2018 ANNUAL OPERATION, MAINTENANCE, AND MONITORING REPORT

STAUFFER MANAGEMENT COMPANY SITE
5715 OLD LEWISTON ROAD
LEWISTON, NY 14092

Prepared For:

Stauffer Management Company LLC
1800 Concord Pike
Wilmington DE, 19803

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April 2, 2019
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List of Acronyms

SPDES	State Pollution Discharge Elimination System
O&M	Operations and Maintenance
SMC	Stauffer Management Company, LLC
GRD	Greater Radiological Dimensions
NYSDEC	New York State Department of Environmental Conservation
CO	Consent Order
SVE	Soil Vapor Extraction
SSPL	Site-Specific Parameter List
GAC	Granular Activated Carbon
NYPA	New York Power Authority
FZ	Flow Zone
PVC	Polyvinyl Chloride
NAPL	Non-Aqueous Phase Liquid
ROD	Record of Decision
GPM	Gallons per Minute
BGS	Below Ground Surface
VOCs	Volatile Organic Compounds
SVOCs	Semi- Volatile Organic Compounds
EE	Environmental Easement
SMP	Site Management Plan
OM&M	Operations, Maintenance & Monitoring
CSM	Conceptual Site Model
DOW	Division of Water
DER	Division of Environmental Remediation
PDB	Passive Diffusion Bag
PCE	Tetrachloroethene
TCE	Trichloroethene

EXECUTIVE SUMMARY

This report has been prepared to summarize the operation and maintenance (O&M) activities performed at the Stauffer Management Company, LLC (SMC) Site (Site) in Lewiston, New York for the reporting period of January 1, 2018 through December 31, 2018. The report also summarizes any significant modifications to remediation operations during the reporting period.

The SMC Site is located in the Town of Lewiston, New York, immediately north of the Forebay of the Robert Moses Power Plant and is a former chemical manufacturing facility owned and operated by Stauffer Chemical Company. All structures associated with the former plant were demolished in the early 1980s. The overall Site management and remediation is conducted by SMC, with Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. (Langan) providing day-to-day operation and maintenance of the remediation system in 2018. A local sub-contractor, Greater Radiological Dimensions (GRD), of Lewiston, New York, assists in the routine operations and conducts weekly treatment system inspections. The remedial work is being done in accordance with New York State Department of Environmental Conservation (NYSDEC) Consent Order (CO) #B9-0137-86-04, effective July 19, 2004.

Currently, the active remedial operations consist of a bedrock groundwater extraction and treatment system, including deep bedrock and shallow bedrock extraction wells. A soil vapor extraction (SVE) treatment system for Area A of the Site has been shut off with approval from NYSDEC, but remains operable and is to be decommissioned and demolished. Two other SVE systems were decommissioned in 2001 and 2004.

The major chemicals of concerns in the groundwater at the Site have been identified in the following Site-Specific Parameter List (SSPL):

- Benzene
- Carbon Disulfide
- Carbon tetrachloride
- Tetrachloroethene (PCE)
- Trichloroethene (TCE)
- Chlorobenzene
- Chloroform
- Methylene chloride
- Toluene

The groundwater extraction well network consists of two deep bedrock extraction wells, three intermediate/deep bedrock extraction wells, three shallow bedrock extraction wells and three overburden/shallow bedrock wells in Area A. The locations of the extraction wells are shown on

Figure 2. Underground force mains with secondary containment convey recovered groundwater from the extraction wells to the treatment building.

Extracted groundwater is treated using a series of particulate filters and contaminant removal occurs in in two granular activated carbon (GAC) vessels located in the treatment building. The treated water from the GAC vessels is discharged through the outfall to the New York Power Authority (NYPA) Forebay, located south of the Site. Treated water is discharged in accordance with effluent limits and sampling requirements set by NYSDEC. Due to the Site being operated under the CO, a state Pollution Discharge Elimination System (SPDES) permit is not required.

Approximately 14.7 million gallons of groundwater were extracted, treated, and discharged in 2018. This volume was approximately 3% higher than the amount extracted in 2017. The total contaminant mass removed by the groundwater extraction system in 2018 was approximately 1,676 pounds, which is 20% higher than pounds removed in 2017 (1,386 pounds). Reductions in extraction volumes and mass removal were noted at shallow wells DPA-202 and DPA-203 and deeper extraction wells LR-66 and OW-3. Insufficient water was present in these wells to sustain high groundwater extraction rates, which in turn reduced mass recovery rates. A significant increase in mass extraction was noted in extraction well EW-6, where mass removal rates nearly doubled from 2017. Figures presenting groundwater potentiometric contours and chemical isoconcentrations are presented in Section 6 for each flow zone (FZ) designated at the Site. The current extraction well configuration provides hydraulic capture across the Site and indicates that the extraction system continues to be effective at both hydraulic containment and contaminant mass removal.

