwater standards and verify lack of contaminant rebounding.

A limited number of soil samples will be collected and analyzed for site VOCs to compare with the protection of groundwater SCOs in conjunction with shutting the system off and implementing the post-treatment groundwater monitoring plan. Four samples in the upper pervious unit and four samples in the lower pervious unit are proposed, to include two in the upgradient and two in the downgradient areas of the upper and lower VOC isopleth plumes. These samples will be collected from the base of the pervious units. A sampling and analysis plan including the proposed locations will be submitted to the DEC for review prior to implementation.

Refer to Section 6.0 for additional information.

6.0 SCHEDULE

The following remedial action schedule is proposed:

Construction - 120 Days

Phase 1 Construction (90 days):

- Procure specialized equipment from KTI.
- Obtain sparge points from KTI and install wells.
- Order and set electrical service at proposed shed location.

Phase 2 Construction (30 days):

- Set building.
- Install trench and piping from wells to shed.

- Install plumbing and electrical.

- Complete system testing and startup.

System Full Time Operation - 1 to 2 Years

- Perform periodic inspections.

- Implement quarterly groundwater monitoring program.

- Come to a joint agreement between the DEC and Project Engineer to shut down system based on groundwater monitoring data with regard to compliance with groundwater standards.

Post-Treatment Monitoring – 1 Year

- Shut off system.

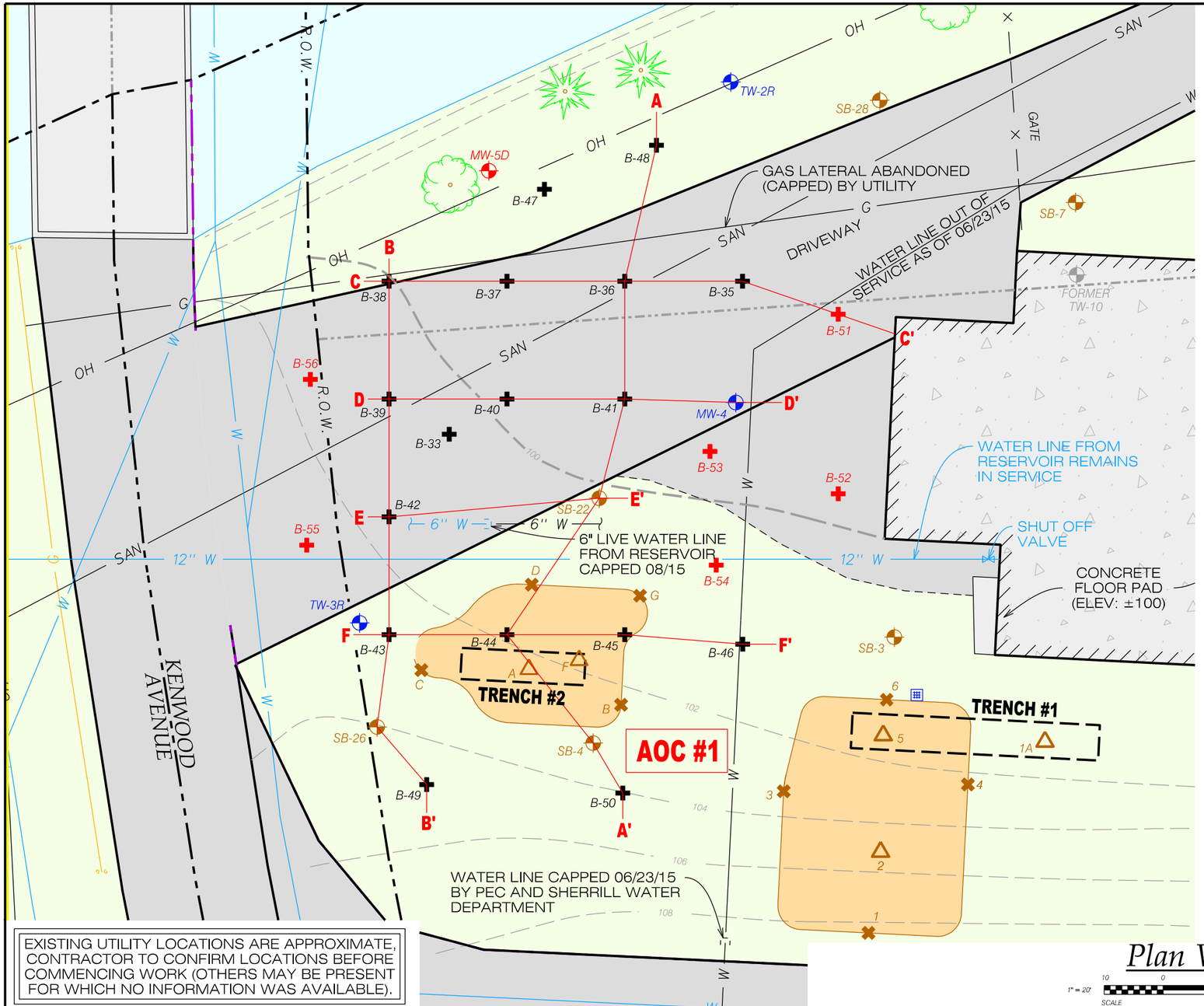
- Implement quarterly groundwater monitoring for a minimum of one year.

- Reactivate system if groundwater contaminant rebounding is observed (proposed definition of rebounded concentrations is two orders of magnitude (X100) or greater than any individual VOC standard).

- Complete soil confirmation sampling and analysis.

- Extend the monitoring program beyond one year to better evaluate trends and possible natural attenuation if groundwater concentrations are less than the proposed rebounded X100 threshold and greater than standards.

FIGURES



EXISTING UTILITY LOCATIONS ARE APPROXIMATE, CONTRACTOR TO CONFIRM LOCATIONS BEFORE COMMENCING WORK (OTHERS MAY BE PRESENT FOR WHICH NO INFORMATION WAS AVAILABLE).

Key

- Property Line
- R.O.W. — Right of Way
- Former Building Wall
- Catch Basin
- SAN — Sanitary Sewer
- W — Water Main w/ Size
- 110 — Topographic Contour
- Remedial Excavation, Completed in Summer of 2015
- B-3 — Soil Boring (Completed in 2010 for Remedial Investigation Report)
- Monitoring Well
- SIDEWALL SAMPLE / BOTTOM SAMPLE — AOC 1 Soil Confirmation Sample Collected July & August, 2015 (Refer to 12/2015 Construction Completion Report)
- B-33 — Soil Borings for Investigation of Impact at AOC #1 Trench #2 Area (Completed 04/21/16 and 11/7-8/16)
- B-51 — Soil Borings Completed 03/01/17
- MW-5D — Motoring Well Installed 03/01/17
- A — A' — Location of Cross-Sections, Figures 3-6

Plan View

1" = 20' SCALE — 10 0 10 20 FEET

PLUMLEY ENGINEERING

PLUMLEY ENGINEERING, P.C.
8232 LOOP ROAD
BALDWINSVILLE, NY 13027

TELEPHONE: (315) 638-8587
FAX: (315) 638-9740
WWW.PLUMLEYENG.COM

Civil and Environmental Engineering

REVISIONS: DATE: BY:

PROJECT: FORMER ONEIDA KNIFE PLANT - LOT 1
BROWNFIELD CLEANUP PROGRAM

DWG. TITLE: AOC #1 REMEDIAL ACTION WORK PLAN
BORING LOCATION PLAN

CLIENT: ONEIDA, LTD

LOCATION: CITY OF SHERRILL, ONEIDA COUNTY, NEW YORK

PROJECT No.:	2015025
FILE NAME.:	BORING
SCALE:	AS NOTED
DATE:	SEPT. 2017
ENG'D BY:	FAK
DRAWN BY:	JJL
CHECKED BY:	DRV

SHEET NO.:

FIGURE 1

FORMER ONEIDA KNIFE PLANT
City of Sherrill, Oneida County, New York
DEC Site No. C633077

FIGURE 2 - GEOLOGIC COLUMN

Site Elevation (ft.)	Soil Boring Column Typical Ground Surface	General Description	U.S.C.S.	Average Depth (ft.)
100				
98	Mixed Unit	Surficial sand, or sand and gravel fill in place	SW/GW	
96				
94		Mixtures of fine sand and silt, or silty clay (likely disturbed soil or fill in places	SM, ML, CL	
92				8
90	Upper Pervious Unit	Brown or gray, fine-medium sand, trace-little silt, variable grave or sandy gravel; trace fine-coarse organics in places	SP,SW,GW, GW/GM	
88				12
86	Upper Clay Unit	Soft, reddish clay or silty clay	CL	
84				
82				18
80	Lower Pervious Unit	Reddish, graded sand and gravel, trace - little silt; or gravelly fine-coarse sand	SW,GW	
78				22
76	Lower Clay Unit	Reddish silt clay; thin interbeds of silt and fine sand in place	CL	

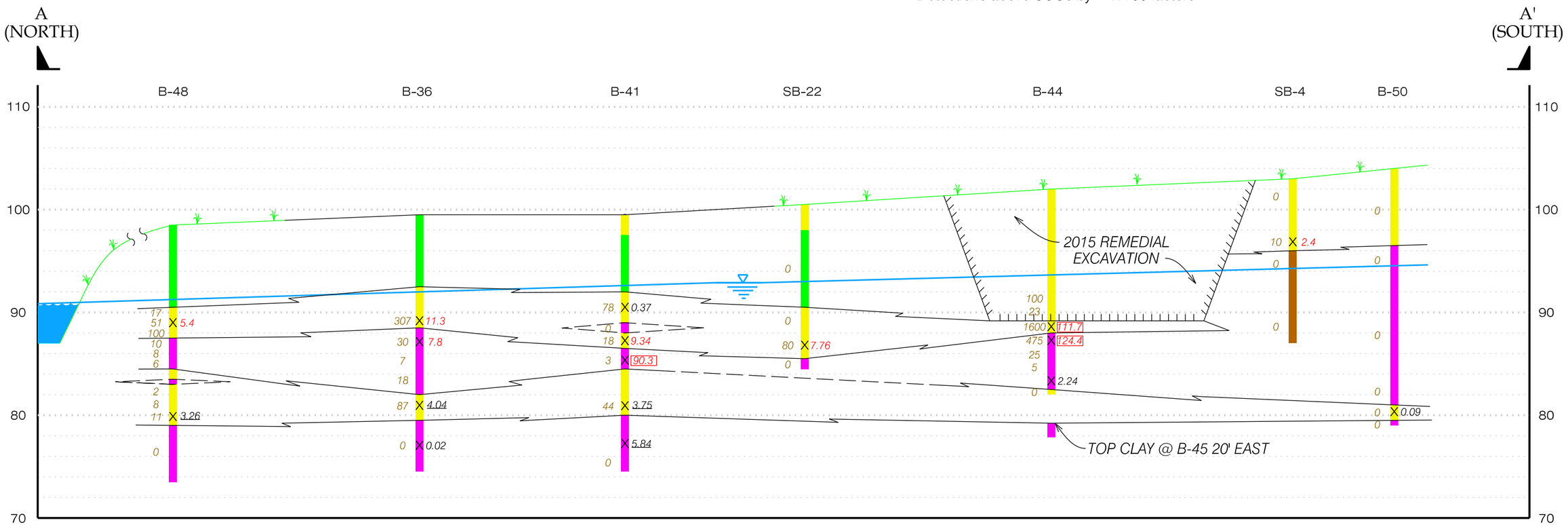
Key

VOC (EPA 8260) Analytical Results:

- Water Level
- 10 — Soil PID Reading (PPM)
- X — Soil Sample Location
- 0.12 — No Detections above SCOs
- 4.04 — Detections above SCOs by < x 10 factors
- 9.34 — Detections above SCOs by > x 10, < x 100 factors
- 90.3 — Detections above SCOs by > x 100 factors

SOILS: (Generalized)

- Surficial Silt or Clay
- Pervious Sand Units
- Clay Units
- Silt



Section A

Horizontal Scale: 1" = 10'
Vertical Scale: 1" = 10'

PLUMLEY ENGINEERING

PLUMLEY ENGINEERING, P.C.
8232 LOOP ROAD
BALDWINSVILLE, NY 13027

TELEPHONE: (315) 638-8567
FAX: (315) 638-9740
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Civil and Environmental Engineering

REVISIONS: DATE: BY:

PROJECT: FORMER ONEIDA KNIFE PLANT - LOT 1
BROWNFIELD CLEANUP PROGRAM

DWG. TITLE: AOC #1 REMEDIAL ACTION WORK PLAN
NORTH TO SOUTH CROSS - SECTION A-A'

CLIENT: ONEIDA, LTD

LOCATION: CITY OF SHERRILL, ONEIDA COUNTY, NEW YORK

PROJECT No.:	2015025
FILE NAME.:	CS-1C
SCALE:	AS NOTED
DATE:	SEPT. 2017
ENG'D BY:	FAK
DRAWN BY:	JJL
CHECKED BY:	FAK

SHEET NO.:

FIGURE 3

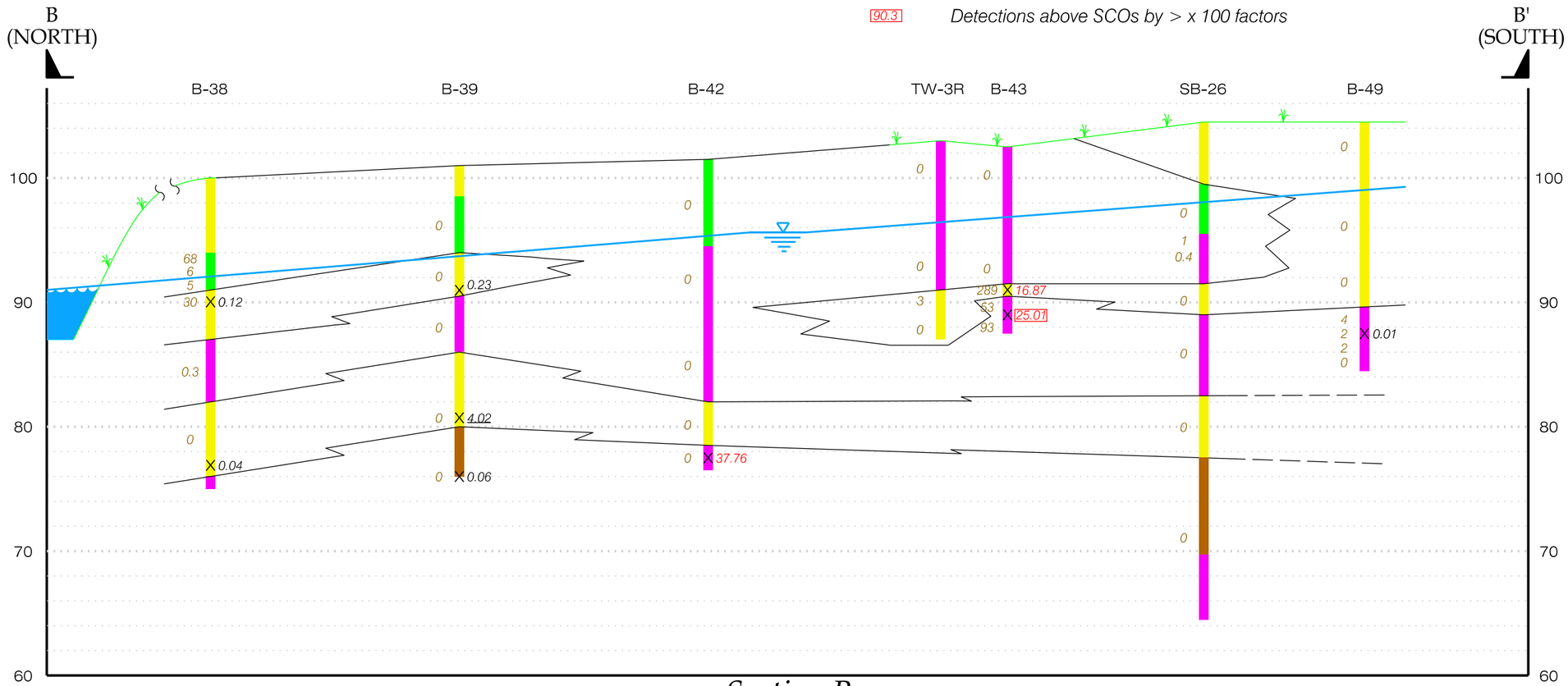
Key

VOC (EPA 8260) Analytical Results:

	Water Level
10	Soil PID Reading (PPM)
X	Soil Sample Location
0.12	No Detections above SCOs
4.04	Detections above SCOs by < x 10 factors
9.34	Detections above SCOs by > x 10, < x 100 factors
90.3	Detections above SCOs by > x 100 factors

SOILS: (Generalized)

- Surficial Silt or Clay
- Pervious Sand Units
- Clay Units
- Silt



Section B

Horizontal Scale: 1" = 10'
Vertical Scale: 1" = 10'

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REVISIONS: DATE: BY:

PROJECT: FORMER ONEIDA KNIFE PLANT - LOT 1
BROWNFIELD CLEANUP PROGRAM

DWG. TITLE: AOC #1 REMEDIAL ACTION WORK PLAN
NORTH TO SOUTH CROSS - SECTION B-B'

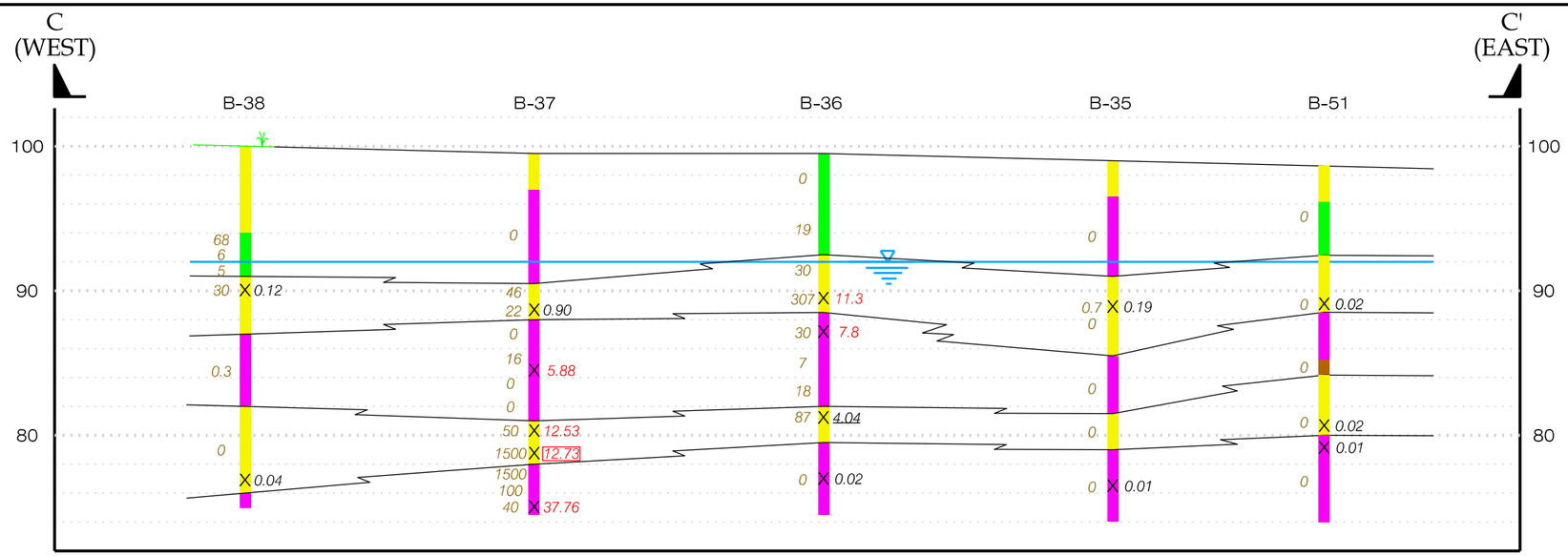
CLIENT: ONEIDA, LTD

LOCATION: CITY OF SHERRILL, ONEIDA COUNTY, NEW YORK

PROJECT No.:	2015025
FILE NAME.:	CS-1C
SCALE:	AS NOTED
DATE:	SEPT. 2017
ENG'D BY:	FAK
DRAWN BY:	JJL
CHECKED BY:	FAK

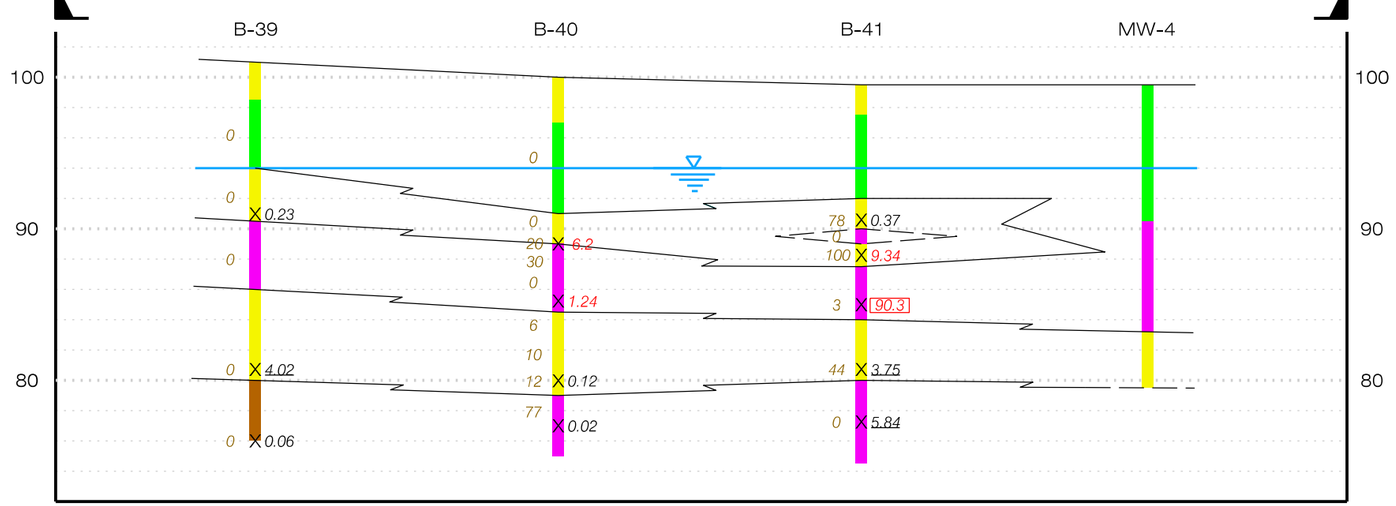
SHEET NO.:

FIGURE 4



Section C

Horizontal Scale: 1" = 10'
Vertical Scale: 1" = 10'



Section D

Horizontal Scale: 1" = 10'
Vertical Scale: 1" = 10'

Key

VOC (EPA 8260) Analytical Results:

- Water Level
- 10 — Soil PID Reading (PPM)
- X — Soil Sample Location
- 0.12 — No Detections above SCOs
- 4.04 — Detections above SCOs by < x 10 factors
- 9.34 — Detections above SCOs by > x 10, < x 100 factors
- 90.3 — Detections above SCOs by > x 100 factors

SOILS: (Generalized)

- Surficial Silt or Clay
- Pervious Sand Units
- Clay Units
- Silt

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REVISIONS: | DATE: | BY:

PROJECT: *FORMER ONEIDA KNIFE PLANT - LOT 1*
BROWNFIELD CLEANUP PROGRAM

DWG. TITLE: AOC #1 REMEDIAL ACTION WORK PLAN
WEST TO EAST CROSS - SECTIONS C-C' AND D-D'

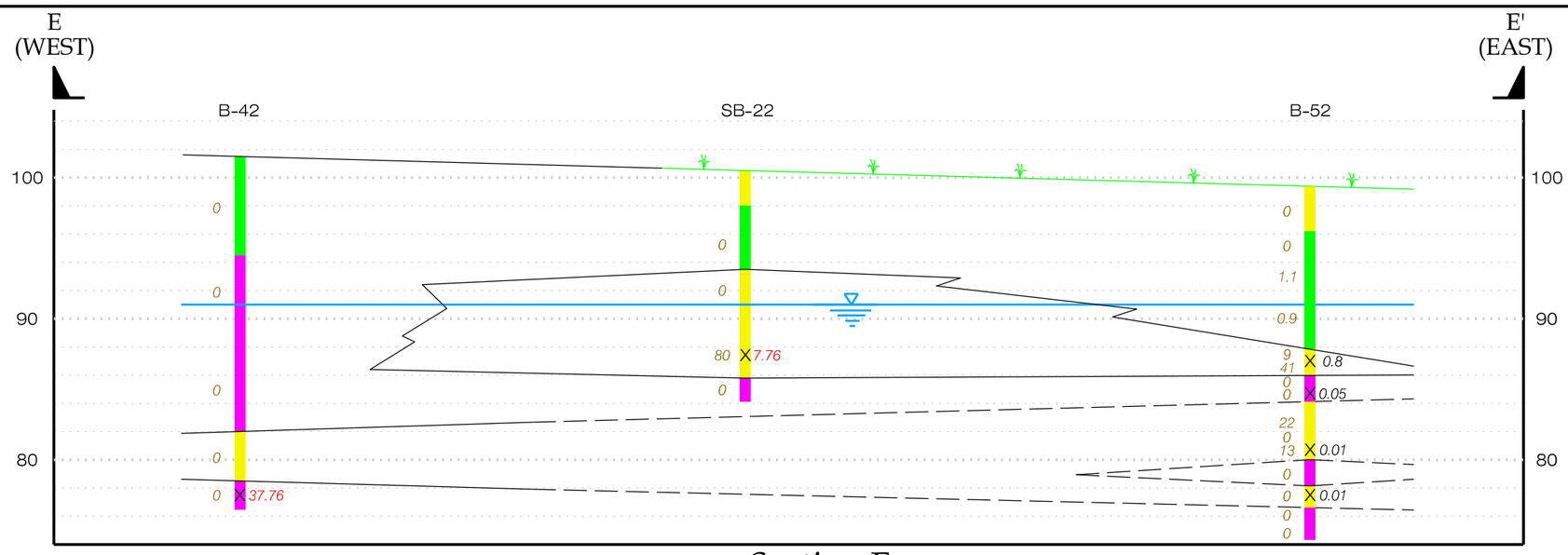
CLIENT: ONEIDA, LTD

LOCATION: CITY OF SHERRILL, ONEIDA COUNTY, NEW YORK

PROJECT No.:	2015025
FILE NAME.:	CS-1C
SCALE:	AS NOTED
DATE:	SEPT. 2017
ENG'D BY:	FAK
DRAWN BY:	JJL
CHECKED BY:	FAK

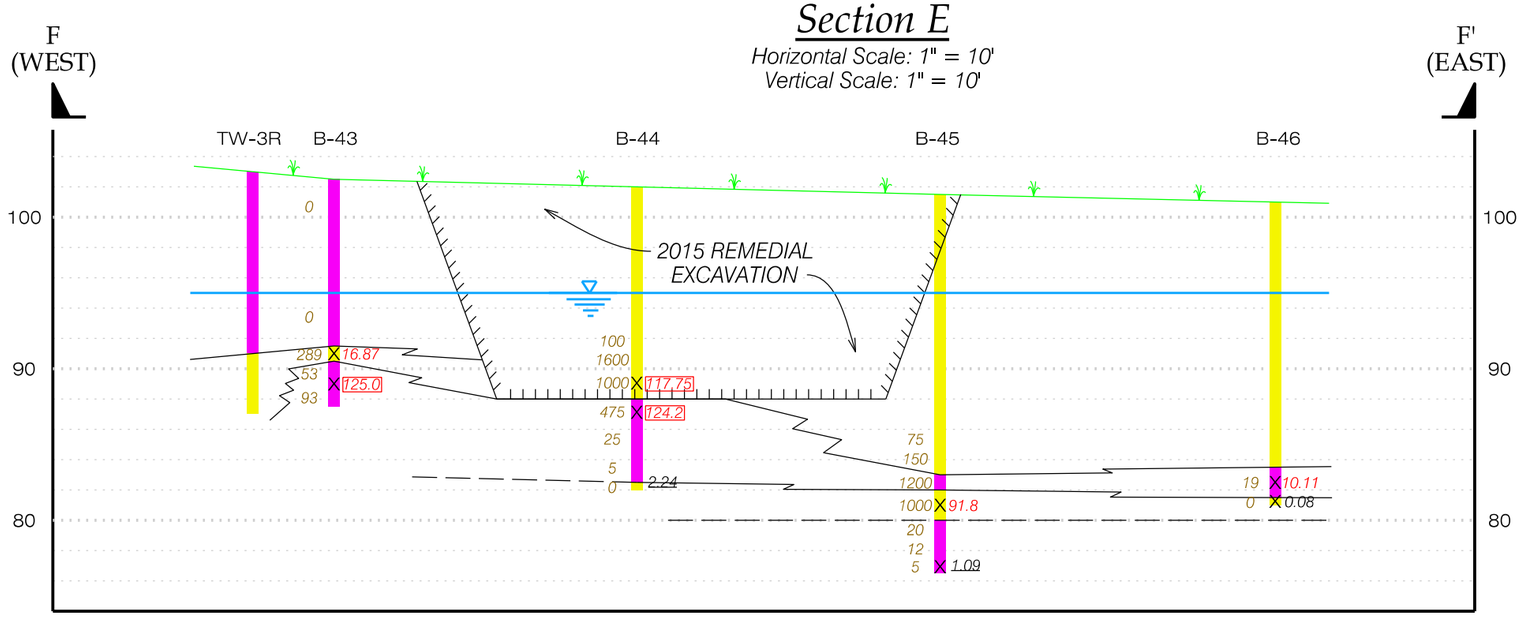
SHEET NO.:

FIGURE 5



Section E

Horizontal Scale: 1" = 10'
Vertical Scale: 1" = 10'



Section F

Horizontal Scale: 1" = 10'
Vertical Scale: 1" = 10'

Key

VOC (EPA 8260) Analytical Results:

- Water Level
- 10 — Soil PID Reading (PPM)
- X — Soil Sample Location
- 0.12 — No Detections above SCOs
- 4.04 — Detections above SCOs by < x 10 factors
- 9.34 — Detections above SCOs by > x 10, < x 100 factors
- 90.3 — Detections above SCOs by > x 100 factors

SOILS: (Generalized)

- Surficial Silt or Clay
- Pervious Sand Units
- Clay Units
- Silt

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PLUMLEY ENGINEERING, P.C.
8232 LOOP ROAD
BALDWINSVILLE, NY 13027
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REVISIONS: DATE: BY:

PROJECT: FORMER ONEIDA KNIFE PLANT - LOT 1
BROWNFIELD CLEANUP PROGRAM

DWG. TITLE: AOC #1 REMEDIAL ACTION WORK PLAN
WEST TO EAST CROSS - SECTIONS E-E' AND F-F'

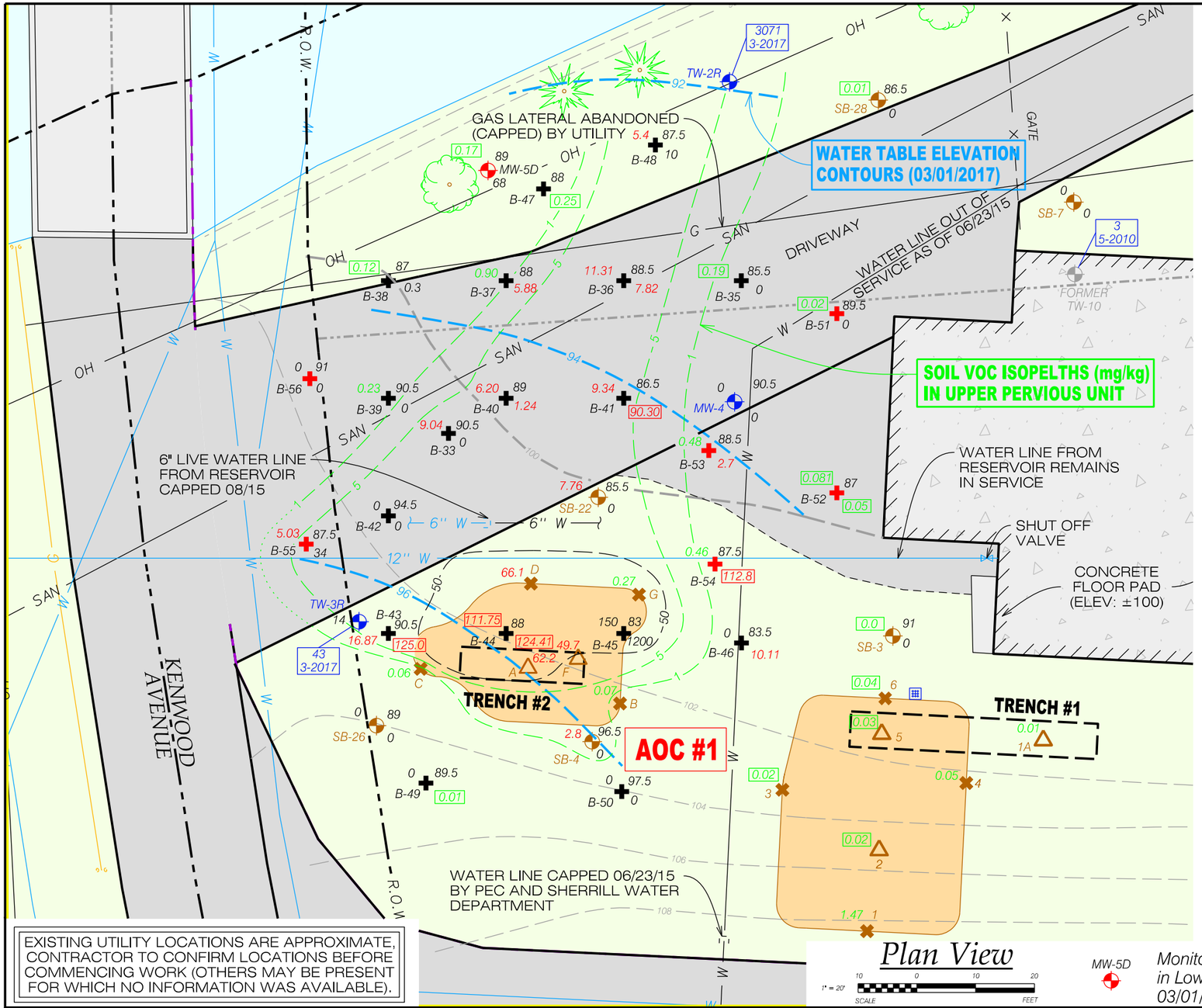
CLIENT: ONEIDA, LTD

LOCATION: CITY OF SHERRILL, ONEIDA COUNTY, NEW YORK

PROJECT No.:	2015025
FILE NAME.:	CS-1C
SCALE:	AS NOTED
DATE:	SEPT. 2017
ENG'D BY:	FAK
DRAWN BY:	JJL
CHECKED BY:	FAK

SHEET NO.:

FIGURE 6



EXISTING UTILITY LOCATIONS ARE APPROXIMATE, CONTRACTOR TO CONFIRM LOCATIONS BEFORE COMMENCING WORK (OTHERS MAY BE PRESENT FOR WHICH NO INFORMATION WAS AVAILABLE).

Plan View

1" = 20' SCALE 10 0 10 20 FEET

Key

- Property Line
- R.O.W. — Right of Way
- Former Building Wall
- Catch Basin
- SAN — Sanitary Sewer
- W — Water Main w/ Size
- 110 — Topographic Contour
- Remedial Excavation, Completed in Summer of 2015
- B-3 — Soil Boring (Completed in 2010 for Remedial Investigation Report)
- 3 / 3-2017 — Monitoring Well Total VOCs in Ground Water, ug/L (Date)
- SIDEWALL SAMPLE
- BOTTOM SAMPLE — AOC 1 Soil Confirmation Sample Collected July & August, 2015 (Refer to 12/2015 Construction Completion Report)

Soil Borings for Investigation of Impact at AOC #1 Trench #2 Area (Completed 04/21/16 and 11/7-8/16):

0.90 = Total Soil VOCs (mg/kg) in Upper Previous Unit
88 = Elevation of Bottom of Upper Previous Unit/Top of Upper Clay
5.88 = Total Soil VOCs (mg/kg) in underlying Clay Unit
0.3 = Soil PID Reading (PPM) at Locations where no Analyical Samples were Collected

- Soil Borings Completed 03/01/17
- 0.12 — No Compound Exceedances
- 0.12 — Compound Exceedances < ±X10
- 7.82 — Compound Exceedances >X10 <X100
- 90.30 — Compound Exceedances >X100
- * — NYS DEC CP-51 Protection of Groundwater Soil Cleanup Objectives

MW-5D — Monitoring Well Installed in Lower Pervious Unit 03/01/2017

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PLUMLEY ENGINEERING, P.C.
8232 LOOP ROAD
BALDWINSVILLE, NY 13027
TELEPHONE: (315) 638-8587
FAX: (315) 638-9740
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PROJECT: FORMER ONEIDA KNIFE PLANT - LOT 1
BROWNFIELD CLEANUP PROGRAM

DWG. TITLE: AOC #1 REMEDIAL ACTION WORK PLAN
SOIL AND GROUNDWATER DATA IN UPPER UNITS

CLIENT: ONEIDA, LTD

LOCATION: CITY OF SHERRILL, ONEIDA COUNTY, NEW YORK

Note: No alteration permitted hereon except as provided under Section 7209 Subdivision 2 of the New York State Education Law.

PROJECT No.:	2015025
FILE NAME.:	EV01P
SCALE:	AS NOTED
DATE:	SEPT. 2017
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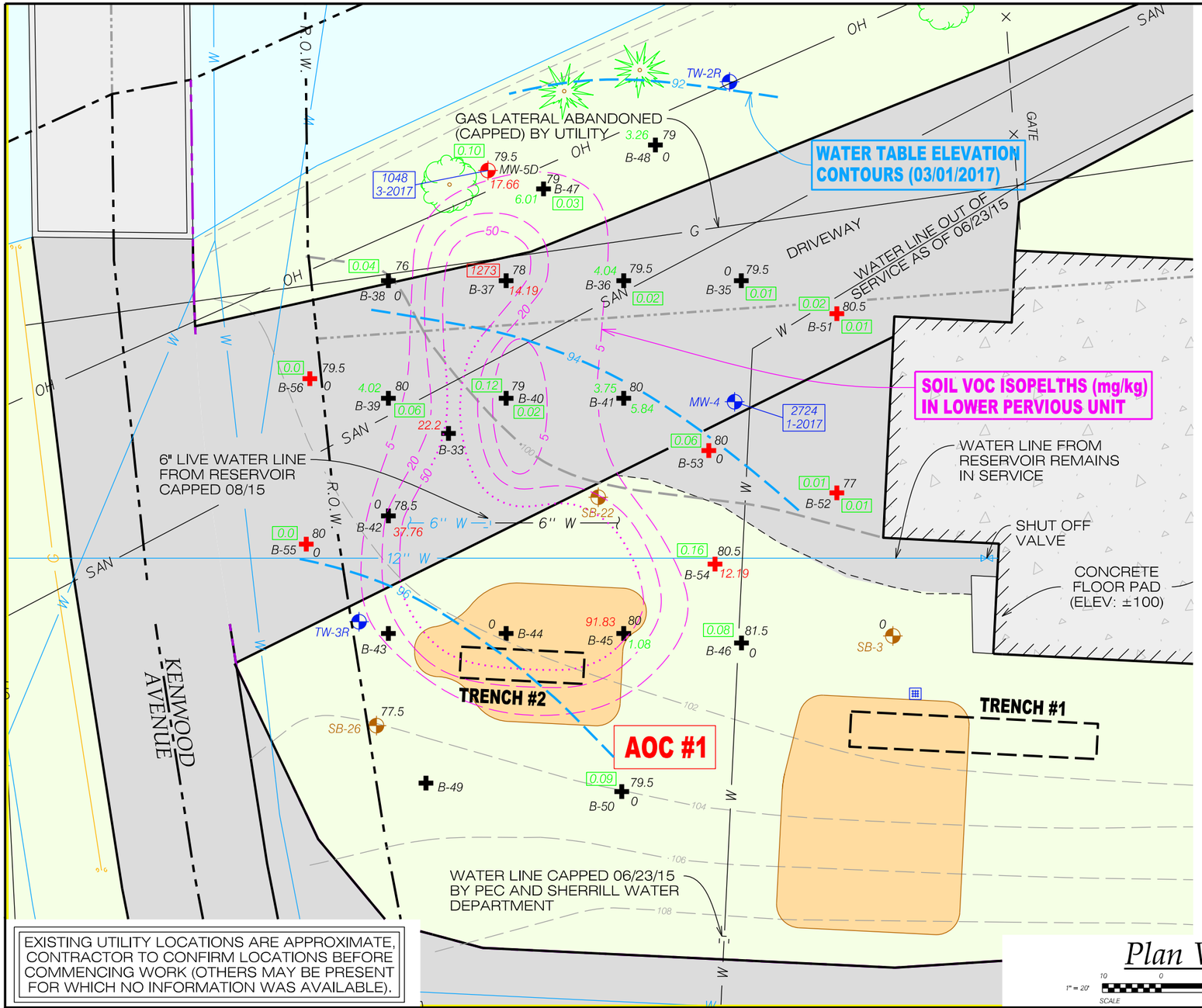
CHECKED BY:	DRV

SHEET NO.:

FIGURE 7



EXISTING UTILITY LOCATIONS ARE APPROXIMATE, CONTRACTOR TO CONFIRM LOCATIONS BEFORE COMMENCING WORK (OTHERS MAY BE PRESENT FOR WHICH NO INFORMATION WAS AVAILABLE).

Plan View

1" = 20' SCALE — 10 0 10 20 FEET

Key

- Property Line
- R.O.W. — Right of Way
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- SAN — Sanitary Sewer
- W — Water Main w/ Size
- 110 — Topographic Contour
- Remedial Excavation, Completed in Summer of 2015
- B-3 — Soil Boring (Completed in 2010 for Remedial Investigation Report)
- 1048 / 3-2017 — Monitoring Well; Total VOCs in Groundwater , ug/L (Date)

Soil Borings for Investigation of Impact at AOC #1 Trench #2 Area (Completed 04/21/16, 11/7-8/16 and 03/01/17):

- 0.90 = Total Soil VOCs (mg/kg) in Lower Previous Unit
- 88 = Elevation of Bottom of Lower Previous Unit/Top of Lower Clay
- 5.88 = Total Soil VOCs (mg/kg) in underlying Clay Unit
- 0.3 = Soil PID Reading (PPM) at Locations where no Analyical Samples were Collected

- Soil Borings Completed 03/01/17
- 0.12 — No Compound Exceedances ★
- 0.12 — Compound Exceedances < ±X10
- 7.82 — Compound Exceedances >X10 <X100
- 90.30 — Compound Exceedances >X100
- ★ — NYS DEC CP-51 Protection of Groundwater Soil Cleanup Objectives
- MW-5D — Monitoring Well Installed in Lower Pervious Unit 03/01/2017

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Civil and Environmental Engineering
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8232 LOOP ROAD
BALDWINSVILLE, NY 13027
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PROJECT: FORMER ONEIDA KNIFE PLANT - LOT 1
BROWNFIELD CLEANUP PROGRAM

DWG. TITLE: AOC #1 REMEDIAL ACTION WORK PLAN
SOIL AND GROUNDWATER DATA IN LOWER UNITS

CLIENT: ONEIDA, LTD

LOCATION: CITY OF SHERRILL, ONEIDA COUNTY, NEW YORK

Note: No alteration permitted hereon except as provided under Section 7209 Subdivision 2 of the New York State Education Law.

PROJECT No.:	2015025
FILE NAME.:	EV01P
SCALE:	AS NOTED
DATE:	SEPT. 2017
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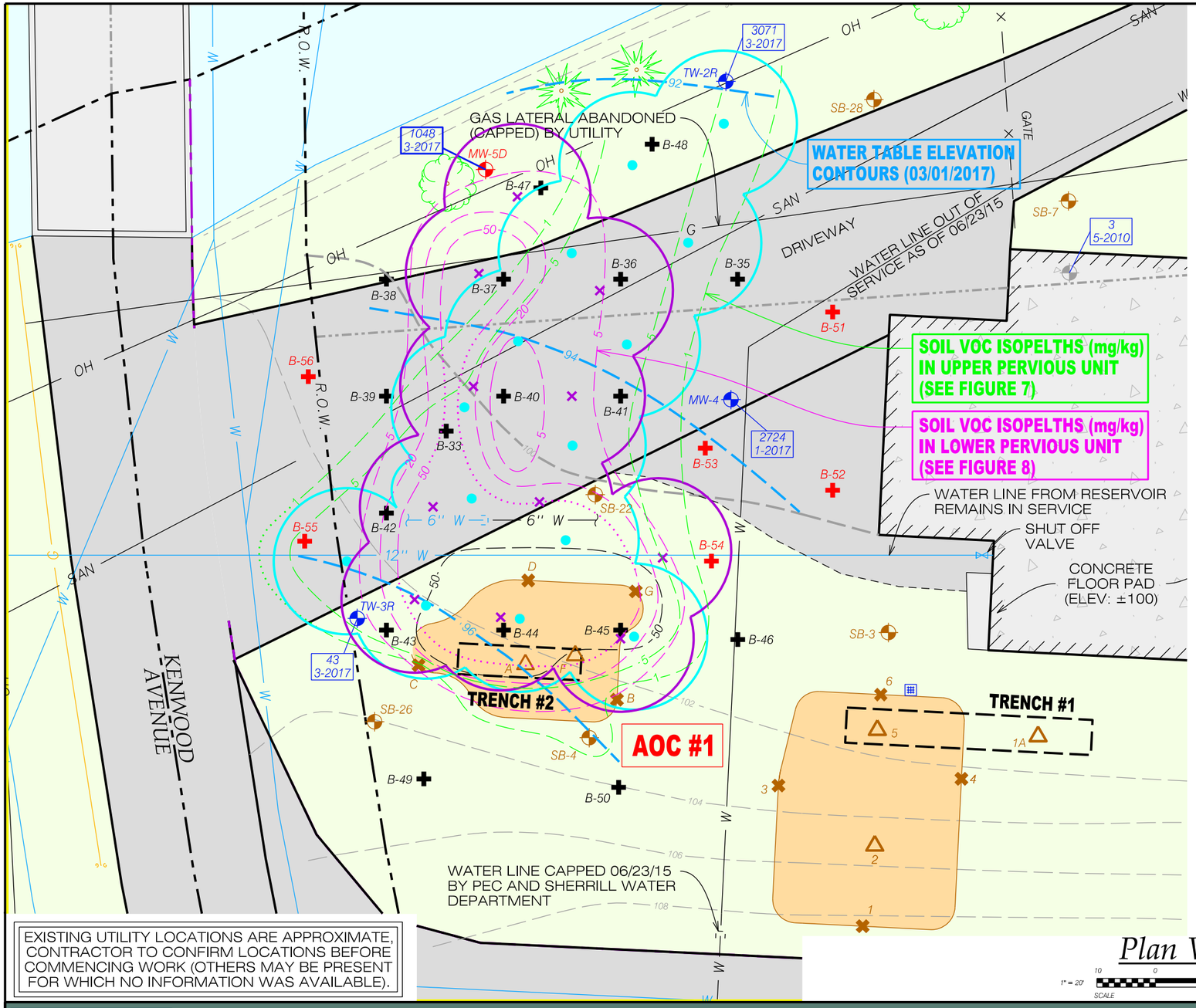
DRAWN BY:	JJL
CHECKED BY:	DRV

SHEET NO.:

FIGURE 8



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Key

- Property Line
- R.O.W. — Right of Way
- Former Building Wall
- Catch Basin
- SAN — Sanitary Sewer
- W — Water Main w/ Size
- 110 — Topographic Contour
- Remedial Excavation, Completed in Summer of 2015
- B-3 — Soil Boring (Completed in 2010 for Remedial Investigation Report)
- 3 / 5-2010 — Monitoring Well Total VOCs in Ground Water, ug/L (Date)
- SIDEWALL SAMPLE / BOTTOM SAMPLE — AOC 1 Soil Confirmation Sample Collected July & August, 2015 (Refer to 12/2015 Construction Completion Report)
- B-32 — Soil Borings for Investigation of Impact at AOC #1 Trench #2 Area (Completed 04/21/16 and 11/7-8/16)
- B-51 — Soil Borings Completed on 03/01/2017
- MW-5D — Monitoring Well Installed in Lower Pervious Unit 03/01/2017
- Proposed Sparge Wells in Upper Pervious Unit
- Proposed Sparge Wells in Lower Pervious Unit
- Areas of Sparging Influence Based on 12.5' Radius of Influence

Note: Proposed Sparge Well Locations may change pending field conditions encountered.

Plan View

1" = 20' SCALE (10 0 10 20 FEET)

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PROJECT: FORMER ONEIDA KNIFE PLANT - LOT 1
BROWNFIELD CLEANUP PROGRAM

DWG. TITLE: AOC #1 REMEDIAL ACTION WORK PLAN
REMEDIAL SITE PLAN - PROPOSED SPARGE WELLS

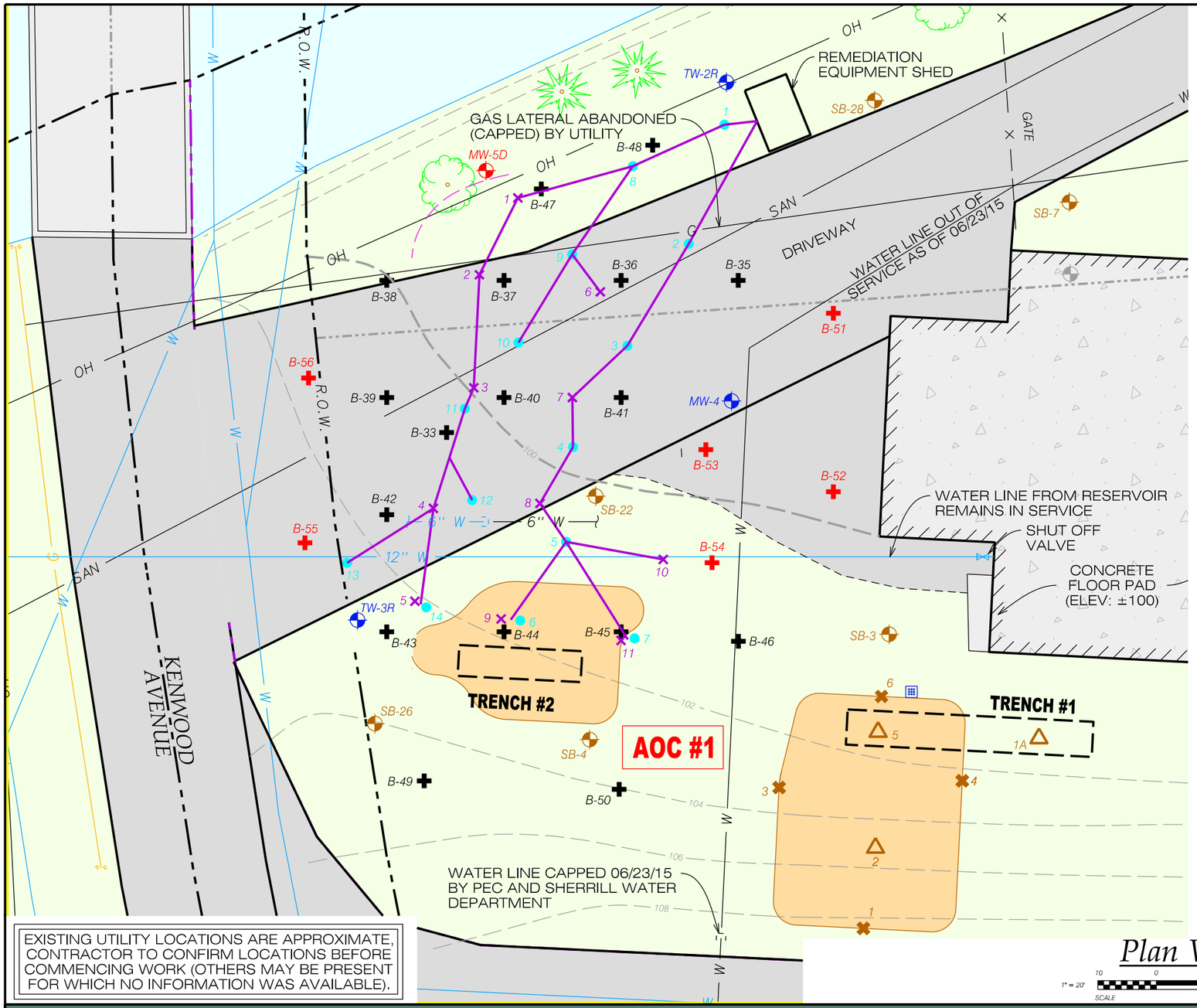
CLIENT: ONEIDA, LTD

LOCATION: CITY OF SHERRILL, ONEIDA COUNTY, NEW YORK

PROJECT No.:	2015025
FILE NAME.:	EV01P
SCALE:	AS NOTED
DATE:	SEPT. 2017
ENG'D BY:	FAK
DRAWN BY:	JJL
CHECKED BY:	DRV

SHEET NO.:

FIGURE 9



EXISTING UTILITY LOCATIONS ARE APPROXIMATE, CONTRACTOR TO CONFIRM LOCATIONS BEFORE COMMENCING WORK (OTHERS MAY BE PRESENT FOR WHICH NO INFORMATION WAS AVAILABLE).