The treatment system was re-configured to bring the solids settling tank back on-line, to assist with particulate removal. A chemical feed pilot test was also conducted with NYSDEC permission in 2018 to test the effectiveness of chemical addition to reduce the filter clogging issues. The chemical feed pilot test showed that the addition of disinfectant, biodispersion and anti-scaling agents were successful in reducing the frequency of particulate filter replacement from three times a week to once per week. With NYSDEC approval, Langan implemented full time chemical feed in February 2019.

A field investigation was conducted in 2018 to further refine the conceptual Site Model (CSM). The investigation included conducting the following tasks:

- Downhole video logging

- Groundwater Sampling
- Continuous Water-Level Monitoring
- Downhole Geophysics
- Packer Testing
- Passive Diffusion Bag (PDB) Sampling
- Aquifer Testing

A summary report for the CSM will be provided to NYSDEC under separate cover. The enhanced hydrogeological understanding and characterization of the flow zones has been incorporated into this report, and is discussed in Section6.

At the request of NYSDEC, SMC conducted a sampling event to screen the Site for emerging contaminants, including perfluorinated compounds and 1,4-dioxane. The sampling event was completed in accordance with Emerging Contaminant Sampling Work Plan, submitted to NYSDEC on July 18, 2018. The sampling results are presented in Table 7, and show that the Site groundwater is not impacted by these emerging contaminants.

1.0 INTRODUCTION

This report summarizes the operation and maintenance (O&M) activities performed at the Stauffer Management Company LLC (SMC) Site (Site) in Lewiston, New York for the reporting period of January 1, 2018 through December 31, 2018. This report also summarizes significant modifications to remedial operations made during the reporting period and presents data that can be used to evaluate effectiveness and remedial system optimization.

1.1 Site Background

The SMC Site is located in the Town of Lewiston, New York, immediately north of the Forebay of the Robert Moses Power Plan. Figure 1 depicts the location of the Site and Figure 2 depicts the Site layout.

The Site is the location of a former chemical manufacturing facility owned and operated by Stauffer Chemical Company. All structures associated with the former plant were demolished in the early 1980s. Stauffer Chemical Company was divested in 1987, and Atkemix Thirty Seven, a subsidiary of Stauffer Management Company, became the Site owner. In 2000, Stauffer Management Company and Atkemix Thirty Seven restructured into a limited liability company that is now known as SMC, a wholly owned subsidiary of AstraZeneca.

In 1995, in accordance with Consent Order (CO) #B9-0137-86-04, SMC initiated construction for soil and groundwater remediation. At that time, the treatment building was erected to house the Site groundwater extraction and treatment system and the soil vapor extraction (SVE) treatment system for Area A. A second SVE treatment system, located in Area C, was mounted in a trailer location off-Site, beyond the southeast corner of the Site property. SVE operations at Area C were discontinued in May 2004, and the Area C SVE system was decommissioned in July 2004. A third SVE system at Area T-4 was also installed in 1995, operated until 2000, and decommissioned in September 2001. Note that Area B was a historical landfill located beyond the southeast corner of the Site used for disposal of inert materials. Area B material was disposed of off-Site and investigations determined no need for further remediation.

The major chemicals of concern in the groundwater at the Site have been designated in the Site-Specific Parameter List (SSPL) as follows:

- Benzene
- Carbon Disulfide
- Carbon tetrachloride
- Tetrachloroethene (PCE)
- Trichloroethene (TCE)
- Chlorobenzene
- Chloroform
- Methylene chloride
- Toluene

These chemicals have historically been detected at varying concentrations in the groundwater, subsurface soils, seeps, and surface water run-off at the Site and its immediate vicinity.

1.2 Remedial System Descriptions

The remedial systems currently operable at the Site include:

1. Area A SVE System (Note that the Area A SVE system is currently turned off, but remains in operable condition – See Section 3.1 below)
2. Overburden and bedrock groundwater extraction and treatment system, consisting of shallow and deep bedrock extraction wells.

These remedial systems and Site areas are briefly described in the following sections.

1.2.1 Area A

Area A occupies approximately 136,500 square feet near the center of the property as shown on Figure 3. The remedial system at Area A used a combination of soil vapor and groundwater extraction, consisting of 39 SVE wells, 3 dual-phase groundwater/SVE wells and a multilayer cover comprised of a polyvinyl chloride (PVC) geomembrane liner, a geotextile cushion and crushed stone.

Each SVE well is connected to one of four header pipes that enter the Treatment Building and are connected to the vacuum blower housed in the north side of the building. The SVE piping is mounted on a metal framed pipe strap support system. The Area A SVE treatment system is comprised of an integrated blower skid consisting of a moisture separator tank, an in-line filter, a vacuum blower, a discharge silencer and a condensate removal pump, all located in the treatment building. The heat exchanger and granular activated carbon (GAC) adsorption units are adjacent to the blower skid and anchored separately to the concrete floor in the building.