Plan View

1" = 20' SCALE — 10 0 10 20 FEET

Key

- Property Line
- R.O.W. — Right of Way
- Former Building Wall
- Catch Basin
- SAN — Sanitary Sewer
- W — Water Main w/ Size
- 110 — Topographic Contour
- Remedial Excavation, Completed in Summer of 2015
- B-3 — Soil Boring (Completed in 2010 for Remedial Investigation Report)
- Monitoring Well
- B-32 — Soil Borings for Investigation of Impact at AOC #1 Trench #2 Area (Completed 04/21/16 and 11/7-8/16)
- B-51 — Soil Borings Completed on 03/01/2017
- MW-5D — Monitoring Well Installed in Lower Pervious Unit 03/01/2017
- Proposed Sparge Wells in Upper Pervious Unit
- Proposed Sparge Wells in Lower Pervious Unit
- System Piping Routes

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PROJECT: FORMER ONEIDA KNIFE PLANT - LOT 1
BROWNFIELD CLEANUP PROGRAM

DWG. TITLE: AOC #1 REMEDIAL ACTION WORK PLAN
REMEDIAL SITE PLAN - SYSTEM LAYOUT

CLIENT: ONEIDA, LTD

LOCATION: CITY OF SHERRILL, ONEIDA COUNTY, NEW YORK

PROJECT No.:	2015025
FILE NAME.:	EV01P
SCALE:	AS NOTED
DATE:	SEPT. 2017
ENG'D BY:	FAK
DRAWN BY:	JJL
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SHEET NO.:

FIGURE 10

TABLES

FORMER ONEIDA KNIFE PLANT - LOT 1
City of Sherrill, Oneida County, New York
NYSDEC Site No. C633077

TABLE 1 - MONITORING WELL AND GROUNDWATER ELEVATION DATA FOR AOC #1 WELLS

Location	Top Well Elevation	Ground Elevation	Bottom Well/ Screen Elevation	Top of Screen Elevation	March 1, 2017	
					Depth to water	Groundwater Elevation
River Level at Bridge	-	-	-	-	-	92.0
MW 5D	98.86	99.1	79.1	84.1	6.25	92.61
TW 2R	98.17	98.6	88.3	93.3	6.18	91.99
MW-4	99.5	99.8	79.7	89.7	5.88	93.62
TW 3R	102.26	102.6	86.4	96.4	5.64	96.62

FORMER ONEIDA KNIFE PLANT - LOT 1
City of Sherrill, Oneida County, New York
DEC Site No. C633077

TABLE 2 - SUMMARY OF NOVEMBER 2016 SOIL ANALYTICAL RESULTS
AOC #1 BORINGS - DETECTED COMPOUNDS ONLY

Client Sample ID:	Unit	Industrial Use SCOs[1]	Protection of Groundwater SCOs[1]	B-35 10-10.5' BGS	B-35 22-22.5' BGS	B-36 10-10.5' BGS	B-36 13' BGS	B-36 17.5-18' BGS	B-36 22-23' BGS	B-37 10-11' BGS	B-37 14-15' BGS	B-37 18.5-19' BGS	B-37 21' BGS	B-37 24-25' BGS	B-38 9.5-10' BGS	B-38 24-25' BGS	B-39 10-10.5' BGS
Lab Sample ID:				MC48706-1	MC48706-2	MC48706-3	MC48706-4	MC48706-5	MC48706-6	MC48706-7	MC48706-8	MC48706-9	MC48706-10	MC48706-11	MC48706-12	MC48706-13	MC48706-14
Date Sampled:				11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/07/2016
GC/MS Volatiles (SW846 8260C)																	
Acetone	mg/kg	1,000	0.05	0.0292	ND (0.0037)	ND (0.19)	ND (0.23)	ND (0.19)	ND (0.0035)	ND (0.25)	ND (0.33)	ND (0.19)	ND (7.9)	ND (0.25)	ND (0.0029)	ND (0.0033)	0.0263
2-Butanone (MEK)	mg/kg	1,000	0.3	0.0058	ND (0.0038)	ND (0.19)	ND (0.23)	ND (0.19)	ND (0.0036)	ND (0.26)	ND (0.34)	ND (0.19)	ND (8.1)	ND (0.26)	ND (0.0030)	ND (0.0034)	0.0061
Carbon disulfide	mg/kg		2.7	0.0019	ND (0.00046)[d]	ND (0.023)	ND (0.028)	ND (0.023)	ND (0.00044)[d]	ND (0.031)	ND (0.041)	ND (0.023)	ND (0.98)	ND (0.031)	0.0018 J	ND (0.00041)[d]	0.0012
cis-1,2-Dichloroethene	mg/kg	1,000	0.25	0.103	0.003	**6.78**	**7.7**	0.0908	0.0023	**0.896**	**4.88**	0.0943	ND (0.86)	ND (0.028)	0.0204	0.0074	0.102
trans-1,2-Dichloroethene	mg/kg	1,000	0.19	0.001	ND (0.00046)	ND (0.023)	ND (0.028)	ND (0.023)	ND (0.00043)	ND (0.031)	ND (0.041)	ND (0.023)	ND (0.97)	ND (0.031)	ND (0.00036)	ND (0.00041)	0.0011
Tetrachloroethene	mg/kg	300	1.3	0.0072	ND (0.00034)	0.451	ND (0.020)	1.23	ND (0.00032)	ND (0.023)	0.11	**4.89**	**953**	**6.32**	0.0177	0.0221	0.0026
Toluene	mg/kg	1,000	0.7	0.0017	ND (0.00045)	ND (0.023)	ND (0.028)	ND (0.023)	ND (0.00042)	ND (0.030)	ND (0.040)	ND (0.023)	ND (0.96)	ND (0.030)	0.00051	ND (0.00040)	0.0011
Trichloroethene	mg/kg	400	0.47	0.0268	0.0016	**3.71**	0.118	**2.72**	0.0127	ND (0.024)	0.365	**7.55**	**320**	**7.87**	0.0853	0.0112	0.0225
Vinyl chloride	mg/kg	27	0.02	0.0126	0.0038	**0.365**	**0.340 J**	ND (0.19)	ND (0.0036)	**0.277 J**	**0.529**	ND (0.19)	ND (8.1)	ND (0.26)	ND (0.0030)	ND (0.0034)	**0.0704**
Xylene (total)	mg/kg	1,000	1.6	0.001	ND (0.00039)	ND (0.020)	ND (0.024)	ND (0.020)	ND (0.00037)	ND (0.027)	ND (0.035)	ND (0.020)	ND (0.83)	ND (0.027)	ND (0.00031)	ND (0.00035)	ND (0.00041)
Total Detected Compounds	mg/kg	-	-	0.19	0.01	11.31	7.82	4.04	0.02	0.90	5.88	12.53	1273	14.19	0.12	0.04	0.23
Soil Sample PID Reading	ppm	-	-	1	0	307	30	87	0	46	16	50	1500	40	30	0	0
General Chemistry																	
Solids, Percent	%	-	-	78.2	84.9	89.9	81.9	92.1	83.3	75.6	79.5	92.5	90.1	78.7	89.5	83.4	78.9

Client Sample ID:	Unit	Industrial Use SCOs[1]	Protection of Groundwater SCOs[1]	B-39 20-21' BGS	B-39 24-25' BGS	B-40 11-12' BGS	B-40 14-15' BGS	B-40 20-21' BGS	B-40 22.5-23' BGS	B-41 9-10' BGS	B-41 12-13' BGS	B-41 14-15' BGS	B-41 18-19' BGS	B-41 22-23' BGS	B-42 24-24.5' BGS	B-43 11-12' BGS	B-43 13.5-14' BGS
Lab Sample ID:				MC48706-15	MC48706-16	MC48706-17	MC48706-18	MC48706-19	MC48706-20	MC48706-21	MC48706-22	MC48706-23	MC48706-24	MC48706-25	MC48706-26	MC48706-27	MC48706-28
Date Sampled:				11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/07/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016
GC/MS Volatiles (SW846 8260C)																	
Acetone	mg/kg	1,000	0.05	ND (0.24)	0.0165	ND (0.26)	ND (0.26)	0.0107	0.0051 J	**0.123**	ND (0.22)	ND (0.96)	ND (0.18)	ND (0.22)	ND (0.46)	ND (0.21)	ND (1.1)
2-Butanone (MEK)	mg/kg	1,000	0.3	ND (0.24)	ND (0.0039)	ND (0.27)	ND (0.27)	ND (0.0035)	ND (0.0032)	0.0381	ND (0.23)	ND (0.99)	ND (0.18)	ND (0.22)	ND (0.47)	ND (0.22)	ND (1.2)
Carbon disulfide	mg/kg		2.7	ND (0.030)	ND (0.00048)[d]	ND (0.033)	ND (0.033)	0.0017 J	ND (0.00039)[d]	0.0058	ND (0.028)	ND (0.12)	ND (0.022)	ND (0.027)	ND (0.058)	ND (0.027)	ND (0.14)
1,2-Dichlorobenzene	mg/kg	1,000	1.1	ND (0.026)	ND (0.00043)	ND (0.029)	ND (0.029)	ND (0.00038)	ND (0.00035)	0.0015	ND (0.025)	ND (0.11)	ND (0.020)	ND (0.024)	ND (0.052)	ND (0.024)	ND (0.13)
1,1-Dichloroethene	mg/kg	1,000	0.33	ND (0.049)	ND (0.00080)	ND (0.054)	ND (0.055)	ND (0.00072)	ND (0.00064)	0.0011	ND (0.047)	ND (0.20)	ND (0.037)	ND (0.045)	ND (0.096)	ND (0.045)	ND (0.24)
cis-1,2-Dichloroethene	mg/kg	1,000	0.25	ND (0.026)	0.0019	**4.68**	0.139	0.0428	0.0057	0.117	**7.71**	**29.8**	0.0925	0.0472	ND (0.051)	**6.42**	**3.53**
trans-1,2-Dichloroethene	mg/kg	1,000	0.19	ND (0.029)	ND (0.00047)	ND (0.032)	ND (0.032)	ND (0.00042)	ND (0.00038)	0.0022	ND (0.027)	ND (0.12)	ND (0.022)	ND (0.027)	ND (0.057)	0.0289	ND (0.14)
Tetrachloroethene	mg/kg	300	1.3	**2.79**	0.0087	ND (0.024)	ND (0.024)	0.027	0.0044	0.0145	0.163	0.433 J	1.2	0.423	**36**	**5.01**	**34.8**
Toluene	mg/kg	1,000	0.7	ND (0.029)	ND (0.00047)	ND (0.032)	ND (0.032)	0.00099	ND (0.00038)	0.002	ND (0.027)	ND (0.12)	ND (0.021)	ND (0.026)	ND (0.056)	ND (0.026)	ND (0.14)
Trichloroethene	mg/kg	400	0.47	**1.23**	0.0286	0.168	ND (0.025)	0.0419	0.0079	0.0463	0.346	**60.5**	**2.46**	**5.37**	**1.76**	**4.86**	**86.7**
1,2,4-Trimethylbenzene	mg/kg	380	3.6	ND (0.028)	ND (0.00045)	ND (0.030)	ND (0.031)	ND (0.00040)	ND (0.00036)	0.001	ND (0.026)	ND (0.11)	ND (0.021)	ND (0.025)	ND (0.054)	ND (0.025)	ND (0.13)
Vinyl chloride	mg/kg	27	0.02	ND (0.24)	ND (0.0040)	**1.35**	**1.1**	ND (0.0036)	ND (0.0032)	0.0168	**1.12**	ND (0.99)	ND (0.18)	ND (0.22)	ND (0.48)	**0.555**	ND (1.2)
Xylene (total)	mg/kg	1,000	1.6	ND (0.025)	ND (0.00041)	ND (0.028)	ND (0.028)	ND (0.00037)	ND (0.00033)	0.00057	ND (0.024)	ND (0.10)	ND (0.019)	ND (0.023)	ND (0.049)	ND (0.023)	ND (0.12)
Total Detected Compounds	mg/kg	-	-	4.02	0.06	6.20	1.24	0.12	0.02	0.37	9.34	90.30	3.75	5.84	37.76	16.87	125.03
Soil Sample PID Reading	ppm	-	-	0	0	20	0	12	7	78	100	3	44	0	0	289	93
General Chemistry																	
Solids, Percent	%	-	-	79	82.4	76	82	79.9	85.9	66.2	79.1	80.7	93.3	82	80.4	83.5	79.5

FORMER ONEIDA KNIFE PLANT - LOT 1
City of Sherrill, Oneida County, New York
DEC Site No. C633077

TABLE 2 - SUMMARY OF NOVEMBER 2016 SOIL ANALYTICAL RESULTS
AOC #1 BORINGS - DETECTED COMPOUNDS ONLY

Client Sample ID:	Unit	Industrial Use SCOs[1]	Protection of Groundwater SCOs[1]	B-44 13.5-14' BGS	B-44 14.5-15' BGS	B-44 19-19.5' BGS	B-45 19-20' BGS	B-45 24-25' BGS	B-46 18-18.5' BGS	B-46 19-20' BGS	B-47 9-10' BGS	B-47 17-19' BGS	B-47 22-23' BGS	B-48 9-10' BGS	B-48 19-19.5' BGS	B-49 17-18' BGS	B-50 24-24.5' BGS
Lab Sample ID:				MC48706-29	MC48706-30	MC48706-31	MC48706-32	MC48706-33	MC48706-34	MC48706-35	MC48706-36	MC48706-37	MC48706-38	MC48706-39	MC48706-40	MC48706-41	MC48706-42
Date Sampled:				11/08/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016	11/08/2016
GC/MS Volatiles (SW846 8260C)																	
Acetone	mg/kg	1,000	0.05	ND (1.3)	ND (1.1)	ND (0.22)	ND (0.78)	ND (0.20)	ND (0.22)	0.0054 J	0.0129	ND (0.22)	0.0244	ND (0.46)	ND (0.18)	0.0030 J	0.0142
n-Butylbenzene	mg/kg	1,000	12	ND (0.14)	ND (0.12)	ND (0.024)	0.103	ND (0.021)	ND (0.024)	ND (0.00039)	ND (0.00032)	ND (0.024)	ND (0.00035)	ND (0.051)	ND (0.020)	ND (0.00032)	ND (0.00040)
Carbon disulfide	mg/kg		2.7	ND (0.16)	ND (0.13)	ND (0.028)	ND (0.097)	ND (0.024)	ND (0.027)	ND (0.00044)[d]	0.0057	ND (0.027)	ND (0.00040)[d]	ND (0.058)	ND (0.023)	ND (0.00036)[d]	ND (0.00046)[d]
1,2-Dichlorobenzene	mg/kg	1,000	1.1	ND (0.14)	ND (0.12)	ND (0.025)	0.102	ND (0.022)	ND (0.024)	ND (0.00040)	0.00053	ND (0.025)	ND (0.00036)	ND (0.052)	ND (0.020)	ND (0.00032)	ND (0.00041)
cis-1,2-Dichloroethene	mg/kg	1,000	0.25	**10.9**	**12.1**	0.249	ND (0.086)	0.0529	**6.07**	0.0059	0.199	0.120 J	0.0034	**5.04**	0.113	ND (0.00032)	0.0135
trans-1,2-Dichloroethene	mg/kg	1,000	0.19	ND (0.16)	ND (0.13)	ND (0.027)	ND (0.096)	ND (0.024)	0.0812	ND (0.00044)	0.0014	ND (0.027)	ND (0.00040)	ND (0.057)	ND (0.022)	ND (0.00036)	ND (0.00045)
Ethylbenzene	mg/kg	780	1	ND (0.15)	ND (0.12)	ND (0.026)	ND (0.090)	ND (0.023)	0.0627	ND (0.00041)	ND (0.00034)	ND (0.025)	ND (0.00037)	ND (0.054)	ND (0.021)	ND (0.00033)	ND (0.00043)
p-Isopropyltoluene	mg/kg		10	ND (0.14)	ND (0.12)	ND (0.025)	ND (0.087)	ND (0.022)	0.939	ND (0.00040)	ND (0.00033)	ND (0.025)	ND (0.00036)	ND (0.052)	ND (0.020)	ND (0.00032)	ND (0.00041)
Naphthalene	mg/kg	1,000	12	ND (0.23)[d]	ND (0.20)[d]	ND (0.041)[d]	ND (0.14)[d]	ND (0.036)[d]	ND (0.040)[d]	ND (0.00065)	ND (0.00054)	ND (0.041)[d]	0.0013	ND (0.085)[d]	ND (0.034)[d]	ND (0.00053)	ND (0.00068)
Tetrachloroethene	mg/kg	300	1.3	**16.5**	**8.31**	0.0612	**51.2**	0.136	0.34	0.0151	0.0062	**3.24**	0.0011	ND (0.042)	0.83	ND (0.00026)	0.0037
Toluene	mg/kg	1,000	0.7	ND (0.15)	ND (0.13)	ND (0.027)	ND (0.095)	ND (0.024)	0.136	0.00073	0.0013	ND (0.027)	0.00048	ND (0.056)	ND (0.022)	ND (0.00035)	0.00084
Trichloroethene	mg/kg	400	0.47	**83.9**	**104**	**1.93**	**40**	**0.888**	0.05	0.0551	0.0257	**2.77**	0.0033	0.364	**2.32**	0.00033	0.0546
1,2,4-Trimethylbenzene	mg/kg	380	3.6	0.312	ND (0.12)	ND (0.026)	0.283	ND (0.023)	0.244	ND (0.00041)	0.00083	ND (0.026)	ND (0.00038)	ND (0.054)	ND (0.021)	ND (0.00034)	ND (0.00043)
1,3,5-Trimethylbenzene	mg/kg	380	8.4	0.138	ND (0.10)	ND (0.021)	0.14	ND (0.019)	0.112	ND (0.00034)	0.00041	ND (0.021)	ND (0.00031)	ND (0.044)	ND (0.017)	ND (0.00028)	ND (0.00035)
Vinyl chloride	mg/kg	27	0.02	ND (1.3)	ND (1.1)	ND (0.23)	ND (0.80)	ND (0.20)	**1.45**	ND (0.0037)	0.006	ND (0.23)	ND (0.0033)	ND (0.48)	ND (0.19)	0.0095	0.0081
m,p-Xylene	mg/kg	1,000	1.6	ND (0.31)	ND (0.26)	ND (0.053)	ND (0.19)	ND (0.047)	0.247	ND (0.00085)	ND (0.00070)	ND (0.053)	ND (0.00078)	ND (0.11)	ND (0.044)	ND (0.00069)	ND (0.00088)
o-Xylene	mg/kg	1,000	1.6	ND (0.14)	ND (0.11)	ND (0.024)	ND (0.083)	ND (0.021)	0.0665	ND (0.00038)	ND (0.00031)	ND (0.023)	ND (0.00034)	ND (0.049)	ND (0.019)	ND (0.00031)	ND (0.00039)
Xylene (total)	mg/kg	1,000	1.6	ND (0.14)	ND (0.11)	ND (0.024)	0.143	ND (0.021)	0.314	ND (0.00038)	0.0008	ND (0.023)	ND (0.00034)	ND (0.049)	ND (0.019)	ND (0.00031)	ND (0.00039)
Total Detected Compounds	mg/kg	-	-	111.75	124.41	2.24	91.83	1.08	10.11	0.08	0.25	6.01	0.03	5.40	3.26	0.01	0.09
Soil Sample PID Reading	ppm	-	-	>1000	475.00	5.00	>1000	5.00	19.00	0.00	100.00	18.00	0.00	100.00	11.00	2.00	0.00
General Chemistry																	
Solids, Percent	%	-	-	76.4	85	82.8	88.1	83.5	85	87.6	88.4	84.9	81.3	52.2	86.2	83.8	86.6

Notes:

Legend: Hit | **Exceed**

[1]New York Codes, Rules and Regulations, Title 6 (6NYCRR) Part 375-6, *Remediation Program Soil Cleanup Objectives,* December 2006.

[d]Continuing Calibration outside of acceptance criteria. Reporting Limit response verified by low-level standard.

FORMER ONEIDA KNIFE PLANT - LOT 1
City of Sherrill, Oneida County, New York
DEC Site No. C633077

TABLE 3 - SUMMARY OF MARCH 2017 SOIL ANALYTICAL RESULTS
AOC #1 BORINGS - DETECTED COMPOUNDS ONLY

Date Sampled: March 1, 2017

Client Sample ID:	Recommended Soil Cleanup Objective[1] (mg/kg)		MW-5D 7.5-8' BGS	MW-5D 18.5-19.5' BGS	MW-5D 19.5-20' BGS	B-51 8.5-9.5' BGS	B-51 17.5-18.5' BGS	B-51 19-20' BGS	B-52 11.5-12.5* BGS	B-52 19.5-20' BGS	B-52 13-15'** BGS	B-52 22.5' BGS	B-53 10.5-11' BGS
Lab Sample ID:	**Industrial Restricted Use**	**Protection of Groundwater**	**JC38192-1**	**JC38192-2**	**JC38192-3**	**JC38192-4**	**JC38192-5**	**JC38192-6**	**JC38192-7**	**JC38192-8**	**JC38192-9**	**JC38192-10**	**JC38192-11**
GC/MS Volatiles (SW846 8260C)													
Acetone	1,000	0.05	0.0101 J	ND (0.0042)	0.0090 J	0.0216	0.0069 J	0.0060 J	0.0222	0.0082 J	0.0067 J	0.0101 J	0.0342
Benzene	89	0.06	0.00043 J	0.00034 J	0.00067	0.00040 J	0.00079	ND (0.00013)	0.00037 J	0.00028 J	0.00049	0.00061	0.00033 J
2-Butanone (MEK)	1,000	0.3	ND (0.0023)	ND (0.0015)	ND (0.0019)	ND (0.0020)	ND (0.0017)	ND (0.0020)	ND (0.0026)	ND (0.0020)	ND (0.0015)	ND (0.0021)	ND (0.0021)
n-Butylbenzene	1,000	12	ND (0.00020)	ND (0.00013)	ND (0.00016)	ND (0.00017)	ND (0.00015)	ND (0.00017)	ND (0.00022)	ND (0.00017)	ND (0.00013)	ND (0.00018)	ND (0.00018)
sec-Butylbenzene	1,000	11	ND (0.00020)	ND (0.00013)	ND (0.00016)	ND (0.00017)	ND (0.00015)	ND (0.00017)	ND (0.00022)	ND (0.00017)	ND (0.00013)	ND (0.00018)	ND (0.00018)
Carbon disulfide	NS	2.7	0.0034	ND (0.00014)	ND (0.00018)	0.0014 J	ND (0.00017)	ND (0.00019)	0.0015 J	ND (0.00019)	ND (0.00014)	ND (0.00020)	0.0013 J
Chloroform	700	0.37	ND (0.00031)	ND (0.00020)	ND (0.00026)	ND (0.00027)	ND (0.00023)	ND (0.00027)	ND (0.00034)	ND (0.00027)	ND (0.00020)	ND (0.00029)	0.00087 J
1,2-Dichlorobenzene	1,000	1.1	ND (0.00023)	ND (0.00015)	ND (0.00018)	ND (0.00019)	ND (0.00017)	ND (0.00019)	ND (0.00025)	ND (0.00019)	ND (0.00014)	ND (0.00021)	ND (0.00020)
1,1-Dichloroethane	480	0.27	ND (0.00025)	ND (0.00016)	ND (0.00020)	ND (0.00021)	ND (0.00018)	ND (0.00021)	ND (0.00027)	ND (0.00021)	ND (0.00016)	ND (0.00022)	ND (0.00022)
1,1-Dichloroethene	1,000	0.33	ND (0.00020)	ND (0.00013)	ND (0.00016)	ND (0.00017)	0.00052 J	ND (0.00017)	ND (0.00022)	ND (0.00017)	0.00035 J	ND (0.00018)	0.0042
cis-1,2-Dichloroethene	1,000	0.25	0.16	0.0035	0.0041	0.0022	0.0069	0.0089	0.0332	0.0048	0.01	0.0051	0.224
trans-1,2-Dichloroethene	1,000	0.19	0.0011 J	ND (0.00013)	ND (0.00017)	ND (0.00018)	ND (0.00015)	ND (0.00018)	0.00049 J	ND (0.00018)	0.00044 J	ND (0.00019)	0.0029
Ethylbenzene	780	1	ND (0.00020)	ND (0.00013)	ND (0.00016)	ND (0.00017)	ND (0.00015)	ND (0.00017)	ND (0.00022)	ND (0.00017)	ND (0.00012)	ND (0.00018)	ND (0.00018)
Isopropylbenzene	NS	2.3	ND (0.00020)	ND (0.00013)	ND (0.00017)	ND (0.00017)	ND (0.00015)	ND (0.00017)	ND (0.00022)	ND (0.00017)	ND (0.00013)	ND (0.00019)	ND (0.00018)
p-Isopropyltoluene	NS	10	ND (0.00032)	ND (0.00021)	ND (0.00026)	ND (0.00027)	ND (0.00024)	ND (0.00027)	ND (0.00035)	ND (0.00027)	ND (0.00020)	ND (0.00029)	ND (0.00029)
Methylene chloride	1,000	0.05	0.0041 J	0.0027 J	0.0024 J	0.0032 J	0.0027 J	0.0024 J	0.0033 J	0.0029 J	0.0024 J	0.0031 J	0.0032 J
Naphthalene	1,000	12	ND (0.0013)	ND (0.00085)	ND (0.0011)	ND (0.0011)	ND (0.00098)	ND (0.0011)	ND (0.0014)	ND (0.0011)	ND (0.00083)	ND (0.0012)	ND (0.0012)
n-Propylbenzene	1,000	3.9	ND (0.00026)	ND (0.00017)	ND (0.00021)	ND (0.00022)	ND (0.00019)	ND (0.00022)	ND (0.00029)	ND (0.00022)	ND (0.00017)	ND (0.00024)	ND (0.00023)
Tetrachloroethene	300	1.3	ND (0.00037)	0.0874	**17.6**	0.00064 J	ND (0.00027)	ND (0.00032)	0.00051 J	ND (0.00031)	ND (0.00023)	ND (0.00034)	0.0115
Toluene	1,000	0.7	0.00057 J	0.00023 J	0.00031 J	0.00035 J	0.00046 J	ND (0.00014)	ND (0.00018)	ND (0.00014)	0.00021 J	ND (0.00015)	0.00028 J
Trichloroethene	400	0.47	0.007	0.0058	0.0555	0.00076 J	0.0117	0.00042 J	0.0056	ND (0.00021)	0.0401	0.0011 J	0.169
1,2,4-Trimethylbenzene	380	3.6	0.00027 J	ND (0.00015)	ND (0.00019)	ND (0.00020)	ND (0.00017)	ND (0.00020)	ND (0.00025)	ND (0.00019)	ND (0.00015)	ND (0.00021)	0.00041 J
1,3,5-Trimethylbenzene	380	8.4	ND (0.00022)	ND (0.00014)	ND (0.00018)	ND (0.00019)	ND (0.00016)	ND (0.00019)	ND (0.00024)	ND (0.00018)	ND (0.00014)	ND (0.00020)	ND (0.00019)
Vinyl chloride	27	0.02	0.0045	ND (0.00017)	ND (0.00022)	ND (0.00023)	0.00046 J	0.0017 J	0.0185	0.0046	0.00032 J	0.00059 J	**0.0351**
m,p-Xylene	1,000	1.6	ND (0.00029)	ND (0.00019)	ND (0.00023)	ND (0.00025)	ND (0.00021)	ND (0.00025)	ND (0.00032)	ND (0.00024)	ND (0.00018)	ND (0.00026)	ND (0.00026)
o-Xylene	1,000	1.6	0.00027 J	ND (0.00017)	ND (0.00022)	ND (0.00023)	ND (0.00020)	ND (0.00023)	ND (0.00029)	ND (0.00023)	ND (0.00017)	ND (0.00024)	ND (0.00024)
Xylene (total)	1,000	1.6	0.00027 J	ND (0.00017)	ND (0.00022)	ND (0.00023)	ND (0.00020)	ND (0.00023)	ND (0.00029)	ND (0.00023)	ND (0.00017)	ND (0.00024)	ND (0.00024)
Total Compound Concentration			0.17	0.10	17.66	0.02	0.02	0.01	0.08	0.01	0.05	0.01	0.48
General Chemistry													
Solids, Percent	-	-	80.8	85.3	83.3	80.9	86.9	87.3	73.4	81.3	88.2	83.2	69.4

FORMER ONEIDA KNIFE PLANT - LOT 1
City of Sherrill, Oneida County, New York
DEC Site No. C633077

TABLE 3 - SUMMARY OF MARCH 2017 SOIL ANALYTICAL RESULTS
AOC #1 BORINGS - DETECTED COMPOUNDS ONLY

Date Sampled: March 1, 2017

Client Sample ID:	Recommended Soil Cleanup Objective[1] (mg/kg)		B-53 13' BGS	B-53 19-19.5' BGS	B-54 15' BGS	B-54 16-17' BGS	B-54 19-20' BGS	B-54 23-23.5' BGS	B-54 12-13' BGS	B-55 14-15' BGS	B-55 21.5-22.5' BGS	B-56 21.5-22.5' BGS
	Industrial Restricted Use	Protection of Groundwater										
Lab Sample ID:			**JC38192-12**	**JC38192-13**	**JC38192-14**	**JC38192-15**	**JC38192-16**	**JC38192-17**	**JC38192-18**	**JC38192-19**	**JC38192-20**	**JC38192-21**
GC/MS Volatiles (SW846 8260C)												
Acetone	1,000	0.05	0.0060 J	0.0074 J	0.0090 J	0.0100 J	0.0059 J	ND (0.35)	**0.0917**	ND (0.47)	ND (0.0065)	ND (0.0049)
Benzene	89	0.06	0.00053	0.0008	0.0008	0.00075	0.0012	ND (0.0084)	0.0023	ND (0.011)	ND (0.00016)	0.00056
2-Butanone (MEK)	1,000	0.3	ND (0.0018)	ND (0.0015)	ND (0.0020)	ND (0.0022)	ND (0.0018)	ND (0.12)	0.0164	ND (0.17)	ND (0.0023)	ND (0.0017)
n-Butylbenzene	1,000	12	ND (0.00015)	ND (0.00013)	ND (0.00017)	ND (0.00019)	ND (0.00015)	ND (0.011)	0.00085 J	ND (0.014)	ND (0.00020)	ND (0.00015)
sec-Butylbenzene	1,000	11	ND (0.00015)	ND (0.00013)	ND (0.00017)	ND (0.00020)	ND (0.00016)	ND (0.011)	0.00080 J	ND (0.014)	ND (0.00020)	ND (0.00015)
Carbon disulfide	NS	2.7	0.00023 J	ND (0.00015)	0.0024	0.0024 J	0.00026 J	ND (0.012)	0.0064	ND (0.016)	ND (0.00022)	ND (0.00017)
Chloroform	700	0.37	ND (0.00024)	ND (0.00020)	ND (0.00027)	ND (0.00030)	ND (0.00024)	ND (0.017)	ND (0.00033)	ND (0.022)	ND (0.00031)	ND (0.00023)
1,2-Dichlorobenzene	1,000	1.1	ND (0.00017)	ND (0.00015)	ND (0.00019)	ND (0.00022)	ND (0.00017)	ND (0.012)	0.0011 J	ND (0.016)	ND (0.00022)	ND (0.00017)
1,1-Dichloroethane	480	0.27	ND (0.00019)	ND (0.00016)	0.0054	0.0015	ND (0.00019)	ND (0.013)	ND (0.00026)	ND (0.018)	ND (0.00024)	ND (0.00018)
1,1-Dichloroethene	1,000	0.33	0.0016	ND (0.00013)	0.0074	0.0052	ND (0.00016)	ND (0.011)	0.0015	ND (0.014)	ND (0.00020)	ND (0.00015)
cis-1,2-Dichloroethene	1,000	0.25	**2.62**	0.0173	**20.8**	**7.8**	0.112	0.0567 J	0.213	**4.38**	0.0012 J	0.003
trans-1,2-Dichloroethene	1,000	0.19	0.003	ND (0.00014)	0.0169	0.0114	0.00057 J	ND (0.011)	0.0035	ND (0.015)	ND (0.00021)	ND (0.00015)
Ethylbenzene	780	1	ND (0.00015)	ND (0.00013)	ND (0.00017)	ND (0.00019)	ND (0.00015)	ND (0.010)	0.00079 J	ND (0.014)	ND (0.00019)	ND (0.00015)
Isopropylbenzene	NS	2.3	ND (0.00015)	ND (0.00013)	ND (0.00017)	ND (0.00020)	ND (0.00016)	ND (0.011)	0.00035 J	ND (0.015)	ND (0.00020)	ND (0.00015)
p-Isopropyltoluene	NS	10	ND (0.00024)	ND (0.00021)	ND (0.00028)	ND (0.00031)	ND (0.00025)	ND (0.017)	0.0011 J	ND (0.023)	ND (0.00032)	ND (0.00024)
Methylene chloride	1,000	0.05	0.0024 J	0.0026 J	0.0040 J	0.0047 J	0.0030 J	ND (0.070)	0.0028 J	ND (0.094)	0.0027 J	0.0023 J
Naphthalene	1,000	12	ND (0.0010)	ND (0.00086)	ND (0.0011)	ND (0.0013)	ND (0.0010)	ND (0.070)	0.0021 J	ND (0.094)	ND (0.0013)	ND (0.00098)
n-Propylbenzene	1,000	3.9	ND (0.00020)	ND (0.00017)	ND (0.00022)	ND (0.00025)	ND (0.00020)	ND (0.014)	0.00072 J	ND (0.019)	ND (0.00026)	ND (0.00019)
Tetrachloroethene	300	1.3	ND (0.00028)	0.0164	**3.05**	0.0848	0.0055	**2.96**	0.0035	ND (0.027)	0.00099 J	0.00052 J
Toluene	1,000	0.7	ND (0.00012)	ND (0.00011)	0.0067	0.0026	0.00034 J	ND (0.0088)	0.003	ND (0.012)	ND (0.00016)	0.00032 J
Trichloroethene	400	0.47	0.0032	0.0191	**88.5**	**28.6**	0.0401	**9.23**	0.0934	0.0818 J	ND (0.00025)	0.0014
1,2,4-Trimethylbenzene	380	3.6	ND (0.00017)	ND (0.00015)	ND (0.00020)	ND (0.00022)	ND (0.00018)	ND (0.012)	0.0075	ND (0.016)	ND (0.00023)	ND (0.00017)
1,3,5-Trimethylbenzene	380	8.4	ND (0.00016)	ND (0.00014)	ND (0.00019)	ND (0.00021)	ND (0.00017)	ND (0.012)	0.003	ND (0.016)	ND (0.00021)	ND (0.00016)
Vinyl chloride	27	0.02	**0.0697**	0.002	**0.392**	**0.157**	0.0055	ND (0.014)	0.0106	**0.647**	0.00066 J	0.00071 J
m,p-Xylene	1,000	1.6	ND (0.00022)	ND (0.00019)	ND (0.00025)	ND (0.00028)	ND (0.00022)	ND (0.015)	0.0025	ND (0.021)	ND (0.00028)	ND (0.00021)
o-Xylene	1,000	1.6	ND (0.00020)	ND (0.00017)	ND (0.00023)	ND (0.00026)	ND (0.00020)	ND (0.014)	0.0014	ND (0.019)	ND (0.00026)	ND (0.00020)
Xylene (total)	1,000	1.6	ND (0.00020)	ND (0.00017)	ND (0.00023)	ND (0.00026)	ND (0.00020)	ND (0.014)	0.0039	ND (0.019)	ND (0.00026)	ND (0.00020)
Total Compound Concentration			2.70	0.06	112.78	36.66	0.16	12.19	0.46	5.03	0.00	0.00
General Chemistry												
Solids, Percent	-	-	83.5	87.2	80.1	80	88.1	84.6	74.4	72.3	80.1	88.4

Notes:

Legend: Hit | **Exceed**

[1]New York Codes, Rules and Regulations, Title 6 (6NYCRR) Part 375-6, *Remedial Program Soil Cleanup Objectives* .

mg/kg milligrams per kilogram, equivalent to parts per million (ppm)

ND Not detected above the laboratory method detection limit.

NS No State Standard

J Estimated

FORMER ONEIDA KNIFE PLANT - LOT 1
City of Sherrill, Oneida County, New York
DEC Site No. C633077

TABLE 4 - SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
AOC #1 MONITORING WELLS - DETECTED COMPOUNDS

Compound	State Groundwater Standards[1]	Compound Concentration							
		TW-2/2R			TW-3/3R			MW-4	MW-5D
Volatile Organic Compounds (EPA Method 8260) in µg/L		**Apr-06**	**May-10**	**Mar-17**	**Apr-06**	**May-10**	**Mar-17**	**Jan-17**	**Mar-17**
1,1-Dichloroethene	5		1	***22***				***20***	
cis-1,2-Dichloroethene	5	***640***	***784***	***2,740***	***100***	***76***	***25***	***1,930***	***61***
Tetrachloroethene	5		***3***			***2***	1	***8***	***921***
Toluene	5				***71***				
Trans-1,2-Dichloroethene	5		***13***	***23***				***14***	
Trichloroethene	5	***590***	***129***		***140***	***22***	***10***	***319***	***54***
Vinyl Chloride	2	***10***	***23***	***286***	***15***	***3***	***7***	***433***	***12***
Total VOCs	10	***1,240***	***953***	***3,071***	***326***	***103***	***43***	***2,724***	***1,048***

Notes:

[1]DEC Division of Water's Technical and Operational Guidance Series (TOGS) 1.1.1, *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations* , dated June 1998, with Addenda dated April 2000 and June 2004.
µg/L micrograms per liter, equivalent to parts per billion (ppb)
Blank cell indicates the compound was not detected.
Compounds that exceeded State Groundwater Standards are denoted in ***BOLD*** .

ATTACHMENTS

BORING LOGS

PLUMLEY ENGINEERING, P.C.
ENVIRONMENTAL TEST BORING LOG

PROJECT: Oneida, LTD. / Everyware Global, AOC #1
JOB NO.: 2015025/008
LOCATION: Sherrill, NY
DATE STARTED: 03/01/17 **DATE COMPLETED:** 03/01/17
INSPECTOR: FAK/MTM
DRILLER: NYEG Drilling, LLC
DRILLING METHOD: Geoprobe 7720

HOLE NO.: B-51
HOLE LOCATION:
SURF. EL. 99
GROUNDWATER DEPTH: ~6-7

TIME	CASING/HOLE CONDITION	DEPTH

SAMPLER TYPE: 2.25" macrocore

DEPTH (Ft.)	SAMPLE DEPTH (Ft.)	Run #	RECOVERY (Ft.)	Staining	PID (ppm)	DESCRIPTION OF MATERIAL	CONTACT DEPTH (Ft.)	
						Black, dry f-c sand, cinders, little gravel	2	
5	0 - 5	1	3.5	No	0	Gray, moist silty clay, trace f-m gravel, trace - little fine organics	6.5	
10	5 - 10	2	4.5	No	0	Wet, reddish-brn, silty f-c sand and f-m gravel	9.5	x
						wet, red,soft, silty clay	14.25	
15	10 - 15	3	3	No	0	Wet,red clayey silt	15	
						Wet, reddish-brn, f-c sand and f-m gravel	18.5	x
20	15 - 20	4	3.25	No	0	Wet, red clayey silt		x
25	20 - 25	5	5	No	0	Wet,red, thinnly interbedded clay and clayey silt		
						Soil boring sealed with bentonite		

Comments: **x**-soil sample collected for laboratory analysis

PLUMLEY ENGINEERING, P.C.
ENVIRONMENTAL TEST BORING LOG

PROJECT: Oneida, LTD. / Everyware Global, AOC #1
JOB NO.: 2015025/008
LOCATION: Sherrill, NY
DATE STARTED: 03/01/17 **DATE COMPLETED:** 03/01/17
INSPECTOR: FAK/MTM
DRILLER: NYEG Drilling, LLC
DRILLING METHOD: Geoprobe 7720

HOLE NO.: B-52
HOLE LOCATION:
SURF. EL. 99.5
GROUNDWATER DEPTH: ~6-7

TIME	CASING/HOLE CONDITION	DEPTH

SAMPLER TYPE: 2.25" macrocore

DEPTH (Ft.)	SAMPLE DEPTH (Ft.)	Run #	RECOVERY (Ft.)	Staining	PID (ppm)	DESCRIPTION OF MATERIAL	CONTACT DEPTH (Ft.)	
						Brown, dry f-m sand		
					0		2	
						Red-brn,moist, stiff clayey silt and f sand, little f-m gravel		
					0			
5	0 - 5	1	3	No			5	
						Gray-brown,moist clayey silt, little f organics		
					1.1	(trace tan m sand-shell fragments?)		
					0.9			
10	5 - 10	2	5	No	0.9	-woody organic	10	
					8.8	Gray, wet f-m sand, little f-c gravel, trace silt		
					40.8		12.75	x
						Red, wet soft clay	13	
					0	Red, wet clayey silt		
15	10 - 15	3	4.25	No	0		15	x
						wet, red m-c sand and f-c gravel, little f sand		
					22			
					0			
					13.1		19	x
20	15 - 20	4	4	No		Wet, red silty clay		
					0		21	
						Wet, red m-c sand and f-c gravel, little f sand		
					0		22.5	x
					0			
25	20 - 25	5	5	No	0	Wet, red silty clay		
						Soil boring sealed with bentonite		

Comments: **x**-soil sample collected for laboratory analysis

PLUMLEY ENGINEERING, P.C.
ENVIRONMENTAL TEST BORING LOG

PROJECT: Oneida, LTD. / Everyware Global, AOC #1
JOB NO.: 2015025/008
LOCATION: Sherrill, NY
DATE STARTED: 03/01/17 **DATE COMPLETED:** 03/01/17
INSPECTOR: FAK/MTM
DRILLER: NYEG Drilling, LLC
DRILLING METHOD: Geoprobe 7720

HOLE NO.: B-53
HOLE LOCATION:
SURF. EL. 99.5
GROUNDWATER DEPTH: ~6-7

TIME	CASING/HOLE CONDITION	DEPTH

SAMPLER TYPE: 2.25" macrocore

DEPTH (Ft.)	SAMPLE DEPTH (Ft.)	Run #	RECOVERY (Ft.)	Staining	PID (ppm)	DESCRIPTION OF MATERIAL	CONTACT DEPTH (Ft.)	
						Dry,brown f-m sand		
							2	
					0	Red-brown,moist, clayey silt and f sand		
							4.5	
5	0 - 5	1	4	No	0	Tan f-m sand		
							5.5	
					0			
						Gray, soft, moist silty clay, little fine organics		
					0	-woody organic	9.5	
10	5 - 10	2	4.5	No	700			
					440	Gray, wet ,f-c sand and gravel, little silt	11	x
					1.8	Red, wet soft, silty clay		x
15	10 - 15	3	5	No				
					4.8		16.5	
					0			
					12	Wet, reddish-brn, silty f-c sand and f-m gravel		x
20	15 - 20	4	5	No	0		19.5	
					0	Wet, red clayey silt	20.5	
					0			
						Red, wet,thinnly interbedded clayey silt and clay		
					0			
25	20 - 25	5	5	No	0			
						Soil boring sealed with bentonite		

Comments: **x**-soil sample collected for laboratory analysis

PLUMLEY ENGINEERING, P.C.
ENVIRONMENTAL TEST BORING LOG

PROJECT: Oneida, LTD. / Everyware Global, AOC #1
JOB NO.: 2015025/008
LOCATION: Sherrill, NY
DATE STARTED: 03/01/17 **DATE COMPLETED:** 03/01/17
INSPECTOR: FAK/MTM
DRILLER: NYEG Drilling, LLC
DRILLING METHOD: Geoprobe 7720

HOLE NO.: B-54
HOLE LOCATION:
SURF. EL. 100.5
GROUNDWATER DEPTH: ~6-7

TIME	CASING/HOLE CONDITION	DEPTH

SAMPLER TYPE: 2.25" macrocore

DEPTH (Ft.)	SAMPLE DEPTH (Ft.)	Run #	RECOVERY (Ft.)	Staining	PID (ppm)	DESCRIPTION OF MATERIAL	CONTACT DEPTH (Ft.)	
						Bown, dry f-m sand		
					0		2.5	
						Red-brown, fine sandy silt, trace gravel		
					3.5			
5	0 - 5	1	4.5	No	0		5	
						Grayish brown, moist, soft clay		
					325			
					200		9	
10	5 - 10	2	4	No		Gray silt and f sand	9.5	
					260			
					230	Wet, gray silty f-c sand and f-c gravel		
					2000		13	x
					1080			x
15	10 - 15	3	4.5	No	2	Red,wet, soft silty clay		
					220			
					1500		17.5	x
					515			
						Wet, red, f-m-c sand, little f-m gravel		
20	15 - 20	4	5	No	11.1		20.25	x
						Red,wet silty clay		
					0.2			x
					0.9			
25	20 - 25	5		No	0			
						Soil boring sealed with bentonite		

Comments: **x**-soil sample collected for laboratory analysis

PLUMLEY ENGINEERING, P.C.
ENVIRONMENTAL TEST BORING LOG

PROJECT: Oneida, LTD. / Everyware Global, AOC #1
JOB NO.: 2015025/008
LOCATION: Sherrill, NY
DATE STARTED: 03/01/17 **DATE COMPLETED:** 03/01/17
INSPECTOR: FAK/MTM
DRILLER: NYEG Drilling, LLC
DRILLING METHOD: Geoprobe 7720

HOLE NO.: B-55
HOLE LOCATION:
SURF. EL. 102.5
GROUNDWATER DEPTH: ~6-7

TIME	CASING/HOLE CONDITION	DEPTH

SAMPLER TYPE: 2.25" macrocore

DEPTH (Ft.)	SAMPLE DEPTH (Ft.)	Run #	RECOVERY (Ft.)	Staining	PID (ppm)	DESCRIPTION OF MATERIAL	CONTACT DEPTH (Ft.)	
						Dark gray, f-c sand and gravel		
							1.5	
						Red-brown, dry - moist, f sandy silt, little f-m gravel,		
5	0 - 5	1	5	No	0	trace clay		
							8.5	
10	5 - 10	2	3	No	0	Gray, moist-wet, clayey silt and f sand, trace f organics		
					0		11.25	
					33	Gray, wet, laminated f-m sand	12	
						Grey, wet silt and f-m sand; woody organics, tan m sand		
15	10 - 15	3	4	No	145		15	x
					22			
					34			
						Red, wet, soft silty clay		
					0			
20	15 - 20	4	4.25	No			19.5	
					0			
					0	Red, wet, silty f-c sand and f-c gravel		
							22.5	x
25	20 - 25	5	5	No	0	Red, wet, interbedded silty clay and clay		
						Soil boring sealed with bentonite		

Comments: **x**-soil sample collected for laboratory analysis

PLUMLEY ENGINEERING, P.C.
ENVIRONMENTAL TEST BORING LOG

PROJECT: Oneida, LTD. / Everyware Global, AOC #1
JOB NO.: 2015025/008
LOCATION: Sherrill, NY
DATE STARTED: 03/01/17 **DATE COMPLETED:** 03/01/17
INSPECTOR: FAK/MTM
DRILLER: NYEG Drilling, LLC
DRILLING METHOD: Geoprobe 7720

HOLE NO.: B-56
HOLE LOCATION:
SURF. EL. 102
GROUNDWATER DEPTH: ~6-7

TIME	CASING/HOLE CONDITION	DEPTH

SAMPLER TYPE: 2.25" macrocore

DEPTH (Ft.)	SAMPLE DEPTH (Ft.)	Run #	RECOVERY (Ft.)	Staining	PID (ppm)	DESCRIPTION OF MATERIAL	CONTACT DEPTH (Ft.)
						Gray f-c sand	1
						Red-brown, dry f sand and silt	
5	0 - 5	1	3	No	0		5
						Red-brown, moist, clayey silt, trace f- m gravel	9.5
10	5 - 10	2	4	No	0	Gray, wet, f sandy silt, traces m sand, tan m sand, organics	
						Gray f-c sand and gravel	11
						Red, wet, silty clay	
15	10 - 15	3	5	No	0		
							19
20	15 - 20	4	5	No	0	Red, wet f-c sand, little-some f-c gravel	
							22.5 x
25	20 - 25	5	5	No	0	Moist-wet, red silty clay	
						Soil boring sealed with bentonite	

Comments: **x**-soil sample collected for laboratory analysis

PLUMLEY ENGINEERING, P.C.
ENVIRONMENTAL TEST BORING LOG

PROJECT: Oneida, LTD. / Everyware Global, AOC #1
JOB NO.: 2015025/008
LOCATION: Sherrill, NY
DATE STARTED: 03/01/17 **DATE COMPLETED:** 03/01/17
INSPECTOR: FAK/MTM
DRILLER: NYEG Drilling, LLC
DRILLING METHOD: Geoprobe 7720

HOLE NO.: MW-5D
HOLE LOCATION:
SURF. EL.
GROUNDWATER DEPTH:

TIME	CASING/HOLE CONDITION	DEPTH
	Static	6.5'

SAMPLER TYPE: 2.25" macrocore

DEPTH (Ft.)	SAMPLE DEPTH (Ft.)	Run #	RECOVERY (Ft.)	Staining	PID (ppm)	DESCRIPTION OF MATERIAL	CONTACT DEPTH (Ft.)	
						Red-brown, dry, silt and f sand, trace m-c sand		
5	0 - 5	1	4	No	0			
						Red-brown, moist, silt and f sand, trace clay	7	
					260	Gray, wet silt and f sand, some f-c gravel, trace m-c sand		x
10	5 - 10	2	3.25	No			~10	
					68	Red, wet, soft, silty clay		
					0			
15	10 - 15	3	5		0			
					4.2		16.5	
					0	Gray, wet f-c sand and f-m gravel		
					0		19.5	x
20	15 - 20	4	5		0	Red silt and clay		x
						Installed 1-inch diameter well using 3.25" diam.driven casing, 5-foot 20 slot screen set at 20 feet, sand pack to 14.5', bentonite seal to 1'; installed curb box and concrete pad.		

Comments: **x**-soil sample collected for laboratory analysis

LABORATORY REPORTS

e-Hardcopy 2.0
Automated Report

Technical Report for

Plumley Environmental Engineers

Oneida Knife, Kenwood Avenue, Sherrill, NY

2015025

SGS Accutest Job Number: JC38192

Sampling Date: 03/01/17

Report to:

Plumley Environmental Engineers

dhudson@plumleyeng.com

ATTN: Derk Hudson

Total number of pages in report: 58

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Robert Soll 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (L-A-B L2248)

Table of Contents

Sample Summary

Plumley Environmental Engineers

Job No: JC38192

Oneida Knife, Kenwood Avenue, Sherrill, NY
Project No: 2015025

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC38192-1	03/01/17	08:00	MM/FK	03/03/17	SO	Soil	MW-5D 7.5-8' BGS
JC38192-2	03/01/17	08:15	MM/FK	03/03/17	SO	Soil	MW-5D 18.5-19.5' BGS
JC38192-3	03/01/17	08:20	MM/FK	03/03/17	SO	Soil	MW-5D 19.5-20' BGS
JC38192-4	03/01/17	09:00	MM/FK	03/03/17	SO	Soil	B-51 8.5-9.5' BGS
JC38192-5	03/01/17	09:10	MM/FK	03/03/17	SO	Soil	B-51 17.5-18.5' BGS
JC38192-6	03/01/17	09:20	MM/FK	03/03/17	SO	Soil	B-51 19-20' BGS
JC38192-7	03/01/17	09:50	MM/FK	03/03/17	SO	Soil	B-52 16.5-17.5' BGS
JC38192-8	03/01/17	10:00	MM/FK	03/03/17	SO	Soil	B-52 19.5-20' BGS
JC38192-9	03/01/17	10:05	MM/FK	03/03/17	SO	Soil	B-52 18-19' BGS
JC38192-10	03/01/17	10:10	MM/FK	03/03/17	SO	Soil	B-52 22.5' BGS
JC38192-11	03/01/17	10:45	MM/FK	03/03/17	SO	Soil	B-53 10.5-11' BGS
JC38192-12	03/01/17	10:50	MM/FK	03/03/17	SO	Soil	B-53 13' BGS
JC38192-13	03/01/17	11:00	MM/FK	03/03/17	SO	Soil	B-53 19-19.5' BGS

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Sample Summary
(continued)

Plumley Environmental Engineers

Job No: JC38192

Oneida Knife, Kenwood Avenue, Sherrill, NY
Project No: 2015025

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC38192-14	03/01/17	11:25	MM/FK	03/03/17	SO	Soil	B-54 15' BGS
JC38192-15	03/01/17	11:35	MM/FK	03/03/17	SO	Soil	B-54 16-17' BGS
JC38192-16	03/01/17	11:45	MM/FK	03/03/17	SO	Soil	B-54 19-20' BGS
JC38192-17	03/01/17	12:00	MM/FK	03/03/17	SO	Soil	B-54 23-23.5' BGS
JC38192-18	03/01/17	12:05	MM/FK	03/03/17	SO	Soil	B-54 12-13' BGS
JC38192-19	03/01/17	12:30	MM/FK	03/03/17	SO	Soil	B-54 14-15' BGS
JC38192-20	03/01/17	12:40	MM/FK	03/03/17	SO	Soil	B-55 21.5-22.5' BGS
JC38192-21	03/01/17	13:05	MM/FK	03/03/17	SO	Soil	B-56 21.5-22.5' BGS

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: JC38192
Account: Plumley Environmental Engineers
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY
Collected: 03/01/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC38192-1	**MW-5D 7.5-8' BGS**					
Acetone [a]		10.1 J	13	6.6	ug/kg	SW846 8260C
Benzene [a]		0.43 J	0.66	0.16	ug/kg	SW846 8260C
Carbon disulfide [a]		3.4	2.6	0.22	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		160	1.3	0.58	ug/kg	SW846 8260C
trans-1,2-Dichloroethene [a]		1.1 J	1.3	0.21	ug/kg	SW846 8260C
Methylene chloride [a]		4.1 J	6.6	1.3	ug/kg	SW846 8260C
Toluene [a]		0.57 J	1.3	0.16	ug/kg	SW846 8260C
Trichloroethene [a]		7.0	1.3	0.25	ug/kg	SW846 8260C
1,2,4-Trimethylbenzene [a]		0.27 J	2.6	0.23	ug/kg	SW846 8260C
Vinyl chloride [a]		4.5	2.6	0.27	ug/kg	SW846 8260C
o-Xylene [a]		0.27 J	1.3	0.27	ug/kg	SW846 8260C
Xylene (total) [a]		0.27 J	1.3	0.27	ug/kg	SW846 8260C
JC38192-2	**MW-5D 18.5-19.5' BGS**					
Benzene [a]		0.34 J	0.42	0.10	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		3.5	0.85	0.37	ug/kg	SW846 8260C
Methylene chloride [a]		2.7 J	4.2	0.85	ug/kg	SW846 8260C
Tetrachloroethene [a]		87.4	1.7	0.24	ug/kg	SW846 8260C
Toluene [a]		0.23 J	0.85	0.11	ug/kg	SW846 8260C
Trichloroethene [a]		5.8	0.85	0.16	ug/kg	SW846 8260C
JC38192-3	**MW-5D 19.5-20' BGS**					
Acetone [a]		9.0 J	11	5.4	ug/kg	SW846 8260C
Benzene [a]		0.67	0.54	0.13	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		4.1	1.1	0.47	ug/kg	SW846 8260C
Methylene chloride [a]		2.4 J	5.4	1.1	ug/kg	SW846 8260C
Tetrachloroethene [a]		17600	1400	200	ug/kg	SW846 8260C
Toluene [a]		0.31 J	1.1	0.13	ug/kg	SW846 8260C
Trichloroethene [a]		55.5	1.1	0.20	ug/kg	SW846 8260C
JC38192-4	**B-51 8.5-9.5' BGS**					
Acetone [a]		21.6	11	5.6	ug/kg	SW846 8260C
Benzene [a]		0.40 J	0.56	0.13	ug/kg	SW846 8260C
Carbon disulfide [a]		1.4 J	2.2	0.19	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		2.2	1.1	0.49	ug/kg	SW846 8260C
Methylene chloride [a]		3.2 J	5.6	1.1	ug/kg	SW846 8260C
Tetrachloroethene [a]		0.64 J	2.2	0.32	ug/kg	SW846 8260C
Toluene [a]		0.35 J	1.1	0.14	ug/kg	SW846 8260C
Trichloroethene [a]		0.76 J	1.1	0.21	ug/kg	SW846 8260C