1.2.3 Area C

Area C occupies approximately 19,350 square feet beyond the southeast corner of the Site property, as shown in Figure 3. Area C is the location of one of the landfills previously used by Stauffer Chemical Company.

Due to the success of the Area C SVE system, and with the approval of the NYSDEC, operations at Area C were discontinued in May 2004 and the SVE system was decommissioned and removed in July 2004. The SVE wells were plugged and abandoned in accordance with NYSDEC regulations in December 2004.

1.2.4 Area T-4

Area T-4 occupies approximately 11,500 square feet and is located southwest of the treatment building, as shown on Figure 3. The Area T-4 SVE system was decommissioned in September 2001 based on the success of the system and with approval of the NYSDEC.

1.2.5 Groundwater Extraction and Treatment System

The groundwater extraction well network consists of two deep bedrock extraction wells (LR-66 and OW-3), three intermediate/deep bedrock extraction wells (EW-1, EW-2 and EW-3), three shallow bedrock extraction wells (EW-4, EW-5 and EW-6) and three shallow dual-phase wells in Area A (DPA-201, DPA-202, DPA-203). The locations of the extraction wells are shown on Figure 3. Underground force mains with secondary containment convey extracted groundwater from the wells to the treatment building. The groundwater treatment system is currently housed in the south side of the original treatment building and in the northwest addition to the building.

All groundwater from each of the extraction wells is pumped into the groundwater treatment system. The major components of the treatment system are listed below:

1. Solids Settling Tank: A 1,500-gallon conical bottom tank installed in 2009 to provide solids settling prior to the influent water entering the treatment system. This tank replaced a non-aqueous phase liquid (NAPL) separator tank that had deteriorated. Phase separation is not required at the Site, as no NAPL has been observed since the beginning of system operations.
2. System Feed tank: A process tank used to accumulate water from the solids settling tank. This tank serves as an equalization tank.

3. System Feed Pump: Pumps water from the feed tank through the rest of the treatment system. The pump is controlled by a variable frequency drive.
4. Bag Filters: Groundwater is pumped through thirteen 10-micron bag filters (consisting of an eight bag round filter vessel and a separate five-bag unit) operated in parallel to prevent solids from clogging the GAC.
5. GAC Vessels: After the bag filters, the groundwater passes through two 10,000-pound GAC adsorption vessels operated in series. The 10,000-pound GAC vessels were installed in 2014 as replacements for two 20,000-pound GAC adsorption vessels.

The treated water from the GAC units is discharged through the outfall to the New York Power Authority (NYPA) Forebay, located south of the Site. Treated water is discharged in accordance with effluent limits and sampling requirements set by NYSDEC. Due to the Site being operated under the CO, a State Pollution Discharge Elimination System (SPDES) permit is not required.

2.0 SITE DESCRIPTION

2.1 Physical Setting

The Site is located at 5715 Old Lewiston Road in Lewiston, New York. A Site Location Map showing the Site on a USGS Topographic Map is provided as Figure 1. The most prominent features near the Site are identified on Figure 3. The Site is bounded on three sides by hydroelectric power generating facilities operated by the New York Power Authority (NYPA). Those facilities consist of the following:

- The Robert Moses Niagara Hydroelectric Power Station located to the west of the Site;
- The Lewiston Pump Generating Plant and Lewiston Pumped Storage Reservoir located to the east of the Site; and
- The Forebay canal/reservoir located along the Site's southern property boundary.

The Forebay is about 0.8 miles long in total and varies in width from about 500 to 1,000 feet. The water surface elevation in the Forebay is typically about 50 to 60 feet lower than the ground surface of the Site.

Also prominent is the gorge of the Lower Niagara River, which is located to the west of the Site and flows south to north. The gorge begins at Niagara Falls and ends seven miles down-river at the Niagara Escarpment. The Site is located about five miles down-river from the Niagara Falls. The base of the gorge is about 300 feet lower in elevation than at its closest point to the Site.

The Gate of Heaven Cemetery is located north of the Site. Interstate 190, the Niagara Thruway, is located east of the Site. State Route 104 is located west of the Site.

2.2 Site Remediation History

As summarized in the current Site Management Plan (May 2017), potential soil and soil vapor exposures are controlled by land use restrictions contained in a recorded environmental easement (EE) and by Site management procedures. Potential migration via overland flow and surface water drainage are controlled by Site grading and vegetative cover. Potential on-Site groundwater exposures are controlled by the EE, which prohibits use of groundwater underlying the Site unless treated to render it safe for its intended use.

A groundwater extraction and treatment system has been in operation since 1995. The groundwater extraction network currently consists of a total of 11 active extraction wells (EW-1 through 6, LR-66, OW-3, and three dual-phase extraction [DPA] wells). Total system flow varies seasonally between 30 and 50 gallons per minute (gpm) and typically averages between 43,000 and 57,000 gallons per day. Treatment system operations have over time been impacted by clogging and diminishing yield from the extraction well network. Additionally, removal efficiency (i.e., pounds of VOCs removed per gallon of extracted groundwater) has been declining since the early 2000s. A declining trend in treatment system performance is common in nearly all systems, and is typically observed as the remaining amount of contaminant mass is diminished over time.

2.3 Monitoring/Extraction Well Network

The Site reportedly has 109 total wells (including extraction and monitoring wells) of various depths. Many of the well locations are shown on Figure 2. An inventory of the monitoring and extraction wells and well construction information gathered from review of previous environmental reports completed by others is provided as Table 1. In some instances, the well completion details, i.e., screen depth, are not available.

2.4 Site Hydrogeology

The water table is encountered in the upper bedrock of the Lockport Formation at a depth of about 20 feet below ground surface. The current extraction and monitoring wells were installed based on the depths to four general hyrdostratigraphic zones, identified as the Upper Lockport Water Bearing Zone, the Lower Lockport Water Bearing Zone, the Lockport/Rochester Water Bearing Zone, and the Rochester Water Bearing Zone.

Two bedrock grout curtains are present on or near the SMC property. According to the 1991 Site Investigation Report by Conestoga-Rovers & Associates, the grout curtains reduce the volume of groundwater discharging to the Forebay and the Niagara Gorge. The main north-south grout curtain extends along the Niagara Gorge from about 2,000 feet north of the Robert Moses Power Plant, crosses the intake structure area, and extends south along the gorge further by about 2,000 feet. The second grout curtain, located mostly on the SMC property, is oriented east-west along the Forebay and is about 1,500 feet long. The Forebay grout curtain terminates at the Niagara Gorge grout curtain near the northern edge of the power plant. The Niagara Gorge grout curtain extends to a depth of about 275 below ground surface (bgs) into the Queenston Shale Formation. Grout boreholes for the upper 150 feet of the Niagara Gorge grout curtain were spaced about 10 to 20 feet apart; for the lower 125 feet, grout boreholes were spaced about 40 feet apart. The Forebay grout curtain extends to a depth of about 100 feet into the Rochester Shale Formation. Grout boreholes for the upper 40 to 50 feet of the Forebay grout curtain were spaced 10 to 20 feet apart; for the lower 50 to 60 feet, grout boreholes were spaced 20 feet.

A field investigation was completed in 2018 to update the understanding of the conceptual Site Model (CSM). A discussion of the CSM investigation is provided in Section 6, while the details of the investigation program and findings are being provided to NYSDEC in a separate submission. An important finding of the CSM is the revision of the groundwater flow zones at the site. Previously, four bedrock water bearing zones (WBZs) had been identified at the site and were used to characterize groundwater transport potential and contaminant distribution. As a result of the 2018 field investigation the WBZs have been replaced with Flow Zones (FZs), which alter the grouping of monitoring. The nomenclature for the flow zones is consistent with the detailed assessment conducted for the Hyde Park Landfill Superfund Site, and is discussed in more detail in Section 6.1. A table summarizing the revisions in groundwater flow is provided below. The approximate elevations of the new flow zone designations is also provided in the table.

WBZ Designation	FZ Designation	FZ Elevation Interval
Overburden	Overburden	Varies with geology
Upper Lockport	FZ-10	520 to 540 feet NAVD88
Lower Lockport	FZ-10	520 to 540 feet NAVD88
Lockport/Rochester	FZ-11	510 to 520 feet NAVD88
Rochester	FZ-12	470 feet NAVD88
Irondequoit Limestone*	FZ-13	440 to 445 feet NAVD

* - Irondequoit Limestone was not included in the previous WBZ assessments.

The table above shows that FZ-10 includes both the Upper and Lower Lockport formation flow zones. A deeper flow zone, FZ-13, was also identified during the CSM investigation, which does not correspond with the previously identified WBZs. Extraction well EW-1 encounters this flow zone. Except possibly for EW-2, the other boreholes at the site are too shallow to intersect with FZ-13.

3.0 AREAS A, C AND T-4 REMEDIAL SYSTEM ACTIVITIES

A summary of the inactive remediation areas is provided below, along with a description of the former treatment area and a summary of the remediation timelines.

3.1 Area A Operations For 2018

The Area A SVE system has been turned off since 2014 and did not operate in 2018. As discussed in the 2013 Annual Operations & Maintenance Report, in 2013 through early 2014, SMC performed an evaluation of historical and current Area A performance. The evaluation concluded that the operation of the SVE system had achieved the maximum amount of contaminant removal reasonably attainable, and that any residual vapor-phase volatile organic compounds (VOCs) are being contributed from the contaminated groundwater that exists within and below the Area A treatment field.