Summary of Hits

Job Number: JC38192
Account: Plumley Environmental Engineers
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY
Collected: 03/01/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC38192-5	**B-51 17.5-18.5' BGS**					
Acetone [a]		6.9 J	9.8	4.9	ug/kg	SW846 8260C
Benzene [a]		0.79	0.49	0.12	ug/kg	SW846 8260C
1,1-Dichloroethene [a]		0.52 J	0.98	0.15	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		6.9	0.98	0.43	ug/kg	SW846 8260C
Methylene chloride [a]		2.7 J	4.3	0.86	ug/kg	SW846 8260C
Toluene [a]		0.46 J	0.98	0.12	ug/kg	SW846 8260C
Trichloroethene [a]		11.7	0.98	0.19	ug/kg	SW846 8260C
Vinyl chloride [a]		0.46 J	2.0	0.20	ug/kg	SW846 8260C
JC38192-6	**B-51 19-20' BGS**					
Acetone [a]		6.0 J	11	5.6	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		8.9	1.1	0.49	ug/kg	SW846 8260C
Methylene chloride [a]		2.4 J	5.6	1.1	ug/kg	SW846 8260C
Trichloroethene [a]		0.42 J	1.1	0.21	ug/kg	SW846 8260C
Vinyl chloride [a]		1.7 J	2.2	0.23	ug/kg	SW846 8260C
JC38192-7	**B-52 16.5-17.5' BGS**					
Acetone [a]		22.2	14	7.2	ug/kg	SW846 8260C
Benzene [a]		0.37 J	0.72	0.17	ug/kg	SW846 8260C
Carbon disulfide [a]		1.5 J	2.9	0.25	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		33.2	1.4	0.63	ug/kg	SW846 8260C
trans-1,2-Dichloroethene [a]		0.49 J	1.4	0.23	ug/kg	SW846 8260C
Methylene chloride [a]		3.3 J	7.2	1.4	ug/kg	SW846 8260C
Tetrachloroethene [a]		0.51 J	2.9	0.41	ug/kg	SW846 8260C
Trichloroethene [a]		5.6	1.4	0.28	ug/kg	SW846 8260C
Vinyl chloride [a]		18.5	2.9	0.29	ug/kg	SW846 8260C
JC38192-8	**B-52 19.5-20' BGS**					
Acetone [a]		8.2 J	11	5.6	ug/kg	SW846 8260C
Benzene [a]		0.28 J	0.56	0.13	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		4.8	1.1	0.49	ug/kg	SW846 8260C
Methylene chloride [a]		2.9 J	5.6	1.1	ug/kg	SW846 8260C
Vinyl chloride [a]		4.6	2.2	0.23	ug/kg	SW846 8260C
JC38192-9	**B-52 18-19' BGS**					
Acetone [a]		6.7 J	8.3	4.2	ug/kg	SW846 8260C
Benzene [a]		0.49	0.42	0.10	ug/kg	SW846 8260C
1,1-Dichloroethene [a]		0.35 J	0.83	0.13	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		10	0.83	0.37	ug/kg	SW846 8260C

Summary of Hits

Job Number: JC38192
Account: Plumley Environmental Engineers
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY
Collected: 03/01/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
trans-1,2-Dichloroethene [a]		0.44 J	0.83	0.13	ug/kg	SW846 8260C
Methylene chloride [a]		2.4 J	4.2	0.83	ug/kg	SW846 8260C
Toluene [a]		0.21 J	0.83	0.10	ug/kg	SW846 8260C
Trichloroethene [a]		40.1	0.83	0.16	ug/kg	SW846 8260C
Vinyl chloride [a]		0.32 J	1.7	0.17	ug/kg	SW846 8260C
JC38192-10	**B-52 22.5' BGS**					
Acetone [a]		10.1 J	12	6.0	ug/kg	SW846 8260C
Benzene [a]		0.61	0.60	0.14	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		5.1	1.2	0.53	ug/kg	SW846 8260C
Methylene chloride [a]		3.1 J	6.0	1.2	ug/kg	SW846 8260C
Trichloroethene [a]		1.1 J	1.2	0.23	ug/kg	SW846 8260C
Vinyl chloride [a]		0.59 J	2.4	0.24	ug/kg	SW846 8260C
JC38192-11	**B-53 10.5-11' BGS**					
Acetone [a]		34.2	12	5.9	ug/kg	SW846 8260C
Benzene [a]		0.33 J	0.59	0.14	ug/kg	SW846 8260C
Carbon disulfide [a]		1.3 J	2.4	0.20	ug/kg	SW846 8260C
Chloroform [a]		0.87 J	2.4	0.28	ug/kg	SW846 8260C
1,1-Dichloroethene [a]		4.2	1.2	0.18	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		224	1.2	0.52	ug/kg	SW846 8260C
trans-1,2-Dichloroethene [a]		2.9	1.2	0.19	ug/kg	SW846 8260C
Methylene chloride [a]		3.2 J	5.9	1.2	ug/kg	SW846 8260C
Tetrachloroethene [a]		11.5	2.4	0.33	ug/kg	SW846 8260C
Toluene [a]		0.28 J	1.2	0.15	ug/kg	SW846 8260C
Trichloroethene [a]		169	1.2	0.22	ug/kg	SW846 8260C
1,2,4-Trimethylbenzene [a]		0.41 J	2.4	0.21	ug/kg	SW846 8260C
Vinyl chloride [a]		35.1	2.4	0.24	ug/kg	SW846 8260C
JC38192-12	**B-53 13' BGS**					
Acetone [a]		6.0 J	10	5.0	ug/kg	SW846 8260C
Benzene [a]		0.53	0.50	0.12	ug/kg	SW846 8260C
Carbon disulfide [a]		0.23 J	2.0	0.17	ug/kg	SW846 8260C
1,1-Dichloroethene [a]		1.6	1.0	0.15	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		2620	70	31	ug/kg	SW846 8260C
trans-1,2-Dichloroethene [a]		3.0	1.0	0.16	ug/kg	SW846 8260C
Methylene chloride [a]		2.4 J	5.0	1.0	ug/kg	SW846 8260C
Trichloroethene [a]		3.2	1.0	0.19	ug/kg	SW846 8260C
Vinyl chloride [a]		69.7	2.0	0.20	ug/kg	SW846 8260C

Summary of Hits

Job Number: JC38192
Account: Plumley Environmental Engineers
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY
Collected: 03/01/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC38192-13	**B-53 19-19.5' BGS**					
Acetone [a]		7.4 J	8.6	4.3	ug/kg	SW846 8260C
Benzene [a]		0.80	0.43	0.10	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		17.3	0.86	0.37	ug/kg	SW846 8260C
Methylene chloride [a]		2.6 J	4.3	0.86	ug/kg	SW846 8260C
Tetrachloroethene [a]		16.4	1.7	0.24	ug/kg	SW846 8260C
Trichloroethene [a]		19.1	0.86	0.16	ug/kg	SW846 8260C
Vinyl chloride [a]		2.0	1.7	0.17	ug/kg	SW846 8260C
JC38192-14	**B-54 15' BGS**					
Acetone [a]		9.0 J	11	5.7	ug/kg	SW846 8260C
Benzene [a]		0.80	0.57	0.14	ug/kg	SW846 8260C
Carbon disulfide [a]		2.4	2.3	0.19	ug/kg	SW846 8260C
1,1-Dichloroethane [a]		5.4	1.1	0.21	ug/kg	SW846 8260C
1,1-Dichloroethene [a]		7.4	1.1	0.17	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		20800	1500	680	ug/kg	SW846 8260C
trans-1,2-Dichloroethene [a]		16.9	1.1	0.18	ug/kg	SW846 8260C
Methylene chloride [a]		4.0 J	5.7	1.1	ug/kg	SW846 8260C
Tetrachloroethene [a]		3050	150	22	ug/kg	SW846 8260C
Toluene [a]		6.7	1.1	0.14	ug/kg	SW846 8260C
Trichloroethene [a]		88500	1500	290	ug/kg	SW846 8260C
Vinyl chloride [a]		392	150	16	ug/kg	SW846 8260C
JC38192-15	**B-54 16-17' BGS**					
Acetone [a]		10.0 J	13	6.4	ug/kg	SW846 8260C
Benzene [a]		0.75	0.64	0.15	ug/kg	SW846 8260C
Carbon disulfide [a]		2.4 J	2.6	0.22	ug/kg	SW846 8260C
1,1-Dichloroethane [a]		1.5	1.3	0.24	ug/kg	SW846 8260C
1,1-Dichloroethene [a]		5.2	1.3	0.20	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		7800	74	33	ug/kg	SW846 8260C
trans-1,2-Dichloroethene [a]		11.4	1.3	0.20	ug/kg	SW846 8260C
Methylene chloride [a]		4.7 J	6.4	1.3	ug/kg	SW846 8260C
Tetrachloroethene [a]		84.8	2.6	0.36	ug/kg	SW846 8260C
Toluene [a]		2.6	1.3	0.16	ug/kg	SW846 8260C
Trichloroethene [a]		28600	1500	280	ug/kg	SW846 8260C
Vinyl chloride [a]		157	2.6	0.26	ug/kg	SW846 8260C
JC38192-16	**B-54 19-20' BGS**					
Acetone [a]		5.9 J	10	5.1	ug/kg	SW846 8260C
Benzene [a]		1.2	0.51	0.12	ug/kg	SW846 8260C
Carbon disulfide [a]		0.26 J	2.0	0.17	ug/kg	SW846 8260C

Summary of Hits

Job Number: JC38192
Account: Plumley Environmental Engineers
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY
Collected: 03/01/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
cis-1,2-Dichloroethene [a]		112	1.0	0.44	ug/kg	SW846 8260C
trans-1,2-Dichloroethene [a]		0.57 J	1.0	0.16	ug/kg	SW846 8260C
Methylene chloride [a]		3.0 J	5.1	1.0	ug/kg	SW846 8260C
Tetrachloroethene [a]		5.5	2.0	0.28	ug/kg	SW846 8260C
Toluene [a]		0.34 J	1.0	0.13	ug/kg	SW846 8260C
Trichloroethene [a]		40.1	1.0	0.19	ug/kg	SW846 8260C
Vinyl chloride [a]		5.5	2.0	0.20	ug/kg	SW846 8260C
JC38192-17	**B-54 23-23.5' BGS**					
cis-1,2-Dichloroethene [a]		56.7 J	70	31	ug/kg	SW846 8260C
Tetrachloroethene [a]		2960	140	20	ug/kg	SW846 8260C
Trichloroethene [a]		9230	70	13	ug/kg	SW846 8260C
JC38192-18	**B-54 12-13' BGS**					
Acetone [a]		91.7	14	6.9	ug/kg	SW846 8260C
Benzene [a]		2.3	0.69	0.16	ug/kg	SW846 8260C
2-Butanone (MEK) [a]		16.4	14	2.4	ug/kg	SW846 8260C
n-Butylbenzene [a]		0.85 J	2.7	0.21	ug/kg	SW846 8260C
sec-Butylbenzene [a]		0.80 J	2.7	0.21	ug/kg	SW846 8260C
Carbon disulfide [a]		6.4	2.7	0.23	ug/kg	SW846 8260C
1,2-Dichlorobenzene [a]		1.1 J	1.4	0.23	ug/kg	SW846 8260C
1,1-Dichloroethene [a]		1.5	1.4	0.21	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		213	1.4	0.60	ug/kg	SW846 8260C
trans-1,2-Dichloroethene [a]		3.5	1.4	0.22	ug/kg	SW846 8260C
Ethylbenzene [a]		0.79 J	1.4	0.20	ug/kg	SW846 8260C
Isopropylbenzene [a]		0.35 J	2.7	0.21	ug/kg	SW846 8260C
p-Isopropyltoluene [a]		1.1 J	2.7	0.33	ug/kg	SW846 8260C
Methylene chloride [a]		2.8 J	6.9	1.4	ug/kg	SW846 8260C
Naphthalene [a]		2.1 J	6.9	1.4	ug/kg	SW846 8260C
n-Propylbenzene [a]		0.72 J	2.7	0.27	ug/kg	SW846 8260C
Tetrachloroethene [a]		3.5	2.7	0.39	ug/kg	SW846 8260C
Toluene [a]		3.0	1.4	0.17	ug/kg	SW846 8260C
Trichloroethene [a]		93.4	1.4	0.26	ug/kg	SW846 8260C
1,2,4-Trimethylbenzene [a]		7.5	2.7	0.24	ug/kg	SW846 8260C
1,3,5-Trimethylbenzene [a]		3.0	2.7	0.23	ug/kg	SW846 8260C
Vinyl chloride [a]		10.6	2.7	0.28	ug/kg	SW846 8260C
m,p-Xylene [a]		2.5	1.4	0.30	ug/kg	SW846 8260C
o-Xylene [a]		1.4	1.4	0.28	ug/kg	SW846 8260C
Xylene (total) [a]		3.9	1.4	0.28	ug/kg	SW846 8260C
JC38192-19	**B-54 14-15' BGS**					
cis-1,2-Dichloroethene [b]		4380	94	41	ug/kg	SW846 8260C

Summary of Hits

Job Number: JC38192
Account: Plumley Environmental Engineers
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY
Collected: 03/01/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Trichloroethene [b]		81.8 J	94	18	ug/kg	SW846 8260C
Vinyl chloride [b]		647	190	19	ug/kg	SW846 8260C
JC38192-20	**B-55 21.5-22.5' BGS**					
cis-1,2-Dichloroethene [a]		1.2 J	1.3	0.57	ug/kg	SW846 8260C
Methylene chloride [a]		2.7 J	6.5	1.3	ug/kg	SW846 8260C
Tetrachloroethene [a]		0.99 J	2.6	0.37	ug/kg	SW846 8260C
Vinyl chloride [a]		0.66 J	2.6	0.26	ug/kg	SW846 8260C
JC38192-21	**B-56 21.5-22.5' BGS**					
Benzene [a]		0.56	0.49	0.12	ug/kg	SW846 8260C
cis-1,2-Dichloroethene [a]		3.0	0.98	0.43	ug/kg	SW846 8260C
Methylene chloride [a]		2.3 J	4.9	0.98	ug/kg	SW846 8260C
Tetrachloroethene [a]		0.52 J	2.0	0.27	ug/kg	SW846 8260C
Toluene [a]		0.32 J	0.98	0.12	ug/kg	SW846 8260C
Trichloroethene [a]		1.4	0.98	0.19	ug/kg	SW846 8260C
Vinyl chloride [a]		0.71 J	2.0	0.20	ug/kg	SW846 8260C

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.
(b) Sample prepared from intact soil. Diluted due to high concentration of target compound.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-5D 7.5-8' BGS
Lab Sample ID: JC38192-1
Matrix: SO - Soil
Method: SW846 8260C SW846 5035
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY

Date Sampled: 03/01/17
Date Received: 03/03/17
Percent Solids: 80.8

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135545.D	1	03/06/17	PS	03/03/17 13:00	n/a	V3C6164
Run #2							

	Initial Weight
Run #1	4.7 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	10.1	13	6.6	ug/kg	J
71-43-2	Benzene	0.43	0.66	0.16	ug/kg	J
78-93-3	2-Butanone (MEK)	ND	13	2.3	ug/kg	
104-51-8	n-Butylbenzene	ND	2.6	0.20	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.6	0.20	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.6	0.21	ug/kg	
75-15-0	Carbon disulfide	3.4	2.6	0.22	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.6	0.22	ug/kg	
108-90-7	Chlorobenzene	ND	2.6	0.21	ug/kg	
67-66-3	Chloroform	ND	2.6	0.31	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.3	0.23	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.3	0.18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.3	0.20	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.3	0.25	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.3	0.23	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.3	0.20	ug/kg	
156-59-2	cis-1,2-Dichloroethene	160	1.3	0.58	ug/kg	
156-60-5	trans-1,2-Dichloroethene	1.1	1.3	0.21	ug/kg	J
123-91-1	1,4-Dioxane	ND	160	63	ug/kg	
100-41-4	Ethylbenzene	ND	1.3	0.20	ug/kg	
98-82-8	Isopropylbenzene	ND	2.6	0.20	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.6	0.32	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.3	0.35	ug/kg	
75-09-2	Methylene chloride	4.1	6.6	1.3	ug/kg	J
91-20-3	Naphthalene	ND	6.6	1.3	ug/kg	
103-65-1	n-Propylbenzene	ND	2.6	0.26	ug/kg	
127-18-4	Tetrachloroethene	ND	2.6	0.37	ug/kg	
108-88-3	Toluene	0.57	1.3	0.16	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	2.6	0.22	ug/kg	
79-01-6	Trichloroethene	7.0	1.3	0.25	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.27	2.6	0.23	ug/kg	J
108-67-8	1,3,5-Trimethylbenzene	ND	2.6	0.22	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5D 7.5-8' BGS		
Lab Sample ID:	JC38192-1	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	80.8
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	4.5	2.6	0.27	ug/kg	
	m,p-Xylene	ND	1.3	0.29	ug/kg	
95-47-6	o-Xylene	0.27	1.3	0.27	ug/kg	J
1330-20-7	Xylene (total)	0.27	1.3	0.27	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		70-122%
17060-07-0	1,2-Dichloroethane-D4	97%		68-124%
2037-26-5	Toluene-D8	100%		77-125%
460-00-4	4-Bromofluorobenzene	104%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5D 18.5-19.5' BGS		
Lab Sample ID:	JC38192-2	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	85.3
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135546.D	1	03/06/17	PS	03/03/17 13:00	n/a	V3C6164
Run #2							

	Initial Weight
Run #1	6.9 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	8.5	4.2	ug/kg	
71-43-2	Benzene	0.34	0.42	0.10	ug/kg	J
78-93-3	2-Butanone (MEK)	ND	8.5	1.5	ug/kg	
104-51-8	n-Butylbenzene	ND	1.7	0.13	ug/kg	
135-98-8	sec-Butylbenzene	ND	1.7	0.13	ug/kg	
98-06-6	tert-Butylbenzene	ND	1.7	0.13	ug/kg	
75-15-0	Carbon disulfide	ND	1.7	0.14	ug/kg	
56-23-5	Carbon tetrachloride	ND	1.7	0.14	ug/kg	
108-90-7	Chlorobenzene	ND	1.7	0.14	ug/kg	
67-66-3	Chloroform	ND	1.7	0.20	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.85	0.15	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.85	0.12	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.85	0.13	ug/kg	
75-34-3	1,1-Dichloroethane	ND	0.85	0.16	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.85	0.15	ug/kg	
75-35-4	1,1-Dichloroethene	ND	0.85	0.13	ug/kg	
156-59-2	cis-1,2-Dichloroethene	3.5	0.85	0.37	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.85	0.13	ug/kg	
123-91-1	1,4-Dioxane	ND	110	41	ug/kg	
100-41-4	Ethylbenzene	ND	0.85	0.13	ug/kg	
98-82-8	Isopropylbenzene	ND	1.7	0.13	ug/kg	
99-87-6	p-Isopropyltoluene	ND	1.7	0.21	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.85	0.23	ug/kg	
75-09-2	Methylene chloride	2.7	4.2	0.85	ug/kg	J
91-20-3	Naphthalene	ND	4.2	0.85	ug/kg	
103-65-1	n-Propylbenzene	ND	1.7	0.17	ug/kg	
127-18-4	Tetrachloroethene	87.4	1.7	0.24	ug/kg	
108-88-3	Toluene	0.23	0.85	0.11	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	1.7	0.14	ug/kg	
79-01-6	Trichloroethene	5.8	0.85	0.16	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	1.7	0.15	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	1.7	0.14	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5D 18.5-19.5' BGS		
Lab Sample ID:	JC38192-2	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	85.3
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.7	0.17	ug/kg	
	m,p-Xylene	ND	0.85	0.19	ug/kg	
95-47-6	o-Xylene	ND	0.85	0.17	ug/kg	
1330-20-7	Xylene (total)	ND	0.85	0.17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-122%
17060-07-0	1,2-Dichloroethane-D4	96%		68-124%
2037-26-5	Toluene-D8	96%		77-125%
460-00-4	4-Bromofluorobenzene	107%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5D 19.5-20' BGS		
Lab Sample ID:	JC38192-3	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	83.3
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135547.D	1	03/06/17	PS	03/03/17 13:00	n/a	V3C6164
Run #2 [a]	E242697.D	1	03/07/17	TDN	03/03/17 13:00	n/a	VE10474
Run #3 [a]	E242698.D	1	03/07/17	TDN	03/03/17 13:00	n/a	VE10474

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.6 g		
Run #2	9.7 g	10.0 ml	10.0 ul
Run #3	9.7 g	10.0 ml	100 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	9.0	11	5.4	ug/kg	J
71-43-2	Benzene	0.67	0.54	0.13	ug/kg	
78-93-3	2-Butanone (MEK)	ND	11	1.9	ug/kg	
104-51-8	n-Butylbenzene	ND	2.1	0.16	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.1	0.16	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.1	0.17	ug/kg	
75-15-0	Carbon disulfide	ND	2.1	0.18	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.1	0.18	ug/kg	
108-90-7	Chlorobenzene	ND	2.1	0.17	ug/kg	
67-66-3	Chloroform	ND	2.1	0.26	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.18	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.15	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.1	0.16	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.1	0.20	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.1	0.18	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.1	0.16	ug/kg	
156-59-2	cis-1,2-Dichloroethene	4.1	1.1	0.47	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.17	ug/kg	
123-91-1	1,4-Dioxane	ND	130	51	ug/kg	
100-41-4	Ethylbenzene	ND	1.1	0.16	ug/kg	
98-82-8	Isopropylbenzene	ND	2.1	0.17	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.1	0.26	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.1	0.28	ug/kg	
75-09-2	Methylene chloride	2.4	5.4	1.1	ug/kg	J
91-20-3	Naphthalene	ND	5.4	1.1	ug/kg	
103-65-1	n-Propylbenzene	ND	2.1	0.21	ug/kg	
127-18-4	Tetrachloroethene	17600 [b]	1400	200	ug/kg	
108-88-3	Toluene	0.31	1.1	0.13	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	2.1	0.18	ug/kg	
79-01-6	Trichloroethene	55.5	1.1	0.20	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5D 19.5-20' BGS		
Lab Sample ID:	JC38192-3	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	83.3
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.1	0.19	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.1	0.18	ug/kg	
75-01-4	Vinyl chloride	ND	2.1	0.22	ug/kg	
	m,p-Xylene	ND	1.1	0.23	ug/kg	
95-47-6	o-Xylene	ND	1.1	0.22	ug/kg	
1330-20-7	Xylene (total)	ND	1.1	0.22	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	103%	103%	102%	70-122%
17060-07-0	1,2-Dichloroethane-D4	100%	106%	104%	68-124%
2037-26-5	Toluene-D8	100%	100%	101%	77-125%
460-00-4	4-Bromofluorobenzene	113%	96%	98%	72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-51 8.5-9.5' BGS		
Lab Sample ID:	JC38192-4	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	80.9
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135550.D	1	03/06/17	PS	03/03/17 13:00	n/a	V3C6164
Run #2							

	Initial Weight
Run #1	5.5 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	21.6	11	5.6	ug/kg	
71-43-2	Benzene	0.40	0.56	0.13	ug/kg	J
78-93-3	2-Butanone (MEK)	ND	11	2.0	ug/kg	
104-51-8	n-Butylbenzene	ND	2.2	0.17	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.2	0.17	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.2	0.18	ug/kg	
75-15-0	Carbon disulfide	1.4	2.2	0.19	ug/kg	J
56-23-5	Carbon tetrachloride	ND	2.2	0.19	ug/kg	
108-90-7	Chlorobenzene	ND	2.2	0.18	ug/kg	
67-66-3	Chloroform	ND	2.2	0.27	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.15	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.1	0.17	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.1	0.21	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.1	0.19	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.1	0.17	ug/kg	
156-59-2	cis-1,2-Dichloroethene	2.2	1.1	0.49	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.18	ug/kg	
123-91-1	1,4-Dioxane	ND	140	54	ug/kg	
100-41-4	Ethylbenzene	ND	1.1	0.17	ug/kg	
98-82-8	Isopropylbenzene	ND	2.2	0.17	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.2	0.27	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.1	0.30	ug/kg	
75-09-2	Methylene chloride	3.2	5.6	1.1	ug/kg	J
91-20-3	Naphthalene	ND	5.6	1.1	ug/kg	
103-65-1	n-Propylbenzene	ND	2.2	0.22	ug/kg	
127-18-4	Tetrachloroethene	0.64	2.2	0.32	ug/kg	J
108-88-3	Toluene	0.35	1.1	0.14	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.19	ug/kg	
79-01-6	Trichloroethene	0.76	1.1	0.21	ug/kg	J
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.20	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.19	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-51 8.5-9.5' BGS		
Lab Sample ID:	JC38192-4	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	80.9
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	2.2	0.23	ug/kg	
	m,p-Xylene	ND	1.1	0.25	ug/kg	
95-47-6	o-Xylene	ND	1.1	0.23	ug/kg	
1330-20-7	Xylene (total)	ND	1.1	0.23	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		70-122%
17060-07-0	1,2-Dichloroethane-D4	96%		68-124%
2037-26-5	Toluene-D8	98%		77-125%
460-00-4	4-Bromofluorobenzene	105%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-51 17.5-18.5' BGS		
Lab Sample ID:	JC38192-5	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	86.9
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	X170601.D	1	03/07/17	TP	03/03/17 13:00	n/a	VX7252
Run #2 [a]	3C135548.D	1	03/06/17	PS	03/03/17 13:00	n/a	V3C6164

	Initial Weight
Run #1	5.9 g
Run #2	6.7 g

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	6.9	9.8	4.9	ug/kg	J
71-43-2	Benzene	0.79	0.49	0.12	ug/kg	
78-93-3	2-Butanone (MEK)	ND	9.8	1.7	ug/kg	
104-51-8	n-Butylbenzene	ND	2.0	0.15	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.0	0.15	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.0	0.15	ug/kg	
75-15-0	Carbon disulfide	ND	2.0	0.17	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.16	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.16	ug/kg	
67-66-3	Chloroform	ND	2.0	0.23	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.98	0.17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.98	0.13	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.98	0.15	ug/kg	
75-34-3	1,1-Dichloroethane	ND	0.98	0.18	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.98	0.17	ug/kg	
75-35-4	1,1-Dichloroethene	0.52	0.98	0.15	ug/kg	J
156-59-2	cis-1,2-Dichloroethene	6.9	0.98	0.43	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.98	0.15	ug/kg	
123-91-1	1,4-Dioxane	ND	120	47	ug/kg	
100-41-4	Ethylbenzene	ND	0.98	0.15	ug/kg	
98-82-8	Isopropylbenzene	ND	2.0	0.15	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.0	0.24	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.98	0.26	ug/kg	
75-09-2	Methylene chloride	2.7 [b]	4.3	0.86	ug/kg	J
91-20-3	Naphthalene	ND	4.9	0.98	ug/kg	
103-65-1	n-Propylbenzene	ND	2.0	0.19	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.27	ug/kg	
108-88-3	Toluene	0.46	0.98	0.12	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.16	ug/kg	
79-01-6	Trichloroethene	11.7	0.98	0.19	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.17	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.16	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-51 17.5-18.5' BGS		
Lab Sample ID:	JC38192-5	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	86.9
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	0.46	2.0	0.20	ug/kg	J
	m,p-Xylene	ND	0.98	0.21	ug/kg	
95-47-6	o-Xylene	ND	0.98	0.20	ug/kg	
1330-20-7	Xylene (total)	ND	0.98	0.20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%	99%	70-122%
17060-07-0	1,2-Dichloroethane-D4	107%	99%	68-124%
2037-26-5	Toluene-D8	100%	96%	77-125%
460-00-4	4-Bromofluorobenzene	109%	105%	72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-51 19-20' BGS		
Lab Sample ID:	JC38192-6	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	87.3
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135553.D	1	03/06/17	PS	03/03/17 13:00	n/a	V3C6164
Run #2							

	Initial Weight
Run #1	5.1 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	6.0	11	5.6	ug/kg	J
71-43-2	Benzene	ND	0.56	0.13	ug/kg	
78-93-3	2-Butanone (MEK)	ND	11	2.0	ug/kg	
104-51-8	n-Butylbenzene	ND	2.2	0.17	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.2	0.17	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.2	0.18	ug/kg	
75-15-0	Carbon disulfide	ND	2.2	0.19	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.2	0.19	ug/kg	
108-90-7	Chlorobenzene	ND	2.2	0.18	ug/kg	
67-66-3	Chloroform	ND	2.2	0.27	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.15	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.1	0.17	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.1	0.21	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.1	0.19	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.1	0.17	ug/kg	
156-59-2	cis-1,2-Dichloroethene	8.9	1.1	0.49	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.18	ug/kg	
123-91-1	1,4-Dioxane	ND	140	54	ug/kg	
100-41-4	Ethylbenzene	ND	1.1	0.17	ug/kg	
98-82-8	Isopropylbenzene	ND	2.2	0.17	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.2	0.27	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.1	0.30	ug/kg	
75-09-2	Methylene chloride	2.4	5.6	1.1	ug/kg	J
91-20-3	Naphthalene	ND	5.6	1.1	ug/kg	
103-65-1	n-Propylbenzene	ND	2.2	0.22	ug/kg	
127-18-4	Tetrachloroethene	ND	2.2	0.32	ug/kg	
108-88-3	Toluene	ND	1.1	0.14	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.19	ug/kg	
79-01-6	Trichloroethene	0.42	1.1	0.21	ug/kg	J
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.20	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.19	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-51 19-20' BGS		
Lab Sample ID:	JC38192-6	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	87.3
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	1.7	2.2	0.23	ug/kg	J
	m,p-Xylene	ND	1.1	0.25	ug/kg	
95-47-6	o-Xylene	ND	1.1	0.23	ug/kg	
1330-20-7	Xylene (total)	ND	1.1	0.23	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		70-122%
17060-07-0	1,2-Dichloroethane-D4	101%		68-124%
2037-26-5	Toluene-D8	98%		77-125%
460-00-4	4-Bromofluorobenzene	109%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-52 16.5-17.5' BGS		
Lab Sample ID:	JC38192-7	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	73.4
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135554.D	1	03/06/17	PS	03/03/17 14:00	n/a	V3C6164
Run #2							

	Initial Weight
Run #1	4.7 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	22.2	14	7.2	ug/kg	
71-43-2	Benzene	0.37	0.72	0.17	ug/kg	J
78-93-3	2-Butanone (MEK)	ND	14	2.6	ug/kg	
104-51-8	n-Butylbenzene	ND	2.9	0.22	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.9	0.22	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.9	0.23	ug/kg	
75-15-0	Carbon disulfide	1.5	2.9	0.25	ug/kg	J
56-23-5	Carbon tetrachloride	ND	2.9	0.24	ug/kg	
108-90-7	Chlorobenzene	ND	2.9	0.23	ug/kg	
67-66-3	Chloroform	ND	2.9	0.34	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.4	0.25	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.4	0.20	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.4	0.22	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.4	0.27	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.4	0.25	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.4	0.22	ug/kg	
156-59-2	cis-1,2-Dichloroethene	33.2	1.4	0.63	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.49	1.4	0.23	ug/kg	J
123-91-1	1,4-Dioxane	ND	180	69	ug/kg	
100-41-4	Ethylbenzene	ND	1.4	0.22	ug/kg	
98-82-8	Isopropylbenzene	ND	2.9	0.22	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.9	0.35	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.4	0.38	ug/kg	
75-09-2	Methylene chloride	3.3	7.2	1.4	ug/kg	J
91-20-3	Naphthalene	ND	7.2	1.4	ug/kg	
103-65-1	n-Propylbenzene	ND	2.9	0.29	ug/kg	
127-18-4	Tetrachloroethene	0.51	2.9	0.41	ug/kg	J
108-88-3	Toluene	ND	1.4	0.18	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.9	0.24	ug/kg	
79-01-6	Trichloroethene	5.6	1.4	0.28	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	2.9	0.25	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.9	0.24	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-52 16.5-17.5' BGS		
Lab Sample ID:	JC38192-7	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	73.4
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	18.5	2.9	0.29	ug/kg	
	m,p-Xylene	ND	1.4	0.32	ug/kg	
95-47-6	o-Xylene	ND	1.4	0.29	ug/kg	
1330-20-7	Xylene (total)	ND	1.4	0.29	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		70-122%
17060-07-0	1,2-Dichloroethane-D4	98%		68-124%
2037-26-5	Toluene-D8	96%		77-125%
460-00-4	4-Bromofluorobenzene	105%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-52 19.5-20' BGS		
Lab Sample ID:	JC38192-8	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	81.3
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135555.D	1	03/07/17	PS	03/03/17 14:00	n/a	V3C6164
Run #2							

	Initial Weight
Run #1	5.5 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	8.2	11	5.6	ug/kg	J
71-43-2	Benzene	0.28	0.56	0.13	ug/kg	J
78-93-3	2-Butanone (MEK)	ND	11	2.0	ug/kg	
104-51-8	n-Butylbenzene	ND	2.2	0.17	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.2	0.17	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.2	0.18	ug/kg	
75-15-0	Carbon disulfide	ND	2.2	0.19	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.2	0.19	ug/kg	
108-90-7	Chlorobenzene	ND	2.2	0.18	ug/kg	
67-66-3	Chloroform	ND	2.2	0.27	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.15	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.1	0.17	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.1	0.21	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.1	0.19	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.1	0.17	ug/kg	
156-59-2	cis-1,2-Dichloroethene	4.8	1.1	0.49	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.1	0.18	ug/kg	
123-91-1	1,4-Dioxane	ND	140	53	ug/kg	
100-41-4	Ethylbenzene	ND	1.1	0.17	ug/kg	
98-82-8	Isopropylbenzene	ND	2.2	0.17	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.2	0.27	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.1	0.30	ug/kg	
75-09-2	Methylene chloride	2.9	5.6	1.1	ug/kg	J
91-20-3	Naphthalene	ND	5.6	1.1	ug/kg	
103-65-1	n-Propylbenzene	ND	2.2	0.22	ug/kg	
127-18-4	Tetrachloroethene	ND	2.2	0.31	ug/kg	
108-88-3	Toluene	ND	1.1	0.14	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.2	0.19	ug/kg	
79-01-6	Trichloroethene	ND	1.1	0.21	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	2.2	0.19	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.2	0.18	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-52 19.5-20' BGS		
Lab Sample ID:	JC38192-8	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	81.3
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	4.6	2.2	0.23	ug/kg	
	m,p-Xylene	ND	1.1	0.24	ug/kg	
95-47-6	o-Xylene	ND	1.1	0.23	ug/kg	
1330-20-7	Xylene (total)	ND	1.1	0.23	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-122%
17060-07-0	1,2-Dichloroethane-D4	99%		68-124%
2037-26-5	Toluene-D8	95%		77-125%
460-00-4	4-Bromofluorobenzene	106%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-52 18-19' BGS		
Lab Sample ID:	JC38192-9	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	88.2
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135556.D	1	03/07/17	PS	03/03/17 14:00	n/a	V3C6164
Run #2							

	Initial Weight
Run #1	6.8 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	6.7	8.3	4.2	ug/kg	J
71-43-2	Benzene	0.49	0.42	0.10	ug/kg	
78-93-3	2-Butanone (MEK)	ND	8.3	1.5	ug/kg	
104-51-8	n-Butylbenzene	ND	1.7	0.13	ug/kg	
135-98-8	sec-Butylbenzene	ND	1.7	0.13	ug/kg	
98-06-6	tert-Butylbenzene	ND	1.7	0.13	ug/kg	
75-15-0	Carbon disulfide	ND	1.7	0.14	ug/kg	
56-23-5	Carbon tetrachloride	ND	1.7	0.14	ug/kg	
108-90-7	Chlorobenzene	ND	1.7	0.14	ug/kg	
67-66-3	Chloroform	ND	1.7	0.20	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.83	0.14	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.83	0.11	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.83	0.13	ug/kg	
75-34-3	1,1-Dichloroethane	ND	0.83	0.16	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.83	0.14	ug/kg	
75-35-4	1,1-Dichloroethene	0.35	0.83	0.13	ug/kg	J
156-59-2	cis-1,2-Dichloroethene	10	0.83	0.37	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.44	0.83	0.13	ug/kg	J
123-91-1	1,4-Dioxane	ND	100	40	ug/kg	
100-41-4	Ethylbenzene	ND	0.83	0.12	ug/kg	
98-82-8	Isopropylbenzene	ND	1.7	0.13	ug/kg	
99-87-6	p-Isopropyltoluene	ND	1.7	0.20	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.83	0.22	ug/kg	
75-09-2	Methylene chloride	2.4	4.2	0.83	ug/kg	J
91-20-3	Naphthalene	ND	4.2	0.83	ug/kg	
103-65-1	n-Propylbenzene	ND	1.7	0.17	ug/kg	
127-18-4	Tetrachloroethene	ND	1.7	0.23	ug/kg	
108-88-3	Toluene	0.21	0.83	0.10	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	1.7	0.14	ug/kg	
79-01-6	Trichloroethene	40.1	0.83	0.16	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	1.7	0.15	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	1.7	0.14	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-52 18-19' BGS		
Lab Sample ID:	JC38192-9	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	88.2
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	0.32	1.7	0.17	ug/kg	J
	m,p-Xylene	ND	0.83	0.18	ug/kg	
95-47-6	o-Xylene	ND	0.83	0.17	ug/kg	
1330-20-7	Xylene (total)	ND	0.83	0.17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		70-122%
17060-07-0	1,2-Dichloroethane-D4	95%		68-124%
2037-26-5	Toluene-D8	95%		77-125%
460-00-4	4-Bromofluorobenzene	105%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-52 22.5' BGS
Lab Sample ID: JC38192-10
Matrix: SO - Soil
Method: SW846 8260C SW846 5035
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY

Date Sampled: 03/01/17
Date Received: 03/03/17
Percent Solids: 83.2

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135557.D	1	03/07/17	PS	03/03/17 14:00	n/a	V3C6164
Run #2							

	Initial Weight
Run #1	5.0 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	10.1	12	6.0	ug/kg	J
71-43-2	Benzene	0.61	0.60	0.14	ug/kg	
78-93-3	2-Butanone (MEK)	ND	12	2.1	ug/kg	
104-51-8	n-Butylbenzene	ND	2.4	0.18	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.4	0.18	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.4	0.19	ug/kg	
75-15-0	Carbon disulfide	ND	2.4	0.20	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.4	0.20	ug/kg	
108-90-7	Chlorobenzene	ND	2.4	0.19	ug/kg	
67-66-3	Chloroform	ND	2.4	0.29	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.2	0.21	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.2	0.16	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.2	0.18	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.2	0.22	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.2	0.21	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.2	0.18	ug/kg	
156-59-2	cis-1,2-Dichloroethene	5.1	1.2	0.53	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	1.2	0.19	ug/kg	
123-91-1	1,4-Dioxane	ND	150	57	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.18	ug/kg	
98-82-8	Isopropylbenzene	ND	2.4	0.19	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.4	0.29	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.2	0.32	ug/kg	
75-09-2	Methylene chloride	3.1	6.0	1.2	ug/kg	J
91-20-3	Naphthalene	ND	6.0	1.2	ug/kg	
103-65-1	n-Propylbenzene	ND	2.4	0.24	ug/kg	
127-18-4	Tetrachloroethene	ND	2.4	0.34	ug/kg	
108-88-3	Toluene	ND	1.2	0.15	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.4	0.20	ug/kg	
79-01-6	Trichloroethene	1.1	1.2	0.23	ug/kg	J
95-63-6	1,2,4-Trimethylbenzene	ND	2.4	0.21	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.4	0.20	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-52 22.5' BGS		
Lab Sample ID:	JC38192-10	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	83.2
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	0.59	2.4	0.24	ug/kg	J
	m,p-Xylene	ND	1.2	0.26	ug/kg	
95-47-6	o-Xylene	ND	1.2	0.24	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.24	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-122%
17060-07-0	1,2-Dichloroethane-D4	100%		68-124%
2037-26-5	Toluene-D8	93%		77-125%
460-00-4	4-Bromofluorobenzene	108%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-53 10.5-11' BGS
Lab Sample ID: JC38192-11
Matrix: SO - Soil
Method: SW846 8260C SW846 5035
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY

Date Sampled: 03/01/17
Date Received: 03/03/17
Percent Solids: 69.4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135558.D	1	03/07/17	PS	03/03/17 14:00	n/a	V3C6164
Run #2							

	Initial Weight
Run #1	6.1 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	34.2	12	5.9	ug/kg	
71-43-2	Benzene	0.33	0.59	0.14	ug/kg	J
78-93-3	2-Butanone (MEK)	ND	12	2.1	ug/kg	
104-51-8	n-Butylbenzene	ND	2.4	0.18	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.4	0.18	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.4	0.19	ug/kg	
75-15-0	Carbon disulfide	1.3	2.4	0.20	ug/kg	J
56-23-5	Carbon tetrachloride	ND	2.4	0.20	ug/kg	
108-90-7	Chlorobenzene	ND	2.4	0.19	ug/kg	
67-66-3	Chloroform	0.87	2.4	0.28	ug/kg	J
95-50-1	1,2-Dichlorobenzene	ND	1.2	0.20	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.2	0.16	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.2	0.18	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.2	0.22	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.2	0.20	ug/kg	
75-35-4	1,1-Dichloroethene	4.2	1.2	0.18	ug/kg	
156-59-2	cis-1,2-Dichloroethene	224	1.2	0.52	ug/kg	
156-60-5	trans-1,2-Dichloroethene	2.9	1.2	0.19	ug/kg	
123-91-1	1,4-Dioxane	ND	150	56	ug/kg	
100-41-4	Ethylbenzene	ND	1.2	0.18	ug/kg	
98-82-8	Isopropylbenzene	ND	2.4	0.18	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.4	0.29	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.2	0.31	ug/kg	
75-09-2	Methylene chloride	3.2	5.9	1.2	ug/kg	J
91-20-3	Naphthalene	ND	5.9	1.2	ug/kg	
103-65-1	n-Propylbenzene	ND	2.4	0.23	ug/kg	
127-18-4	Tetrachloroethene	11.5	2.4	0.33	ug/kg	
108-88-3	Toluene	0.28	1.2	0.15	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	2.4	0.20	ug/kg	
79-01-6	Trichloroethene	169	1.2	0.22	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	0.41	2.4	0.21	ug/kg	J
108-67-8	1,3,5-Trimethylbenzene	ND	2.4	0.19	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-53 10.5-11' BGS		
Lab Sample ID:	JC38192-11	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	69.4
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	35.1	2.4	0.24	ug/kg	
	m,p-Xylene	ND	1.2	0.26	ug/kg	
95-47-6	o-Xylene	ND	1.2	0.24	ug/kg	
1330-20-7	Xylene (total)	ND	1.2	0.24	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-122%
17060-07-0	1,2-Dichloroethane-D4	99%		68-124%
2037-26-5	Toluene-D8	96%		77-125%
460-00-4	4-Bromofluorobenzene	102%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-53 13' BGS		
Lab Sample ID:	JC38192-12	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	83.5
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135559.D	1	03/07/17	PS	03/03/17 14:00	n/a	V3C6164
Run #2 [a]	E242702.D	1	03/07/17	TDN	03/03/17 14:00	n/a	VE10474

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	6.0 g		
Run #2	10.0 g	10.0 ml	100 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	6.0	10	5.0	ug/kg	J
71-43-2	Benzene	0.53	0.50	0.12	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	2.0	0.15	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.0	0.15	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.0	0.16	ug/kg	
75-15-0	Carbon disulfide	0.23	2.0	0.17	ug/kg	J
56-23-5	Carbon tetrachloride	ND	2.0	0.17	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.16	ug/kg	
67-66-3	Chloroform	ND	2.0	0.24	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.14	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.15	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.0	0.19	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.17	ug/kg	
75-35-4	1,1-Dichloroethene	1.6	1.0	0.15	ug/kg	
156-59-2	cis-1,2-Dichloroethene	2620 [b]	70	31	ug/kg	
156-60-5	trans-1,2-Dichloroethene	3.0	1.0	0.16	ug/kg	
123-91-1	1,4-Dioxane	ND	120	48	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.15	ug/kg	
98-82-8	Isopropylbenzene	ND	2.0	0.15	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.0	0.24	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.26	ug/kg	
75-09-2	Methylene chloride	2.4	5.0	1.0	ug/kg	J
91-20-3	Naphthalene	ND	5.0	1.0	ug/kg	
103-65-1	n-Propylbenzene	ND	2.0	0.20	ug/kg	
127-18-4	Tetrachloroethene	ND	2.0	0.28	ug/kg	
108-88-3	Toluene	ND	1.0	0.12	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.17	ug/kg	
79-01-6	Trichloroethene	3.2	1.0	0.19	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.17	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.16	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-53 13' BGS		
Lab Sample ID:	JC38192-12	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	83.5
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	69.7	2.0	0.20	ug/kg	
	m,p-Xylene	ND	1.0	0.22	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.20	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	103%	70-122%
17060-07-0	1,2-Dichloroethane-D4	100%	106%	68-124%
2037-26-5	Toluene-D8	95%	101%	77-125%
460-00-4	4-Bromofluorobenzene	116%	97%	72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.
(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-53 19-19.5' BGS
Lab Sample ID: JC38192-13
Matrix: SO - Soil
Method: SW846 8260C SW846 5035
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY

Date Sampled: 03/01/17
Date Received: 03/03/17
Percent Solids: 87.2

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135560.D	1	03/07/17	PS	03/03/17 12:00	n/a	V3C6164
Run #2							

	Initial Weight
Run #1	6.7 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	7.4	8.6	4.3	ug/kg	J
71-43-2	Benzene	0.80	0.43	0.10	ug/kg	
78-93-3	2-Butanone (MEK)	ND	8.6	1.5	ug/kg	
104-51-8	n-Butylbenzene	ND	1.7	0.13	ug/kg	
135-98-8	sec-Butylbenzene	ND	1.7	0.13	ug/kg	
98-06-6	tert-Butylbenzene	ND	1.7	0.13	ug/kg	
75-15-0	Carbon disulfide	ND	1.7	0.15	ug/kg	
56-23-5	Carbon tetrachloride	ND	1.7	0.14	ug/kg	
108-90-7	Chlorobenzene	ND	1.7	0.14	ug/kg	
67-66-3	Chloroform	ND	1.7	0.20	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.86	0.15	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.86	0.12	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.86	0.13	ug/kg	
75-34-3	1,1-Dichloroethane	ND	0.86	0.16	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.86	0.15	ug/kg	
75-35-4	1,1-Dichloroethene	ND	0.86	0.13	ug/kg	
156-59-2	cis-1,2-Dichloroethene	17.3	0.86	0.37	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.86	0.14	ug/kg	
123-91-1	1,4-Dioxane	ND	110	41	ug/kg	
100-41-4	Ethylbenzene	ND	0.86	0.13	ug/kg	
98-82-8	Isopropylbenzene	ND	1.7	0.13	ug/kg	
99-87-6	p-Isopropyltoluene	ND	1.7	0.21	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.86	0.23	ug/kg	
75-09-2	Methylene chloride	2.6	4.3	0.86	ug/kg	J
91-20-3	Naphthalene	ND	4.3	0.86	ug/kg	
103-65-1	n-Propylbenzene	ND	1.7	0.17	ug/kg	
127-18-4	Tetrachloroethene	16.4	1.7	0.24	ug/kg	
108-88-3	Toluene	ND	0.86	0.11	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	1.7	0.14	ug/kg	
79-01-6	Trichloroethene	19.1	0.86	0.16	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	1.7	0.15	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	1.7	0.14	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-53 19-19.5' BGS		
Lab Sample ID:	JC38192-13	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	87.2
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	2.0	1.7	0.17	ug/kg	
	m,p-Xylene	ND	0.86	0.19	ug/kg	
95-47-6	o-Xylene	ND	0.86	0.17	ug/kg	
1330-20-7	Xylene (total)	ND	0.86	0.17	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		70-122%
17060-07-0	1,2-Dichloroethane-D4	99%		68-124%
2037-26-5	Toluene-D8	96%		77-125%
460-00-4	4-Bromofluorobenzene	106%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-54 15' BGS		
Lab Sample ID:	JC38192-14	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	80.1
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135570.D	1	03/07/17	PS	03/03/17 12:00	n/a	V3C6164
Run #2 [a]	E242703.D	1	03/07/17	TDN	03/03/17 12:00	n/a	VE10474
Run #3 [a]	E242732.D	1	03/08/17	TDN	03/03/17 12:00	n/a	VE10475

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.5 g		
Run #2	9.6 g	10.0 ml	5.0 ul
Run #3	9.6 g	10.0 ml	100 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	9.0	11	5.7	ug/kg	J
71-43-2	Benzene	0.80	0.57	0.14	ug/kg	
78-93-3	2-Butanone (MEK)	ND	11	2.0	ug/kg	
104-51-8	n-Butylbenzene	ND	2.3	0.17	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.3	0.17	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.3	0.18	ug/kg	
75-15-0	Carbon disulfide	2.4	2.3	0.19	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.3	0.19	ug/kg	
108-90-7	Chlorobenzene	ND	2.3	0.18	ug/kg	
67-66-3	Chloroform	ND	2.3	0.27	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.1	0.19	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.1	0.16	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.1	0.17	ug/kg	
75-34-3	1,1-Dichloroethane	5.4	1.1	0.21	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.1	0.19	ug/kg	
75-35-4	1,1-Dichloroethene	7.4	1.1	0.17	ug/kg	
156-59-2	cis-1,2-Dichloroethene	20800 [b]	1500	680	ug/kg	
156-60-5	trans-1,2-Dichloroethene	16.9	1.1	0.18	ug/kg	
123-91-1	1,4-Dioxane	ND	140	54	ug/kg	
100-41-4	Ethylbenzene	ND	1.1	0.17	ug/kg	
98-82-8	Isopropylbenzene	ND	2.3	0.17	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.3	0.28	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.1	0.30	ug/kg	
75-09-2	Methylene chloride	4.0	5.7	1.1	ug/kg	J
91-20-3	Naphthalene	ND	5.7	1.1	ug/kg	
103-65-1	n-Propylbenzene	ND	2.3	0.22	ug/kg	
127-18-4	Tetrachloroethene	3050 [c]	150	22	ug/kg	
108-88-3	Toluene	6.7	1.1	0.14	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.3	0.19	ug/kg	
79-01-6	Trichloroethene	88500 [b]	1500	290	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-54 15' BGS		
Lab Sample ID:	JC38192-14	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	80.1
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.3	0.20	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.3	0.19	ug/kg	
75-01-4	Vinyl chloride	392 [c]	150	16	ug/kg	
	m,p-Xylene	ND	1.1	0.25	ug/kg	
95-47-6	o-Xylene	ND	1.1	0.23	ug/kg	
1330-20-7	Xylene (total)	ND	1.1	0.23	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	109%	104%	104%	70-122%
17060-07-0	1,2-Dichloroethane-D4	98%	106%	105%	68-124%
2037-26-5	Toluene-D8	104%	100%	100%	77-125%
460-00-4	4-Bromofluorobenzene	143% [d]	98%	97%	72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.
(b) Result is from Run# 2
(c) Result is from Run# 3
(d) Outside control limits due to matrix interference.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-54 16-17' BGS		
Lab Sample ID:	JC38192-15	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	80.0
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	3C135571.D	1	03/07/17	PS	03/03/17 12:00	n/a	V3C6164
Run #2 [a]	E242724.D	1	03/08/17	TDN	03/03/17 12:00	n/a	VE10475
Run #3 [a]	E242731.D	1	03/08/17	TDN	03/03/17 12:00	n/a	VE10475

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	4.9 g		
Run #2	10.1 g	10.0 ml	5.0 ul
Run #3	10.1 g	10.0 ml	100 ul

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	10.0	13	6.4	ug/kg	J
71-43-2	Benzene	0.75	0.64	0.15	ug/kg	
78-93-3	2-Butanone (MEK)	ND	13	2.2	ug/kg	
104-51-8	n-Butylbenzene	ND	2.6	0.19	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.6	0.20	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.6	0.20	ug/kg	
75-15-0	Carbon disulfide	2.4	2.6	0.22	ug/kg	J
56-23-5	Carbon tetrachloride	ND	2.6	0.21	ug/kg	
108-90-7	Chlorobenzene	ND	2.6	0.21	ug/kg	
67-66-3	Chloroform	ND	2.6	0.30	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.3	0.22	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.3	0.17	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.3	0.20	ug/kg	
75-34-3	1,1-Dichloroethane	1.5	1.3	0.24	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.3	0.22	ug/kg	
75-35-4	1,1-Dichloroethene	5.2	1.3	0.20	ug/kg	
156-59-2	cis-1,2-Dichloroethene	7800 [b]	74	33	ug/kg	
156-60-5	trans-1,2-Dichloroethene	11.4	1.3	0.20	ug/kg	
123-91-1	1,4-Dioxane	ND	160	61	ug/kg	
100-41-4	Ethylbenzene	ND	1.3	0.19	ug/kg	
98-82-8	Isopropylbenzene	ND	2.6	0.20	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.6	0.31	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.3	0.34	ug/kg	
75-09-2	Methylene chloride	4.7	6.4	1.3	ug/kg	J
91-20-3	Naphthalene	ND	6.4	1.3	ug/kg	
103-65-1	n-Propylbenzene	ND	2.6	0.25	ug/kg	
127-18-4	Tetrachloroethene	84.8	2.6	0.36	ug/kg	
108-88-3	Toluene	2.6	1.3	0.16	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.6	0.21	ug/kg	
79-01-6	Trichloroethene	28600 [c]	1500	280	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-54 16-17' BGS		
Lab Sample ID:	JC38192-15	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	80.0
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.6	0.22	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.6	0.21	ug/kg	
75-01-4	Vinyl chloride	157	2.6	0.26	ug/kg	
	m,p-Xylene	ND	1.3	0.28	ug/kg	
95-47-6	o-Xylene	ND	1.3	0.26	ug/kg	
1330-20-7	Xylene (total)	ND	1.3	0.26	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 3	Limits
1868-53-7	Dibromofluoromethane	101%	103%	104%	70-122%
17060-07-0	1,2-Dichloroethane-D4	95%	106%	106%	68-124%
2037-26-5	Toluene-D8	99%	101%	100%	77-125%
460-00-4	4-Bromofluorobenzene	115%	97%	97%	72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.
(b) Result is from Run# 3
(c) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-54 19-20' BGS
Lab Sample ID: JC38192-16
Matrix: SO - Soil
Method: SW846 8260C SW846 5035
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY

Date Sampled: 03/01/17
Date Received: 03/03/17
Percent Solids: 88.1

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	V167065.D	1	03/08/17	SY	03/03/17 11:00	n/a	VV7026
Run #2							

	Initial Weight
Run #1	5.6 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	5.9	10	5.1	ug/kg	J
71-43-2	Benzene	1.2	0.51	0.12	ug/kg	
78-93-3	2-Butanone (MEK)	ND	10	1.8	ug/kg	
104-51-8	n-Butylbenzene	ND	2.0	0.15	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.0	0.16	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.0	0.16	ug/kg	
75-15-0	Carbon disulfide	0.26	2.0	0.17	ug/kg	J
56-23-5	Carbon tetrachloride	ND	2.0	0.17	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.16	ug/kg	
67-66-3	Chloroform	ND	2.0	0.24	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.14	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.16	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.0	0.19	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.0	0.17	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.0	0.16	ug/kg	
156-59-2	cis-1,2-Dichloroethene	112	1.0	0.44	ug/kg	
156-60-5	trans-1,2-Dichloroethene	0.57	1.0	0.16	ug/kg	J
123-91-1	1,4-Dioxane	ND	130	48	ug/kg	
100-41-4	Ethylbenzene	ND	1.0	0.15	ug/kg	
98-82-8	Isopropylbenzene	ND	2.0	0.16	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.0	0.25	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.27	ug/kg	
75-09-2	Methylene chloride	3.0	5.1	1.0	ug/kg	J
91-20-3	Naphthalene	ND	5.1	1.0	ug/kg	
103-65-1	n-Propylbenzene	ND	2.0	0.20	ug/kg	
127-18-4	Tetrachloroethene	5.5	2.0	0.28	ug/kg	
108-88-3	Toluene	0.34	1.0	0.13	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.17	ug/kg	
79-01-6	Trichloroethene	40.1	1.0	0.19	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.18	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.17	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-54 19-20' BGS		
Lab Sample ID:	JC38192-16	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	88.1
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	5.5	2.0	0.20	ug/kg	
	m,p-Xylene	ND	1.0	0.22	ug/kg	
95-47-6	o-Xylene	ND	1.0	0.20	ug/kg	
1330-20-7	Xylene (total)	ND	1.0	0.20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-122%
17060-07-0	1,2-Dichloroethane-D4	101%		68-124%
2037-26-5	Toluene-D8	96%		77-125%
460-00-4	4-Bromofluorobenzene	95%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-54 23-23.5' BGS
Lab Sample ID: JC38192-17
Matrix: SO - Soil
Method: SW846 8260C SW846 5035
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY

Date Sampled: 03/01/17
Date Received: 03/03/17
Percent Solids: 84.6

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	E242726.D	1	03/08/17	TDN	03/03/17 11:00	n/a	VE10475
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.7 g	10.0 ml	100 ul
Run #2			

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	700	350	ug/kg	
71-43-2	Benzene	ND	35	8.4	ug/kg	
78-93-3	2-Butanone (MEK)	ND	700	120	ug/kg	
104-51-8	n-Butylbenzene	ND	140	11	ug/kg	
135-98-8	sec-Butylbenzene	ND	140	11	ug/kg	
98-06-6	tert-Butylbenzene	ND	140	11	ug/kg	
75-15-0	Carbon disulfide	ND	140	12	ug/kg	
56-23-5	Carbon tetrachloride	ND	140	12	ug/kg	
108-90-7	Chlorobenzene	ND	140	11	ug/kg	
67-66-3	Chloroform	ND	140	17	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	70	12	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	70	9.6	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	70	11	ug/kg	
75-34-3	1,1-Dichloroethane	ND	70	13	ug/kg	
107-06-2	1,2-Dichloroethane	ND	70	12	ug/kg	
75-35-4	1,1-Dichloroethene	ND	70	11	ug/kg	
156-59-2	cis-1,2-Dichloroethene	56.7	70	31	ug/kg	J
156-60-5	trans-1,2-Dichloroethene	ND	70	11	ug/kg	
123-91-1	1,4-Dioxane	ND	8800	3300	ug/kg	
100-41-4	Ethylbenzene	ND	70	10	ug/kg	
98-82-8	Isopropylbenzene	ND	140	11	ug/kg	
99-87-6	p-Isopropyltoluene	ND	140	17	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	70	19	ug/kg	
75-09-2	Methylene chloride	ND	350	70	ug/kg	
91-20-3	Naphthalene	ND	350	70	ug/kg	
103-65-1	n-Propylbenzene	ND	140	14	ug/kg	
127-18-4	Tetrachloroethene	2960	140	20	ug/kg	
108-88-3	Toluene	ND	70	8.8	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	140	12	ug/kg	
79-01-6	Trichloroethene	9230	70	13	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	140	12	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	140	12	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-54 23-23.5' BGS		
Lab Sample ID:	JC38192-17	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	84.6
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	140	14	ug/kg	
	m,p-Xylene	ND	70	15	ug/kg	
95-47-6	o-Xylene	ND	70	14	ug/kg	
1330-20-7	Xylene (total)	ND	70	14	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-122%
17060-07-0	1,2-Dichloroethane-D4	104%		68-124%
2037-26-5	Toluene-D8	98%		77-125%
460-00-4	4-Bromofluorobenzene	97%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-54 12-13' BGS
Lab Sample ID: JC38192-18
Matrix: SO - Soil
Method: SW846 8260C SW846 5035
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY

Date Sampled: 03/01/17
Date Received: 03/03/17
Percent Solids: 74.4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	X170635.D	1	03/08/17	TP	03/03/17 11:00	n/a	VX7254
Run #2							

	Initial Weight
Run #1	4.9 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	91.7	14	6.9	ug/kg	
71-43-2	Benzene	2.3	0.69	0.16	ug/kg	
78-93-3	2-Butanone (MEK)	16.4	14	2.4	ug/kg	
104-51-8	n-Butylbenzene	0.85	2.7	0.21	ug/kg	J
135-98-8	sec-Butylbenzene	0.80	2.7	0.21	ug/kg	J
98-06-6	tert-Butylbenzene	ND	2.7	0.22	ug/kg	
75-15-0	Carbon disulfide	6.4	2.7	0.23	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.7	0.23	ug/kg	
108-90-7	Chlorobenzene	ND	2.7	0.22	ug/kg	
67-66-3	Chloroform	ND	2.7	0.33	ug/kg	
95-50-1	1,2-Dichlorobenzene	1.1	1.4	0.23	ug/kg	J
541-73-1	1,3-Dichlorobenzene	ND	1.4	0.19	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.4	0.21	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.4	0.26	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.4	0.23	ug/kg	
75-35-4	1,1-Dichloroethene	1.5	1.4	0.21	ug/kg	
156-59-2	cis-1,2-Dichloroethene	213	1.4	0.60	ug/kg	
156-60-5	trans-1,2-Dichloroethene	3.5	1.4	0.22	ug/kg	
123-91-1	1,4-Dioxane	ND	170	66	ug/kg	
100-41-4	Ethylbenzene	0.79	1.4	0.20	ug/kg	J
98-82-8	Isopropylbenzene	0.35	2.7	0.21	ug/kg	J
99-87-6	p-Isopropyltoluene	1.1	2.7	0.33	ug/kg	J
1634-04-4	Methyl Tert Butyl Ether	ND	1.4	0.36	ug/kg	
75-09-2	Methylene chloride	2.8	6.9	1.4	ug/kg	J
91-20-3	Naphthalene	2.1	6.9	1.4	ug/kg	J
103-65-1	n-Propylbenzene	0.72	2.7	0.27	ug/kg	J
127-18-4	Tetrachloroethene	3.5	2.7	0.39	ug/kg	
108-88-3	Toluene	3.0	1.4	0.17	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.7	0.23	ug/kg	
79-01-6	Trichloroethene	93.4	1.4	0.26	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	7.5	2.7	0.24	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	3.0	2.7	0.23	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-54 12-13' BGS		
Lab Sample ID:	JC38192-18	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	74.4
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	10.6	2.7	0.28	ug/kg	
	m,p-Xylene	2.5	1.4	0.30	ug/kg	
95-47-6	o-Xylene	1.4	1.4	0.28	ug/kg	
1330-20-7	Xylene (total)	3.9	1.4	0.28	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		70-122%
17060-07-0	1,2-Dichloroethane-D4	108%		68-124%
2037-26-5	Toluene-D8	102%		77-125%
460-00-4	4-Bromofluorobenzene	109%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-54 14-15' BGS
Lab Sample ID: JC38192-19
Matrix: SO - Soil
Method: SW846 8260C SW846 5035
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY

Date Sampled: 03/01/17
Date Received: 03/03/17
Percent Solids: 72.3

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	E242730.D	1	03/08/17	TDN	03/03/17 11:00	n/a	VE10475
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.2 g	10.0 ml	100 ul
Run #2			

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	940	470	ug/kg	
71-43-2	Benzene	ND	47	11	ug/kg	
78-93-3	2-Butanone (MEK)	ND	940	170	ug/kg	
104-51-8	n-Butylbenzene	ND	190	14	ug/kg	
135-98-8	sec-Butylbenzene	ND	190	14	ug/kg	
98-06-6	tert-Butylbenzene	ND	190	15	ug/kg	
75-15-0	Carbon disulfide	ND	190	16	ug/kg	
56-23-5	Carbon tetrachloride	ND	190	16	ug/kg	
108-90-7	Chlorobenzene	ND	190	15	ug/kg	
67-66-3	Chloroform	ND	190	22	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	94	16	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	94	13	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	94	14	ug/kg	
75-34-3	1,1-Dichloroethane	ND	94	18	ug/kg	
107-06-2	1,2-Dichloroethane	ND	94	16	ug/kg	
75-35-4	1,1-Dichloroethene	ND	94	14	ug/kg	
156-59-2	cis-1,2-Dichloroethene	4380	94	41	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	94	15	ug/kg	
123-91-1	1,4-Dioxane	ND	12000	4500	ug/kg	
100-41-4	Ethylbenzene	ND	94	14	ug/kg	
98-82-8	Isopropylbenzene	ND	190	15	ug/kg	
99-87-6	p-Isopropyltoluene	ND	190	23	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	94	25	ug/kg	
75-09-2	Methylene chloride	ND	470	94	ug/kg	
91-20-3	Naphthalene	ND	470	94	ug/kg	
103-65-1	n-Propylbenzene	ND	190	19	ug/kg	
127-18-4	Tetrachloroethene	ND	190	27	ug/kg	
108-88-3	Toluene	ND	94	12	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	190	16	ug/kg	
79-01-6	Trichloroethene	81.8	94	18	ug/kg	J
95-63-6	1,2,4-Trimethylbenzene	ND	190	16	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	190	16	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-54 14-15' BGS		
Lab Sample ID:	JC38192-19	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	72.3
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	647	190	19	ug/kg	
	m,p-Xylene	ND	94	21	ug/kg	
95-47-6	o-Xylene	ND	94	19	ug/kg	
1330-20-7	Xylene (total)	ND	94	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-122%
17060-07-0	1,2-Dichloroethane-D4	107%		68-124%
2037-26-5	Toluene-D8	99%		77-125%
460-00-4	4-Bromofluorobenzene	96%		72-130%

(a) Sample prepared from intact soil. Diluted due to high concentration of target compound.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-55 21.5-22.5' BGS
Lab Sample ID: JC38192-20
Matrix: SO - Soil
Method: SW846 8260C SW846 5035
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY

Date Sampled: 03/01/17
Date Received: 03/03/17
Percent Solids: 80.1

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	X170638.D	1	03/08/17	TP	03/03/17 11:00	n/a	VX7254
Run #2							

	Initial Weight
Run #1	4.8 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	13	6.5	ug/kg	
71-43-2	Benzene	ND	0.65	0.16	ug/kg	
78-93-3	2-Butanone (MEK)	ND	13	2.3	ug/kg	
104-51-8	n-Butylbenzene	ND	2.6	0.20	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.6	0.20	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.6	0.20	ug/kg	
75-15-0	Carbon disulfide	ND	2.6	0.22	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.6	0.22	ug/kg	
108-90-7	Chlorobenzene	ND	2.6	0.21	ug/kg	
67-66-3	Chloroform	ND	2.6	0.31	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	1.3	0.22	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	1.3	0.18	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	1.3	0.20	ug/kg	
75-34-3	1,1-Dichloroethane	ND	1.3	0.24	ug/kg	
107-06-2	1,2-Dichloroethane	ND	1.3	0.22	ug/kg	
75-35-4	1,1-Dichloroethene	ND	1.3	0.20	ug/kg	
156-59-2	cis-1,2-Dichloroethene	1.2	1.3	0.57	ug/kg	J
156-60-5	trans-1,2-Dichloroethene	ND	1.3	0.21	ug/kg	
123-91-1	1,4-Dioxane	ND	160	62	ug/kg	
100-41-4	Ethylbenzene	ND	1.3	0.19	ug/kg	
98-82-8	Isopropylbenzene	ND	2.6	0.20	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.6	0.32	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	1.3	0.34	ug/kg	
75-09-2	Methylene chloride	2.7	6.5	1.3	ug/kg	J
91-20-3	Naphthalene	ND	6.5	1.3	ug/kg	
103-65-1	n-Propylbenzene	ND	2.6	0.26	ug/kg	
127-18-4	Tetrachloroethene	0.99	2.6	0.37	ug/kg	J
108-88-3	Toluene	ND	1.3	0.16	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	2.6	0.22	ug/kg	
79-01-6	Trichloroethene	ND	1.3	0.25	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	2.6	0.23	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.6	0.21	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-55 21.5-22.5' BGS		
Lab Sample ID:	JC38192-20	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	80.1
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	0.66	2.6	0.26	ug/kg	J
	m,p-Xylene	ND	1.3	0.28	ug/kg	
95-47-6	o-Xylene	ND	1.3	0.26	ug/kg	
1330-20-7	Xylene (total)	ND	1.3	0.26	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		70-122%
17060-07-0	1,2-Dichloroethane-D4	109%		68-124%
2037-26-5	Toluene-D8	107%		77-125%
460-00-4	4-Bromofluorobenzene	110%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: B-56 21.5-22.5' BGS
Lab Sample ID: JC38192-21
Matrix: SO - Soil
Method: SW846 8260C SW846 5035
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY

Date Sampled: 03/01/17
Date Received: 03/03/17
Percent Solids: 88.4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	X170639.D	1	03/08/17	TP	03/03/17 11:00	n/a	VX7254
Run #2							

	Initial Weight
Run #1	5.8 g
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	9.8	4.9	ug/kg	
71-43-2	Benzene	0.56	0.49	0.12	ug/kg	
78-93-3	2-Butanone (MEK)	ND	9.8	1.7	ug/kg	
104-51-8	n-Butylbenzene	ND	2.0	0.15	ug/kg	
135-98-8	sec-Butylbenzene	ND	2.0	0.15	ug/kg	
98-06-6	tert-Butylbenzene	ND	2.0	0.15	ug/kg	
75-15-0	Carbon disulfide	ND	2.0	0.17	ug/kg	
56-23-5	Carbon tetrachloride	ND	2.0	0.16	ug/kg	
108-90-7	Chlorobenzene	ND	2.0	0.16	ug/kg	
67-66-3	Chloroform	ND	2.0	0.23	ug/kg	
95-50-1	1,2-Dichlorobenzene	ND	0.98	0.17	ug/kg	
541-73-1	1,3-Dichlorobenzene	ND	0.98	0.13	ug/kg	
106-46-7	1,4-Dichlorobenzene	ND	0.98	0.15	ug/kg	
75-34-3	1,1-Dichloroethane	ND	0.98	0.18	ug/kg	
107-06-2	1,2-Dichloroethane	ND	0.98	0.17	ug/kg	
75-35-4	1,1-Dichloroethene	ND	0.98	0.15	ug/kg	
156-59-2	cis-1,2-Dichloroethene	3.0	0.98	0.43	ug/kg	
156-60-5	trans-1,2-Dichloroethene	ND	0.98	0.15	ug/kg	
123-91-1	1,4-Dioxane	ND	120	47	ug/kg	
100-41-4	Ethylbenzene	ND	0.98	0.15	ug/kg	
98-82-8	Isopropylbenzene	ND	2.0	0.15	ug/kg	
99-87-6	p-Isopropyltoluene	ND	2.0	0.24	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	0.98	0.26	ug/kg	
75-09-2	Methylene chloride	2.3	4.9	0.98	ug/kg	J
91-20-3	Naphthalene	ND	4.9	0.98	ug/kg	
103-65-1	n-Propylbenzene	ND	2.0	0.19	ug/kg	
127-18-4	Tetrachloroethene	0.52	2.0	0.27	ug/kg	J
108-88-3	Toluene	0.32	0.98	0.12	ug/kg	J
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.16	ug/kg	
79-01-6	Trichloroethene	1.4	0.98	0.19	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.17	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.16	ug/kg	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	B-56 21.5-22.5' BGS		
Lab Sample ID:	JC38192-21	**Date Sampled:**	03/01/17
Matrix:	SO - Soil	**Date Received:**	03/03/17
Method:	SW846 8260C SW846 5035	**Percent Solids:**	88.4
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	0.71	2.0	0.20	ug/kg	J
	m,p-Xylene	ND	0.98	0.21	ug/kg	
95-47-6	o-Xylene	ND	0.98	0.20	ug/kg	
1330-20-7	Xylene (total)	ND	0.98	0.20	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		70-122%
17060-07-0	1,2-Dichloroethane-D4	106%		68-124%
2037-26-5	Toluene-D8	107%		77-125%
460-00-4	4-Bromofluorobenzene	106%		72-130%

(a) Sample was not collected per 5035A specifications. Sample preserved from intact soil by laboratory.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SO SW

SGS ACCUTEST

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE _1_ OF _2_ PW

FED-EX Tracking # 6780 9741 7106 | Bottle Order Control #
SGS Accutest Quote # | SGS Accutest Job # JC38192

Client / Reporting Information

Company Name: Plumley Engineering
Street Address: 8232 Loop Road
City: Baldwinsville, State: NY, Zip: 13027
Project Contact: Frank Karboski, E-mail: fkarboski@plur
Phone #: 315-638-8587, Fax #:
Sampler(s) Name(s): Matt Martin/Frank Karboski, Phone #:

Project Information

Project Name: Knife Plant
Street: Kenwood Ave
City: Sherrill, State: NY
Project #: 2015025
Client Purchase Order #: 2015025
Project Manager: Frank Karboski

Billing Information (if different from Report to)

Company Name:
Street Address:
City, State, Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

8260 TCL List

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	8260 TCL List	LAB USE ONLY
1	MW-5D 7.5-8' bgs		3/1/17	8:00	MM/FK	SO	1					x				x	
2	MW-5D 18.5-19.5' bgs		3/1/17	8:15	MM/FK	SO	1					x				x	818
3	MW-5D 19.5-20' bgs		3/1/17	8:20	MM/FK	SO	1					x				x	1404
4	B-51 8.5-9.5' bgs		3/1/17	9:00	MM/FK	SO	1					x				x	4059
5	B-51 17.5-18.5' bgs		3/1/17	9:10	MM/FK	SO	1					x				x	
6	B-51 19-20' bgs		3/1/17	9:20	MM/FK	SO	1					x				x	
7	B-52 16.5-17.5' bgs		3/1/17	9:50	MM/FK	SO	1					x				x	
8	B-52 19.5-20' bgs		3/1/17	10:00	MM/FK	SO	1					x				x	
9	B-52 18-19' bgs		3/1/17	10:05	MM/FK	SO	1					x				x	
10	B-52 22.5' bgs		3/1/17	10:10	MM/FK	SO	1					x				x	
11	B-53 10.5-11' bgs		3/1/17	10:45	MM/FK	SO	1					x				x	
12	B-53 13' bgs		3/1/17	10:50	MM/FK	SO	1					x				x	

INITIAL ASESSMENT JBO
LABEL VERIFICATION

Turnaround Time (Business days)

- [ ] Std. 10 Business Days
- [x] 5 Day Standard
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Emergency & Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date: Freeman

Data Deliverable Information

- [x] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

ACCUTEST SYRACUSE, NY

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:
1		3/2/17 15:30	1
2	Relinquished By:	Date Time:	Received By:
	15:00	3/2/17	2 Fedex
3	Relinquished by Sampler: Fedex	Date Time: 3/3/17 0940	Received By: 3
4	Relinquished By:	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5

Custody Seal # Client | [x] Intact [ ] Not intact | Preserved where applicable [ ] | On Ice [x] | Cooler Temp. 2.0°C IR

SGS ACCUTEST

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
SGS Accutest Quote #	SGS Accutest Job # JC38192

Client / Reporting Information

Company Name: Plumley Engineering
Street Address: 8232 Loop Road
City / State / Zip: Baldwinsville, NY 13027
Project Contact / E-mail: Frank Karboski fkarboski@plur
Phone # / Fax #: 315-638-8587
Sampler(s) Name(s) / Phone #: Matt Martin/Frank Karboski

Project Information

Project Name: Knife Plant
Street: Kenwood Ave
City / State: Sherrill NY
Project #: 2015025
Client Purchase Order #: 2015025
Project Manager: Frank Karboski

Billing Information (if different from Report to)

Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	8260 TCL List	LAB USE ONLY
13	B-53 19-19.5' bgs		3/1/17	11:00	MM/FK	SO	1					x				X	
14	B-54 15' bgs		3/1/17	11:25	MM/FK	SO	1					x				X	
15	B-54 16-17' bgs		3/1/17	11:35	MM/FK	SO	1					x				X	
16	B-54 19-20' bgs		3/1/17	11:45	MM/FK	SO	1					x				X	
17	B-54 23-23.5' bgs		3/1/17	12:00	MM/FK	SO	1					x				X	
18	B-54 12-13' bgs		3/1/17	12:05	MM/FK	SO	1					x				X	
19	B-55 14-15' bgs		3/1/17	12:30	MM/FK	SO	1					x				X	
20	B-55 21.5-22.5' bgs		3/1/17	12:40	MM/FK	SO	1					x				X	
21	B-56 21.5-22.5' bgs		3/1/17	13:05	MM/FK	SO	1					x				X	

Turnaround Time (Business days)

- [ ] Std. 10 Business Days
- [x] 5 Day Standard
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other _____

Emergency & Rush T/A data available VIA Lablink

Approved By (SGS Accutest PM): / Date: Freeman

Data Deliverable Information

- [x] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format _____
- [ ] Other _____

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

ACCUTEST SYRACUSE, NY

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		3/1/17 13:3	1	2	3/2/17 15:00	2 FEDEX
3	FEDEX	3/3/17 0943	3	4		4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Intact / Not Intact	Preserved where applicable / On Ice / Cooler Temp.

SGS Accutest Sample Receipt Summary

Job Number: JC38192 **Client:** Plumley Engineering **Project:** Knife Plant

Date / Time Received: 3/3/2017 9:40:00 AM **Delivery Method:** FedEx **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.0);

Cooler Temps (Corrected) °C: Cooler 1: (3.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☐		☑	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☐		☑
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Soil volatiles were not collected per 5035 specifications. Lab to prepare vials from intact volume.
Samples -1 to -6 received out of hold.
Samples -7 through -21 received with minimal holding time remaining. Lab to verify which samples made it within 48 hours.
Client has asked that we proceed as noted for any sample not making hold times.

SM089-02
Rev. Date 12/1/16

Responded to by: Michelle

Response Date: 3/3

Response:

please proceed as noted

JC38192: Chain of Custody
Page 4 of 4

e-Hardcopy 2.0
Automated Report

Technical Report for

Plumley Environmental Engineers

Oneida Knife, Kenwood Avenue, Sherrill, NY

2015025

SGS Accutest Job Number: JC38200

Sampling Date: 03/01/17

Report to:

Plumley Engineering, P.C.
8232 Loop Road
Baldwinsville, NY 13027
fkarboski@plumleyeng.com

ATTN: Frank Karboski

Total number of pages in report: **14**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Robert Soll 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (L-A-B L2248)

Sections: 1 2 3 4

Table of Contents

Sample Summary

Plumley Environmental Engineers

Job No: JC38200

Oneida Knife, Kenwood Avenue, Sherrill, NY
Project No: 2015025

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JC38200-1	03/01/17	14:50	MM	03/03/17	AQ	Ground Water	TW-3R
JC38200-2	03/01/17	14:40	MM	03/03/17	AQ	Ground Water	TW-2R
JC38200-3	03/01/17	14:30	MM	03/03/17	AQ	Ground Water	MW-5D

Summary of Hits

Job Number: JC38200
Account: Plumley Environmental Engineers
Project: Oneida Knife, Kenwood Avenue, Sherrill, NY
Collected: 03/01/17

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JC38200-1	**TW-3R**					
cis-1,2-Dichloroethene		25.3	1.0	0.31	ug/l	SW846 8260C
Tetrachloroethene		0.93 J	1.0	0.23	ug/l	SW846 8260C
Trichloroethene		9.8	1.0	0.26	ug/l	SW846 8260C
Vinyl chloride		7.1	1.0	0.33	ug/l	SW846 8260C
JC38200-2	**TW-2R**					
1,1-Dichloroethene		21.8	10	2.0	ug/l	SW846 8260C
cis-1,2-Dichloroethene		2740	100	31	ug/l	SW846 8260C
trans-1,2-Dichloroethene		23.1	10	3.6	ug/l	SW846 8260C
Vinyl chloride		286	10	3.3	ug/l	SW846 8260C
JC38200-3	**MW-5D**					
cis-1,2-Dichloroethene		61.3	5.0	1.5	ug/l	SW846 8260C
Tetrachloroethene		921	50	12	ug/l	SW846 8260C
Trichloroethene		53.9	5.0	1.3	ug/l	SW846 8260C
Vinyl chloride		12.0	5.0	1.6	ug/l	SW846 8260C

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	TW-3R		
Lab Sample ID:	JC38200-1	**Date Sampled:**	03/01/17
Matrix:	AQ - Ground Water	**Date Received:**	03/03/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A176688.D	1	03/07/17	JC	n/a	n/a	V2A7480
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	0.50	0.14	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.9	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.28	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	1.0	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	0.28	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.33	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.54	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.17	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.23	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.19	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.21	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.21	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.39	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.20	ug/l	
156-59-2	cis-1,2-Dichloroethene	25.3	1.0	0.31	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.36	ug/l	
123-91-1	1,4-Dioxane	ND	130	32	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.16	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	1.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.34	ug/l	
75-09-2	Methylene chloride	ND	2.0	1.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.17	ug/l	
127-18-4	Tetrachloroethene	0.93	1.0	0.23	ug/l	J
108-88-3	Toluene	ND	1.0	0.23	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.22	ug/l	
79-01-6	Trichloroethene	9.8	1.0	0.26	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.26	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.32	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-3R		
Lab Sample ID:	JC38200-1	**Date Sampled:**	03/01/17
Matrix:	AQ - Ground Water	**Date Received:**	03/03/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	7.1	1.0	0.33	ug/l	
	m,p-Xylene	ND	1.0	0.42	ug/l	
95-47-6	o-Xylene	ND	1.0	0.21	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.21	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		76-120%
17060-07-0	1,2-Dichloroethane-D4	93%		73-122%
2037-26-5	Toluene-D8	98%		84-119%
460-00-4	4-Bromofluorobenzene	96%		78-117%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-2R		
Lab Sample ID:	JC38200-2	**Date Sampled:**	03/01/17
Matrix:	AQ - Ground Water	**Date Received:**	03/03/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A176686.D	10	03/07/17	JC	n/a	n/a	V2A7480
Run #2	2A176687.D	100	03/07/17	JC	n/a	n/a	V2A7480

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	100	50	ug/l	
71-43-2	Benzene	ND	5.0	1.4	ug/l	
78-93-3	2-Butanone (MEK)	ND	100	19	ug/l	
104-51-8	n-Butylbenzene	ND	20	2.8	ug/l	
135-98-8	sec-Butylbenzene	ND	20	10	ug/l	
98-06-6	tert-Butylbenzene	ND	20	2.8	ug/l	
75-15-0	Carbon disulfide	ND	20	3.3	ug/l	
56-23-5	Carbon tetrachloride	ND	10	5.4	ug/l	
108-90-7	Chlorobenzene	ND	10	1.7	ug/l	
67-66-3	Chloroform	ND	10	2.3	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	10	2.3	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	10	1.9	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	2.1	ug/l	
75-34-3	1,1-Dichloroethane	ND	10	2.1	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	3.9	ug/l	
75-35-4	1,1-Dichloroethene	21.8	10	2.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	2740 [a]	100	31	ug/l	
156-60-5	trans-1,2-Dichloroethene	23.1	10	3.6	ug/l	
123-91-1	1,4-Dioxane	ND	1300	320	ug/l	
100-41-4	Ethylbenzene	ND	10	2.0	ug/l	
98-82-8	Isopropylbenzene	ND	10	1.6	ug/l	
99-87-6	p-Isopropyltoluene	ND	20	10	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	3.4	ug/l	
75-09-2	Methylene chloride	ND	20	10	ug/l	
91-20-3	Naphthalene	ND	50	10	ug/l	
103-65-1	n-Propylbenzene	ND	20	1.7	ug/l	
127-18-4	Tetrachloroethene	ND	10	2.3	ug/l	
108-88-3	Toluene	ND	10	2.3	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	10	2.2	ug/l	
79-01-6	Trichloroethene	ND	10	2.6	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	20	2.6	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	20	3.2	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	TW-2R		
Lab Sample ID:	JC38200-2	**Date Sampled:**	03/01/17
Matrix:	AQ - Ground Water	**Date Received:**	03/03/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	286	10	3.3	ug/l	
	m,p-Xylene	ND	10	4.2	ug/l	
95-47-6	o-Xylene	ND	10	2.1	ug/l	
1330-20-7	Xylene (total)	ND	10	2.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%	97%	76-120%
17060-07-0	1,2-Dichloroethane-D4	95%	94%	73-122%
2037-26-5	Toluene-D8	98%	99%	84-119%
460-00-4	4-Bromofluorobenzene	97%	98%	78-117%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5D		
Lab Sample ID:	JC38200-3	**Date Sampled:**	03/01/17
Matrix:	AQ - Ground Water	**Date Received:**	03/03/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2A176677.D	5	03/06/17	JC	n/a	n/a	V2A7480
Run #2	2A176675.D	50	03/06/17	JC	n/a	n/a	V2A7480