A letter summarizing the evaluation and a recommendation to discontinue operation of the Area A SVE system was submitted to NYSDEC on June 6, 2014. The NYSDEC responded to the request on a June 19, 2014 letter to SMC indicating that preparation and submittal of an EE would

first be required. On August 4, 2014, NYSDEC visited the Site to discuss Area A and other remedial operations. Suring the visit, NYSDEX agreed that the Area A blower could be kept off while the EE process was pending. Therefore, the system has been turned off since August 2014.

The final EE was signed by SMC on April 28, 2015 and by NYSDEC on August 24, 2015. The EE was filed in Niagara County on September 4, 2015. Upon NYSDEC approval of the Site management Plan (SMP) that was submitted in 2017, the Area A SVE system will be decommissioned. Note the SVE system is being maintained in operable condition.

Since the system was not running, there was no contaminant mass removal from the Area A SVE system during 2018.

3.2 Area C Operations For 2018

Due to the success of the system, the former Area C SVE system was decommissioned in July 2004 with the approval of the NYSDEC. The SVE wells were plugged and abandoned in accordance with the NYSDEC regulations in December 2004.

3.3 Area T-4 Operations For 2018

Due to the success of the system, the former Area T-4 SVE system was decommissioned in September 2001 with the approval of the NYSDEC. Dual Phase well T-4 (also known as DPT-261) was taken out of service as an SVE well in 2001. It remains as a monitoring point; however insufficient water was present in the well in 2018 and a groundwater sample was not collected.

4.0 GROUNDWATER EXTRACTION SYSTEM OM&M ACTIVITIES

4.1 Summary of Operations

The bedrock groundwater extraction system operated in automatic mode throughout the reporting period, with visits to the Site two to three times per week to confirm pumping operations, conduct system inspection, perform bag filter change-outs, system process water sampling, and various other OM&M activities. Intermittently, extended periods of non-pumping or reduced rates occurred from the following activities:

- Extraction well disinfection/cleaning event in June 2018 (entire system was down for two weeks),
- CSM update activities during July and August 2018 (majority or entire system was down for seven weeks),
- OW-3 pneumatic controller had frozen breaking the internals during the winter of 2018 and was repaired in September 2018 (nine months), after several trouble shooting, well rehabilitation and equipment replacement events,
- EW-1 and EW-2 electric pumps were not able to be reused after the disinfection event and were replaced in June 2018 (one week of down time),
- EW-2 pressure transducer controller required replacement in July 2018 (reduced production for two weeks), and
- Deteriorating air lines for EW-4, DPA-201 and DPA-202 impeded pumping rates and were replaced in August 2018 (reduced production for one to two months).

4.2 2018 Extraction System Modifications

A well disinfection and redevelopment event in June 2018 led to diagnosing several issues with various pumping wells. The following repairs have been made since:

- Electric pump replacement for EW-1,
- Electric pump replacement for EW-2,
- Pressure transducer controller replacement for EW-2,
- Pneumatic pump cleaning, tubing replacement, pneumatic controller replacement, and airline accessory replacement for OW-3, and
- Repaired air and water lines to EW-4 and DPA-203.

4.3 Mass Removal

4.3.1 Extraction Wells EW-1 through EW-6

Mass removal calculations for the extraction wells are summarized in Table 2. The mass removal was calculated using the extraction volumes from individual well totalizer readings and the analytical results of the annual groundwater sampling event. The percent removal for each compound is displayed for each well, depicting how much of the total mass for each compound was removed at each well. The groundwater extraction volumes for EW-5 and DPA-201 are presented together as a cumulative volume. There is a discrepancy between the groundwater extraction volume as measured by the individual extraction well totalizers and the treatment

system combined effluent totalizer. The treatment system combined effluent totalizer reading shows that 14,738,043 gallons of water were extracted during 2018, while the sum of individual well flow meters is 12,201,593 gallons, representing a 17% discrepancy. This discrepancy in flow totals is likely because of the cyclic performance of the pneumatic wells, where flow rates are unsteady, and therefore, may not be registered in the flow meters. Overall, the treatment system combined effluent totalizer is likely more representative.

The total mass removal from EW-1 through EW-6 is estimated to be 1,675 pounds, and represents over 99% of the mass recovery for the system for 2018. The remaining 1% of contaminant mass removal comes from the other extraction wells, as discussed below. The removal efficiencies for each well are provided in the table below.

Extraction Well	Removal Efficiency (pounds/1,000 gallons)
EW-1	0.41
EW-2	0.01
EW-3	0.011
EW-4	0.01
EW-5/DPA-201	0.01
EW-6	0.61

4.3.2 Area A Dual Phase Wells DPA-201, DPA-202, DPA-203

Groundwater extraction from the shallow bedrock wells was limited in 2018, because of low water levels. Extraction volumes for DPA-201 (a shallow well) are accounted for in the EW-5 flow measurement because the wells share a common flow meter. In 2018, flowmeters were installed in the piping for these extraction wells to provide more accurate measurements than the pulse counters that were previously used. The pulse counters recorded pump operation rather than directly recording the volume of water removed during each pump cycle. Approximately 38,646 gallons of water were extracted from DPA-202 and DPA-203, with only 101 gallons recovered from DPA-203. Based on the extraction volumes and the annual groundwater sampling data, less than 0.5 pounds of contaminant mass were recovered from DPA-202 and DPA-203 during 2018. The contaminant mass removal efficiencies for DPA-202 and DPA-203 are presented in the table below.

Extraction Well	Removal Efficiency (pounds/1,000 gallons)
DPA-202	0.01
DPA-203	2.56

4.3.3 Area T-4 Extraction Well DPT-261 (T-4)

Extraction well DPT-261 did not operate during 2018 because of a lack of recoverable water, as was the case in 2017. Insufficient water was present during the 2018 groundwater sampling event and a groundwater sample was not collected from this well.

4.3.4 Extraction Well OW-3

Groundwater extraction from OW-3 was limited in 2018. Repairs were completed at the well in June, including repairing a damaged flow controller and replacing air supply lines. Upon completion of the repairs, groundwater extraction resumed, but ceased when water levels fell to the pump intake depth for the well approximately two hours after restarting. Approximately 59 gallons of water were recovered from the well during 2018. Mass removal at OW-3 was limited due to the reduced water extraction volume, with approximately 0.1 pounds of VOCs recovered from the well. The mass removal efficiency for the well was approximately 0.21 pounds per 1,000 gallons.

4.3.5 Extraction Well LR-66

Groundwater extraction from LR-66 was limited to approximately 24,702 gallons for 2018. Approximately 7.53 pounds of VOCs were removed by LR66, providing a mass removal efficiency of 0.3 pounds per 1,000 gallons. The majority of contaminant mass removed from LR-66 was carbon tetrachloride.

4.4 Routine Maintenance

Langan's subcontractor, Greater Radiological Dimensions, Inc. (GRD), has performed weekly system sampling events, and inspections since January 2018. GRD records system operational data, performs basic system maintenance/repairs, and provides house-keeping services. GRD is also responsible for overseeing quarterly liquid phase carbon exchange events, performing annual

groundwater sampling events, and assists with annual extraction well disinfection and redevelopment events.

A-1 Landscaping provides landscaping, road repair and snowplow services as well as assists in all dumpster and heavy equipment needs.

5.0 GROUNDWATER TREATMENT SYSTEM OM&M ACTIVITIES

A summary of the groundwater treatment system OM&M for 2018 is provided in the following sections.

5.1 Summary of Operations

The bedrock groundwater extraction system operated in automatic mode throughout the reporting period, with visits to the Site two to three times per week to confirm pumping operations, perform system inspection, bag filter change-outs, system process water sampling, and various other OM&M activities. Extended periods of non-pumping or reduced rates occurred from the following activities:

- Extraction well disinfection/cleaning event in June 2018 (entire system was down for two weeks),
- CSM update activities during July and August 2018 (majority or entire system was down for seven weeks),
- Brief periods for bag filter changes, carbon exchanges, or power issues (entire system was down for several hours),
- Main air compressor after cooler developed an air leak that led to all pneumatic pumps, except EW-4 (which runs on an individual air compressor), to be shut down during the fall of 2018. The air compressor was repaired on December 12, 2018 and all pneumatic wells resumed operations.

5.2 Maintenance, Inspection, and Monitoring Activities

A summary of the maintenance, inspection and monitoring activities is provided below. The routine treatment system maintenance activities, modifications to the treatment system monitoring, general facility maintenance, monitoring well inventory and the 2018 emerging contaminant sampling event are discussed in the following sections.

5.2.1 Routine Treatment System Maintenance

Routine inspection and maintenance of the groundwater treatment system is performed weekly during visits to the Site. Routine weekly inspections and maintenance include:

- General visual inspection of the treatment equipment for leaks, overflows, or malfunctions,
- Inspection of process-indicating instruments,
- Recording operating conditions in log sheet,
- Correction of operational problems,
- Addressing health and safety issues,
- General housekeeping,
- Replacement of bag filters, as indicated by differential pressure across the filters, and
- Repair or replacement of damaged parts.

All inspections are recorded in the O&M logbook. The treatment system is shut down periodically to perform routine maintenance on the system components. The periodic maintenance shutdowns involved cleaning, inspection, and maintenance activities associated with the following:

- Liquid phase carbon exchanges,
- Bag filter changes,
- Conveyance piping repairs/upgrades,
- Extraction well disinfection and cleaning event, and
- CSM investigation activities.