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	25	ug/l	
71-43-2	Benzene	ND	2.5	0.70	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	9.5	ug/l	
104-51-8	n-Butylbenzene	ND	10	1.4	ug/l	
135-98-8	sec-Butylbenzene	ND	10	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	10	1.4	ug/l	
75-15-0	Carbon disulfide	ND	10	1.7	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	2.7	ug/l	
108-90-7	Chlorobenzene	ND	5.0	0.87	ug/l	
67-66-3	Chloroform	ND	5.0	1.1	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.2	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	0.97	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.1	ug/l	
75-34-3	1,1-Dichloroethane	ND	5.0	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	2.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	61.3	5.0	1.5	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	5.0	1.8	ug/l	
123-91-1	1,4-Dioxane	ND	630	160	ug/l	
100-41-4	Ethylbenzene	ND	5.0	0.98	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	0.79	ug/l	
99-87-6	p-Isopropyltoluene	ND	10	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.7	ug/l	
75-09-2	Methylene chloride	ND	10	5.0	ug/l	
91-20-3	Naphthalene	ND	25	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	10	0.86	ug/l	
127-18-4	Tetrachloroethene	921 [a]	50	12	ug/l	
108-88-3	Toluene	ND	5.0	1.1	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	5.0	1.1	ug/l	
79-01-6	Trichloroethene	53.9	5.0	1.3	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	10	1.3	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	10	1.6	ug/l	

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-5D		
Lab Sample ID:	JC38200-3	**Date Sampled:**	03/01/17
Matrix:	AQ - Ground Water	**Date Received:**	03/03/17
Method:	SW846 8260C	**Percent Solids:**	n/a
Project:	Oneida Knife, Kenwood Avenue, Sherrill, NY		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	12.0	5.0	1.6	ug/l	
	m,p-Xylene	ND	5.0	2.1	ug/l	
95-47-6	o-Xylene	ND	5.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	5.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%	98%	76-120%
17060-07-0	1,2-Dichloroethane-D4	92%	93%	73-122%
2037-26-5	Toluene-D8	98%	98%	84-119%
460-00-4	4-Bromofluorobenzene	99%	98%	78-117%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
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B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

SGS ACCUTEST

CHAIN OF CUSTODY

SGS Accutest - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE _1_ OF _1_

FED-EX Tracking # 6780 9741 7106 | Bottle Order Control # | SGS Accutest Quote # | SGS Accutest Job # JC38200

Client / Reporting Information

Company Name: Plumley Engineering
Street Address: 8232 Loop Road
City: Baldwinsville, NY State: Zip: 13027
Project Contact: Frank Karboski E-mail: fkarboski@plur
Phone #: 315-638-8587 Fax #:
Sampler(s) Name(s): Matt Martin Phone #:

Project Information

Project Name: Knife Plant
Street: Kenwood Ave
City: Sherrill State: NY
Project #: 2015025
Client Purchase Order #: 2015025
Project Manager: Frank Karboski

Billing Information (if different from Report to)
Company Name:
Street Address:
City State Zip:
Attention:

Requested Analysis (see TEST CODE sheet)

SGS Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	8260 TCL List	LAB USE ONLY
1	TW-3R		3/1/17	2:50	MM	GW	3	x								x	
2	TW-2R		3/1/17	2:40	MM	GW	3	x								x	V210
3	MW-5D		3/1/17	2:30	MM	GW	3	x								x	

INITIAL ASESSMENT JVA-D
LABEL VERIFICATION AM

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

Turnaround Time (Business days)

- [ ] Std. 10 Business Days
- [x] 5 Day Standard
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Approved By (SGS Accutest PM): / Date: Freeman

Emergency & Rush T/A data available VIA Lablink

Data Deliverable Information

- [x] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

Comments / Special Instructions

ACCUTEST
SYRACUSE-SC

Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler	Date Time	Received By	Relinquished By	Date Time	Received By
1		3/2/17 13:30		3/2/17 13:30	15:00	3/2/17
2						
3		3/3/17 0940				
4						
5						

Custody Seal # Intact Not intact Preserved where applicable On Ice Cooler Temp. 2.0°C IP

JC38200: Chain of Custody
Page 1 of 2

SGS Accutest Sample Receipt Summary

Job Number: JC38200 **Client:** _____ **Project:** _____

Date / Time Received: 3/3/2017 9:40:00 AM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C: Cooler 1: (2.0);

Cooler Temps (Corrected) °C: Cooler 1: (3.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☑	☐
2. Trip Blank listed on COC:	☐		☑	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

SM089-02
Rev. Date 12/1/16

JC38200: Chain of Custody
Page 2 of 2

PRODUCT INFORMATION

Groundwater Remediation, Water Pollution Technologies

Kerfoot Technologies, Inc. has a mission: to develop environmental tools and technologies that speed up, simplify, and reduce the cost of groundwater remediation.

Kerfoot Technologies, Inc. is an acknowledged leader in groundwater remediation and characterization equipment. Since 1978, KTI has invented and manufactured innovative instruments and methods to obtain fast, effective, accurate, and efficient results. The product line includes its microbubble air/ozone chemical oxidation systems, heat-pulse groundwater flowmeters (GeoFlo®), and soil gas push-probe samplers (Macho and Hefty Systems).

KTI's processes and systems have been used on hundreds of remediation sites in the United States, Canada, and Europe. All products and processes obtain results with minimal site disruption, low profile, and in the case of the chemical oxidation technology, rapid site closure.

Kerfoot Technologies' patented groundwater remediation equipment and processes evolved from the original air sparge systems, into the current chemical oxidation systems using ozone (C-Sparger®) and ozone/peroxide (Perozone®) with air, and further to Nanozox™, with the advantages of nanobubble chemistry. The pulsed injection of gaseous microbubbles of ozone was the technical breakthrough to make the process extremely effective in the remediation of hydrocarbon and chlorinated contaminants. The development of laminar Spargepoints® to allow liquid coatings on the micro- to nanobubbles further enhanced the effectiveness of reaction.

Equally important as the technology we create is the quality of our staff and service support. If there is a question of treatability, we have an in-house laboratory to perform bench-scale tests. We will assist with spargewell placement design and in the set-up and use of the equipment. Once the equipment is in place, our professionals are ready to help in the evaluation and trouble-shooting of performance and equipment.

From initial design to closure, Kerfoot Technologies supports its customers.

- Comprehensive review of site characterization data, including direct groundwater flow measurement equipment, for both rental and purchase.
- In-house treatability bench-scale testing.
- Theoretical and empirical time to treat models.
- Remediation system design.
- Remediation system setup, startup, training, diagnostics, and performance evaluation.

Perozone

PEROZONE® "GIVING BUBBLE POWER A BIG CLEANUP BOOST"

KTI's Perozone® system creates peroxide-coated microbubbles using our unique injection process to greatly enhance destruction of targeted contaminants. Adding a small liquid injection panel to our C-Sparger® ozone remediation system enables co-injection of peroxide through our Laminar Spargepoints®.

The secret of success is in the creation of the hydroperoxide-coated ozonated microbubbles by our Laminar Spargepoints®, followed by the pressure-pulsed injection of these minute bubbles through the Laminar Spargepoints® into a wide variety of formation pore spaces ranging from sands to silty clays to low-permeable fractured bedrock.

By using low concentrations of peroxide coupled with low injection rates (mL/min, not gpm), an efficient chemical ratio of the peroxide-coated microbubble of ozonated gas is created. The enormously increased surface area afforded by microbubbles results in significantly more reactions by more contact with the contaminants of concern, inherently rapidly breaking down long-chain hydrocarbons (weathered gas and oil), aromatic ring compounds, halogenated alkenes and alkanes, certain ethers, as well as a host of other contaminants such as PAHs, PCBs, pesticides such as chlordane and heptachlor, and 1,4 dioxane.

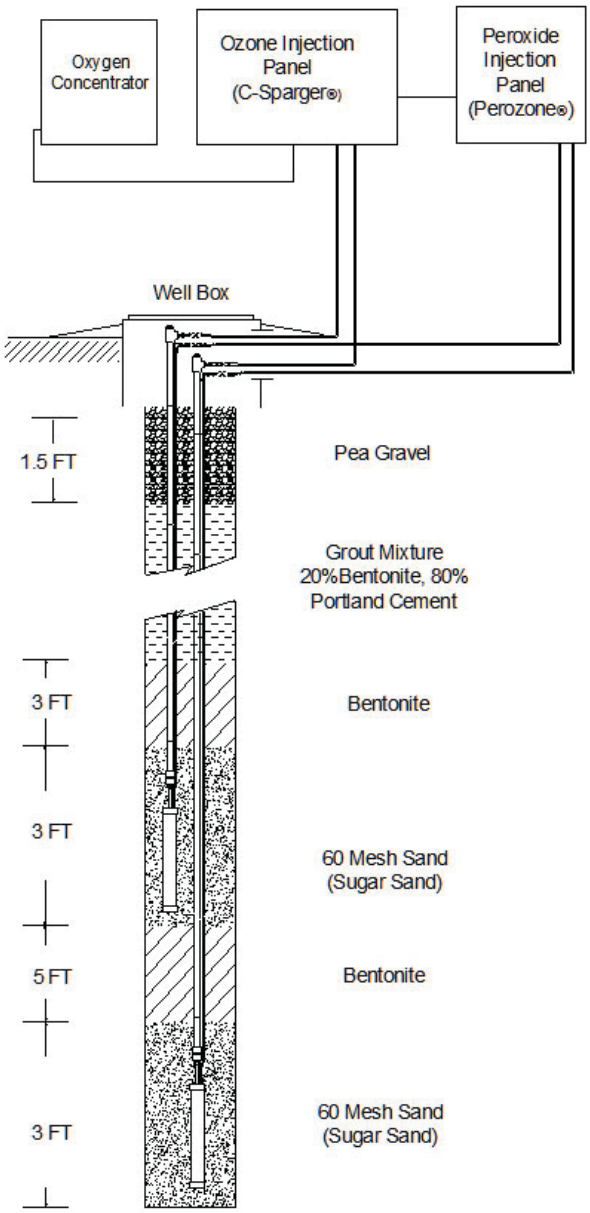
From bench-scale to pilot-scale to full-scale operations, KTI is empirically and theoretically the expert in efficient system design and operation, matching system capacity to site needs. Impressive decrease of contaminant mass and concentration in soil and water may be seen in weeks! The end result is a clean site with beneficially increased oxygen remaining after the decomposition process.

Advantages

- Low capital equipment/operating costs
- Ease of installation and setup
- Requires standard 120VAC household current
- Minimal installation site disturbance
- Variety of systems: wall-mount, modular, trailer
- Ozone/peroxide matched to site requirement (from 0.5-8.0 lbs/day ozone)
- Hydroxyl radical formation dramatically boosts reaction potential
- Pulsed microbubble oxidant injection ensures maximum contaminant contact
- Clean in-situ destruction of contaminants – no hazardous byproducts
- No vapor control necessary Does not form hexavalent chromium

Example System:

MODEL 8100 (WALL-MOUNT)
PEROZONE® SPECIFICATIONS
¾ or 1 HP (2-5 SCFM) continuous service compressor
8-16 gr/hr (0.42-0.84 lbs/day) ozone output
0-40 mL/min hydrogen peroxide injection
Delivery pressure up to 75 psig
6-24 sparging zones
PSA oxygen concentrator
PLC controlled
3/8" – ½" carrier tubing
Panel dimensions:
Gas Panel: 43"W x 29.5"H x 12"D
Liquid Panel: 29.5"W x 29.5H x 12"D
Oxygen Panel: 18"W x 27"H x 10"D



ALSO AVAILABLE FROM KTI:

KTI constructs a wide variety of larger mobile and stationary Perozone® and C-Sparger® oxidant injection systems:
- Ozone: 1.5 to 50+ lbs/day
- Scroll compressors: 3.0 to 30+ hp
- Zones: As many as needed for your site
  Multiple points per zone

Trailers include climate control.
Optional telemetry and maintenance plans

Always…exemplary equipment and site support

Trailer and wall-mount rental systems available

AMBIENT OPERATING CONDTIONS – All Systems
40 - 90°F and less than 80% relative humidity
UL LISTED: US and Canada #E241880


KERFOOT
TECHNOLOGIES
DANGER
KERFOOT
TECHNOLOGIES

April 5, 2017

Mr. Frank A. Karboski, CPG
Senior Geologist
Plumley Engineering, P.C.
8232 Loop Road
Baldwinsville, NY 13027
Ph: (315) 638-8587

RE: Knife Plant Site – 1.5 lb/day Perozone® system quotation

Dear Mr. Karboski,

Thank you for the opportunity to quote our Perozone® technologies for your site. We are proposing a 25-port Perozone® system based on the information that you have sent on the site. This system gives you the option to increase the ozone concentration up to 1.5 pounds per day.

Perozone® System – Model 8600 Ozone Injection Equipment • Manifold Assembly: 25 SS solenoid valves with connections to ½" tubing • Ozone Generator: 1.5 lb/day (max) • Oxygen Concentrator: 45 scfh; 45 psig • Compressor: 5 HP • Injection pump • Ozone sample port • Flow meters – measure air and ozone Liquid Injection Equipment • Manifold Assembly: 25 solenoid valves with connections to 3/8" tubing • 2 - Solenoid-driven metering pumps • 2 - Liquid flow meters System Safety Features • Ozone Monitor- shuts system down when ozone is detected, manual restart required • Low and High pressure switches for ozone injection • Low liquid level switch – shuts liquid pump off if H2O2 is below a certain level Shed Enclosure • 8 ft x 8 ft • 240V, 100amp power service • Insulated, ventilated, lighting • Air Conditioner/Heating unit • System fully installed * Customer is responsible for peroxide purchase	

Tubing • ½" OD x 38" ID Kynar Tubing (gas) xxx ft - $5.85/ft • 3/8" OD x 1/4" HDPE Tubing – xxx ft @ $0.95/ft	
Laminar Spargewell Assemblies: 25 @ $865 each • 25 - Laminar Spargepoints® • 130 – 5ft x ¾" riser casing (gas injection) • 625' – ¼" OD Teflon tubing (liquid injection) • 25– Gas surface check valve assemblies (for connection to 1/2" tubing) • 25 – Liquid surface check valve assemblies(for connection to 3/8" tubing)	
Estimated Freight	
Project Specialist – system start-up and training: Check installation set-up, system connections, and test; and, train personnel. Estimate 5 days on site @ $1200/day (additional days @$1,200/day plus expenses) Per diem: 7 days @ $160/day Travel time @ ½ rate Rental car 7 days $120/day	

- **Payment Terms:** 50% with written purchase order, 50% prior to or at time of delivery
- Lead Time: ~12-16 weeks after PO is received.
- Current U.S. Patent numbers include: 5,855,775; 6,083,407; 6,284,143; 6,306,296; 6,312,605; 6,436,285; 6,447,676; 6,582,611; 6,596,161; 6,780,329; 6,805,798; 6,872,318. EU patent number: 0851843 (national countries). These patents cover both remediation equipment and processes for ozone injection into groundwater and soil, for ozone enhanced air sparging and peroxide ozone enhanced air sparging. Other U.S. and foreign patents pending.
- Issuance of a purchase order indicates your acceptance of a site-specific license for use of the KTI equipment and process, which will become due and payable upon purchase of equipment for site remediation.
- Prices quoted are good for 90 days and are for equipment only. On-site construction services, on-site ancillary or interconnecting piping, or on-site electrical work are not provided as a part of this proposal. No permitting services or costs are included.
- Prices may vary after review of all data, site walk, and/or final design criteria. Customer will be responsible for treatment of vapor extraction (i.e., carbon) if required.
- Additional services by KTI may be provided on request at additional charge, which may include aid in installation and system start-up, development of work plan, design and/or engineering for site, system performance analysis. Such services will necessitate the incurrence of an hourly charge, plus any travel-related expenses as may be required for site-walks, planning meetings, start-ups, etc.
- Freight charges will be billed at cost plus an administrative handling fee .
- Equipment offloading services at the destination or job site have not been included.

Please note: Any preliminary well layout is concept-only. Actual layout may change to accommodate approved well locations and traffic patterns. Client is ultimately responsible for determination of final well location and applicability of process to site needs. In reaching such determination, it is very important to verify permeability and to determine if the contaminant source has been identified, its constituents fully characterized, and the source has been eliminated and/or controlled. It is understood by all parties that the agitation of the groundwater in the vicinity of the C-Sparger® well is an expected and integral part of its operation. Any rise in concentrations in the vicinity of a well after system start-up may be evidence of "pockets" of contaminants previously undetected being circulated into the treatment cycle or evidence of an additional source.

STANDARD TERMS AND CONDITIONS

AGREEMENT: This offer may only be accepted on, and is expressly limited to acceptance of the terms described herein and acceptance by the buyer shall be deemed as acceptance of all of the terms.

ASSUMPTIONS: Kerfoot Technologies, Inc. (KTI) assumes the information provided by the buyer is the full extent of the information necessary to determine the scope of the project. It is the responsibility of the buyer to provide all information necessary to prepare the proposal to KTI. In the preparation of the proposal, KTI cannot consider any information germane to the project not provided by the buyer. This includes but is not limited to: local and federal applicable codes, government regulations, site conditions, project specifications, available electric power, hazardous location classifications, etc. Any errors or omissions in the proposal resulting from unidentified legal or technical requirements are outside the scope of this proposal, and KTI will not be responsible for them.

MODIFICATION: No changes shall be made in the quotation or purchase order unless agreed to by the seller in writing. This order is not subject to deviations of customer's confirming purchase order.

TAXES: The quoted price does not include sales, use, excise or similar taxes except as noted in the proposal. If sales taxes are quoted as a component of the price, such tax amounts have been calculated based on representations by the buyer. The buyer retains responsibility for any sales, use, excise or similar not expressly outlined in the proposal and paid by Kerfoot Technologies, Inc. on the buyers behalf.

F.O.B. All items on this proposal will be shipped F.O.B. (Mashpee, MA) or F.O.B origin point if drop shipped. Kerfoot Technologies, Inc. shall not be responsible nor liable for any damage caused by the freight carrier. Acceptance of the freight by carrier is acknowledgment that containers or method of shipping was acceptable when picked up.

VALIDITY: This proposal will be valid for thirty (30) days unless otherwise stated in the proposal.

CANCELLATION: Buyer may cancel this agreement only upon payment of reasonable cancellation charges which shall take into account expenses incurred and commitments made by Kerfoot Technologies, Inc.

WARRANTY: All products not manufactured by Kerfoot Technologies, Inc. carry the original manufacturer's warranty. Copies are available on request.

KTI warrants its packaged and manufactured equipment against any defect in material or workmanship, under normal use and storage for a period of twelve (12) months from date of manufacture. In the event that products are found to be defective within the warranty period, KTI's sole obligation and remedy shall be the furnishing of replacements for KTI. KTI WILL NOT BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES IN ANY CLAIM SUIT OR PROCEEDINGS ARISING UNDER WARRANTY. NOR WILL KTI ACCEPT ANY LIABILITY FOR CLAIMS For LABOR, LOSS OF PROFIT, REPAIRS OR OTHER EXPENSES INCIDENTAL TO REPLACEMENT. The product warranty expressed above is our only warranty and may not be verbally changed or modified by any representative of KTI. All freight costs incurred in shipping parts to or from KTI or to the manufacturer if necessary are at the expense of the customer.

KTI expressly disclaims any warranties, expressed or implied, including any warranty of merchantability or fitness for a particular purpose or any warranty arising from a course of dealing or usage of trade. Except to the extent required by applicable law, KTI shall not be liable, in tort, contract or otherwise, for any loss or damage, whether direct, consequential or incidental, of any person or entity arising in connections with the equipment.

RETURNS: All returns are subject to a 25% restocking fee. All special orders are non-returnable. All returnable items must be in new, unused, resalable condition and in original packaging. All freight costs incurred due to

returns are at the expense of the customer. All material being returned for warranty evaluation is subject to labor charges if found to be out of warranty. Shop labor rate is $95.00 per hour.

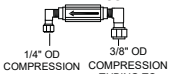
KERFOOT TECHNOLOGIES, INC.
766B FALMOUTH ROAD, MASHPEE, MA 02649
TEL: 508-539-3002 FAX: 508-539-3566
WWW.KERFOOTTECH.COM

LAMINAR SPARGEPOINT® INSTALLATION AND CONSTRUCTION DIAGRAM

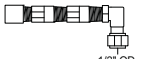
WELL BOX PLACEMENT:
INSTALL WELL BOX WITH SPARGEPOINT GAS RISER PIPE OFFSET FROM CENTER, ABOUT 2-INCHES FROM WELL BOX SIDEWALL. THIS WILL ALLOW FOR EASIER CONNECTION OF CHECK-VALVE ASSEMBLIES TO LATERAL TUBING

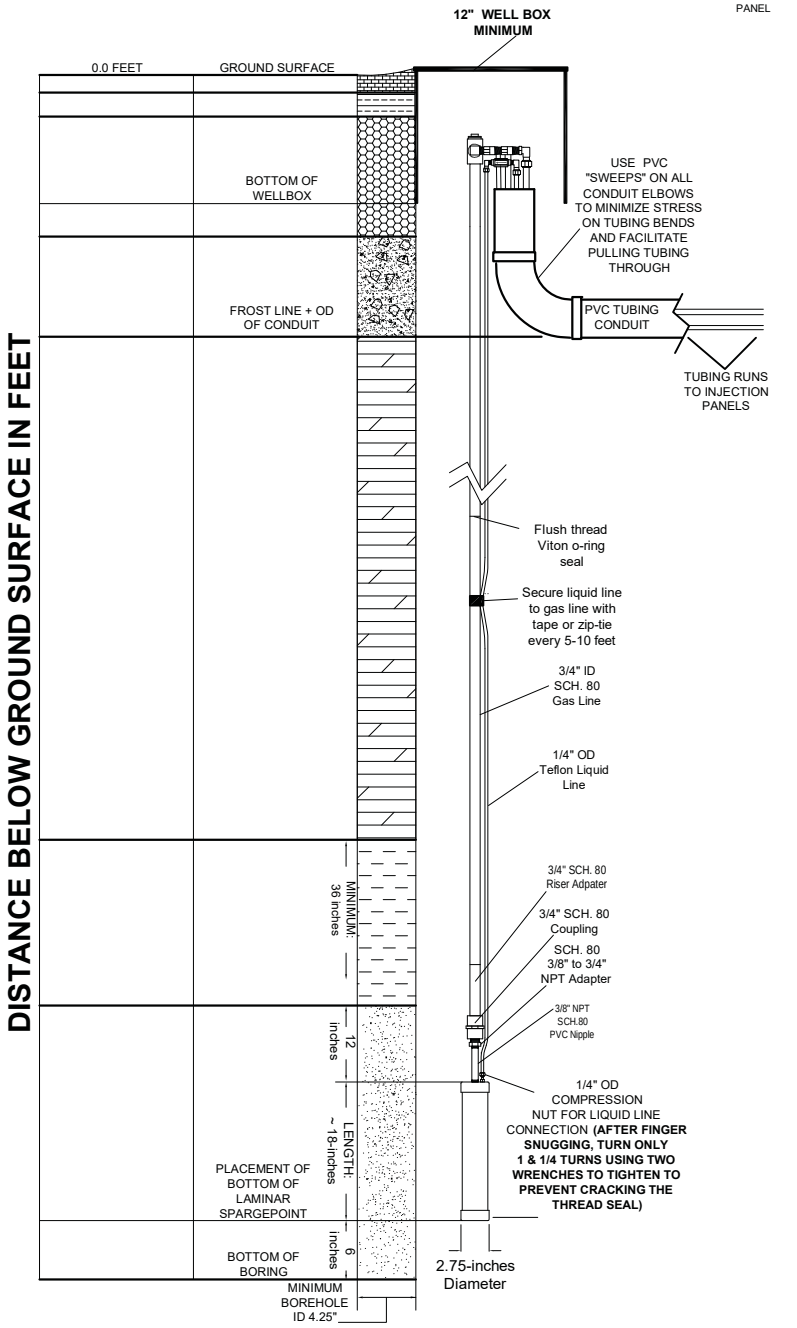
GAS AND LIQUID CHECK-VALVE ASSEMBLIES
(CAN BE ROTATED 90° IN EACH DIRECTION TO ACCOMODATE EASY TUBING CONNECTION, MINIMIZING STRESS ON TUBING BEND)

ENLARGED LIQUID CHECK-VALVE ASSEMBLY



ENLARGED GAS CHECK-VALVE ASSEMBLY





BOREHOLE BACKFILL LEGEND

FINE/MEDIUM FILTER "*sugar*" SAND (PASSES GREATER THAN 60 MESH SEIVE)	BACKFILL	CONCRETE
SLOW RELEASE BENTONITE PELLETS (NOT CHIPS)	PEA GRAVEL (FOR DRAINAGE)	
GROUT MIXTURE (20% BENTONITE POWDER AND 80 % PORTLAND CEMENT)	DENSE GRADE ROAD BASE	

CONFIRM BOREHOLE BACKFILL DEPTHS WITH DROP WEIGHT ALWAYS!

MOST IMPORTANT ASPECTS TO ENSURE SUCCESSFUL REMEDIATION

A. 60 Mesh (sugar) sand must be installed around the spargepoint
B. A minimum 3ft of bentonite pellets must be placed between each laminar spargepoint.
C. Use a drop weight to **check** position and depth of spargepoint, sand, and bentonite.
D. A check valve must be placed at the wellhead.

SPARGEPOINT INSTALLATION INSTRUCTIONS

1. Drill a minimum of a 4.25-inch **Inside Diameter** auger boring to desired depth.
2. Lay out spargepoint assembly parts.
3. **Finger tighten compression nut on spargepoint making sure that the internal two ferrules in the compresion nut have their tapered (narrowest ends) ends pointing toward the compression fitting base with the thinnest ferrule closest to the opening on the compression nut.**
4. Insert cleanly cut and squared end of tubing into compression nut on spargepoint until it bottoms out onto compression fitting base (inserts about 1/2" deep).
5. Using two small adjustable wrenches or open end wrenches (9/16" and 1/2"), tighten compression nut 1 & 1/4 turns. **Make sure the compression fitting base is held with wrench when tightening compression nut to prevent base from turning and unsealing the epoxyied internal threads.** After tighening compression nut check to make sure tubing can't pull out of fitting compression fitting. It shouldn't.
6. Place spargepoint into borehole and snugly tighten 5-foot threaded sections of casings onto spargepoint adapter, **making sure** casing thread has a black viton O-ring, while attaching the 1/4" liquid tubing to each 5-foot section using electrical tape or zip ties, while lowering the assembly down the borehole. This will prevent crimping of the tubing line and avoid catastrophic failure of the injection of liquid. (This can be subsequently determined after installation. A costly mistake).
7. Install spargepoint 6 inches off the bottom of the borehole to prevent clogging.
8. Tremie sand filter pack to 0.5 ft below to 1ft above the spargepoint with 60 mesh sand (sugar sand). **Do not rush allowing filter sand to settle or bridging and/or breakthrough of grout or bentonite may occur and clog spargepoint.**
9. Tremie bentonite beads to 3ft above the sand pack. Tremie or back fill grout mixture to bottom of conduit trench (20% Bentonite Beads, 80% Portland Cement). Make sure the grout mixture is well mixed, avoid any dry nodules. Test the mixture to make sure it is below 110 degrees F when injected. To alleviate some of the heat created from the grout mixture, native sand can be added to the grout mixture.
10. Complete backfilling with a drainable pea gravel. The Spargepoint should be filled with **distilled water** when installation is complete. You can inject/pour it down the gas casing.

Spargepoints should be enclosed and protected using a road box or well box assembly.