5.2.2 Treatment System Modifications

Since Langan took over the OM&M responsibilities in late January 2018 the following minor system modifications have taken place:

- Thorough cleaning of the bag filter housing, equalization tank, and solids removal from the floor sump, trench drain and conical bottom tank in effort to remove accumulated solids, biomass, and mitigate building odors,
- Chemical addition bench scale study took place in the first and second quarter of 2018 and led to a pilot scale study for the mitigation of biomass and scale loading on the bag filters. Positive results from the testing culminated in the installation of a permanent chemical feed system in December of 2018,

- Added a vent from the conical bottom tank and cleaned the vent on the equalization tank to exterior ports,
- Added degassing valves and siphon breaks prior to the conical bottom tank, on overhead piping before bag filters, and overhead piping prior to discharge to relieve pipe knocking and noise,
- Added mechanical flow totalizers to the influent lines from OW-3 and LR-66,
- Replaced flow meter on the influent line from EW-4 and the system effluent line, and
- Replaced the after-cooler on the main air compressor for pneumatically driven pumps.

On–Site treatability studies and pilot tests were performed over the course of 2018 to assess options to better manage solids fouling in the extraction wells and the treatment system. Initial testing indicated that the source of the fouling was a combination of: 1) mineral precipitation (calcium sulfate, rather than conventional calcium carbonate scale), and 2) biofouling (sulfate reducing bacteria and other bacteria). Through subsequent bench scale batch testing, Langan identified a combination of three chemicals that were effective at mitigating solids formation and clogging. With the approval of NYSDEC, Langan piloted a full-scale chemical feed system using the identified combination of treatment chemicals. The frequency of bag filter replacements was reduced from every 3 days before the chemical feed pilot test to every 8 days subsequent to implementing chemical addition.

5.2.3 Groundwater Treatment System Process Monitoring

Groundwater treatment system extraction and discharge data from 2018 is presented in Table 3. The extraction flow rates and totalizer readings are collected on a weekly basis as a minimum.

Samples for chemical analysis are collected routinely from the groundwater treatment system. Samples are collected weekly from the mid-carbon sampling point. The groundwater influent and system effluent are sampled monthly, at a minimum. Process monitoring sample analytical results are presented in Appendix A. Influent, mid-carbon, and effluent data are summarized in Tables A-1 to A-3, respectively.

The 2018 analytical data for the monthly influent groundwater samples are presented in Table A-1. The data indicate that typically carbon tetrachloride, carbon disulfide, and chloroform are detected in high concentrations in the influent. The 2018 analytical data for the weekly mid-carbon groundwater samples are presented in Table A-2. The data indicate that the results are generally

non-detect or indicate low (< 50 ppb) total SSPLs except when breakthrough occurred. Four carbon exchanges were performed in 2018, with one 10,000-pound bed exchanged each time, on the following dates:

- January 12, 2018
- April 20, 2018
- July 27, 2018
- October 18, 2018

Note that for each of the four carbon exchanges performed in 2018, the lead carbon bed was exchanged and the former lag bed became the lead bed, by manipulating valve positions in the piping manifold.

The 2018 analytical data for effluent samples collected from the groundwater treatment system are presented in Table A-3. Effluent samples are collected and analyzed monthly for SSPLs (VOCs) at a minimum. The effluent sample results for 2018 show that no VOC compounds were detected above the discharge limit.

5.2.4 Additional Monitoring of Treated Effluent

In addition to the monthly effluent sampling and analysis for SSPLs, groundwater treatment system effluent samples are also collected quarterly. The list of quarterly parameters and associated discharge limits were originally established in a SPDES permit issued by the NYSDEC Division of Water (DOW) in 1995 when Facility groundwater treatment operations commenced.

Since that time, Facility operations have been conducted in accordance with the July 19, 1993 CO executed by NYSDEC as part of the New York State Superfund program, with oversight by the agency's Division of Environmental Remediation (DER). With respect to Facility effluent discharge, the DOW does not have regulatory authority over discharges from a State Superfund Site. Instead, the DER is responsible for ensuring compliance with Facility effluent criteria and for approval of all submittals. For the SMC facility, DER requires monthly effluent sampling for SSPL compounds and quarterly effluent sampling for a combined list of SSPL compounds and other SPDES parameters.

To differentiate it from the Facility's monthly effluent sampling, the quarterly sampling event is known as the "SPDES sampling" event.

Appendix B presents the quarterly SPDES sample results for 2018. Note that since the monthly effluent samples include analyses of the SPDES SSPLs (the required list of VOCs) on a more frequent basis than quarterly, the VOC component of the SPDES requirements is met by the monthly results shown on Appendix A-3. As noted above, all VOC results were below their respective discharge limits for 2018.

Appendix B presents the list of SPDES semi-volatile, metals and wet chemistry parameters, the associated discharge limits, and the analytical laboratory results of the 2018 quarterly SPDES sampling events for the Facility. Discharge limits are concentration-based with the exception of metals, for which mass limits have been established. To calculate average daily mass discharge rates, the laboratory concentrations are multiplied by the daily average effluent flow for the treatment system and converted into pounds per day.

As noted in Appendix B, there were no parameters detected in excess of the established discharge limits. All of the effluent analyses were non-detect throughout 2018, with the exception of de minimis concentrations of chromium (September), nickel (February, March, September and November), zinc (all samples) and total phenolics (all samples).

5.2.5 Groundwater Treatment System Performance Monitoring – 2018

On August 16, 2016, NYSDEC approved an SMC request to eliminate the quarterly extraction well-only sampling events that had been performed since the 1990s. Sampling of the Site-wide monitoring well network and each extraction well continues to be performed annually.

The purpose of the groundwater monitoring is to evaluate progress of the groundwater extraction system in removing SSPL compounds from the aquifer. The groundwater sampling data are used to assess concentration trends over time.

Groundwater samples are collected in accordance with established procedures and protocols in the Site Operations and Maintenance Manual. The samples are shipped to Test America Laboratories, Inc. for analysis following Chain of Custody procedures. The laboratory sends the analytical results to Langan. The results are reviewed, collated, put into tabular form, sent to SMC for review, and included in the quarterly status reports to NYSDEC.

The annual Site-wide groundwater sampling event was performed between July 10 and 16, 2018. The analytical results for the groundwater samples are presented in Table 4. Low flow sampling logs from the sampling event are provided as Appendix C.

5.2.6 Emerging Contaminants Sampling

At the request of the NYSDEC, SMC prepared and submitted a work plan to collect samples of specific emerging contaminants from three on-Site wells. The sampling event was focused on perfluorinated compounds and 1,4-dioxane. The sampling event was completed in accordance with the NYSDEC approved July 18, 2018 Work Plan. The results of the sampling event are presented in Table 7. The sampling results show that the Site groundwater is not impacted by these emerging contaminants, with only very low levels of perfluorinated compounds and 1,4-dioxane detected.

5.2.7 Groundwater Treatment System Performance Monitoring – 2019

The 2019 annual groundwater sampling event is scheduled to be completed in July 2019. The annual sampling event will use low flow purging techniques to collect samples for the SSPL VOC parameters.

Note that in a June 7, 2016 conference call with NYSDEC, SMC requested that a total of 9 monitoring wells be removed from the annual sampling schedule. These well do not show potentiometric surface depressions during groundwater extraction, are dry, and provide no meaningful information regarding plume delineation or contaminant distribution. This request is pending as SMC has not received further correspondence from NYSDEC regarding the sampling program modification request.

5.2.8 Facilities, Structures, and Grounds Maintenance

The facilities, structures, and grounds are inspected and maintained regularly as specified in the O&M Manual. These inspections are carried out during routine Site visits. These routine inspection tasks include checking the appearance of the grass, driveways, walkways fencing, lighting and containment areas. Inspections and maintenance tasks inside of the Treatment Building include checking the appearance of the walls, floors, ceiling, doors, walkways, emergency equipment, lights, sumps, and equipment support structures. Any problems or deficiencies are noted in the O&M logbook and are promptly addressed.

5.2.9 Unscheduled Maintenance

Unscheduled Maintenance was performed as required in 2018. Examples of unscheduled maintenance activities performed are:

- Replacement of trench drain and sump pit grating,
- Process equipment piping repairs,
- Air compressor after-cooler replacement,
- Overhead and exterior lighting replacement,
- Electrical switch and receptacle replacement, and
- Demolition of interior concrete pads formerly used for process equipment.

5.2.10 Monitoring Well Inventory

An inventory/inspection of the Site monitoring wells was performed in June 2018 as part of the annual groundwater sampling event. A copy of the well inventory is included as Appendix D. The well inventory indicates that the wells are in generally good condition.

6.0 GROUNDWATER LEVEL MONITORING AND CHEMISTRY

6.1 General

Groundwater flow potential and observed characteristics within the boreholes, and as associated with discrete fracture flow zones, are summarized below. The groundwater potentiometric maps were generated using data from the low-flow sampling event in July, and from pump intake or shut-off depths for extraction wells. The pump intake depth was used for extraction wells with pneumatic pumps, which are capable of reducing water levels to the pump intake depth. The extraction wells with electrically driven pumps cannot draw water down to the pump intake depth because of the potential for pump damage if insufficient water is present. For this reason, the extraction wells with electric controls have transducers that stop pumping when the water levels drop below the set point and this set point was used to develop the potentiometric surface maps. Extraction wells were included for each flow zone that is intersected by the extraction well screen.

During the CSM field activities, significant groundwater level fluctuations were observed in monitoring wells, which appeared to correlate with water levels in the adjacent Forebay. Because

of these apparent groundwater dynamics and daily water-level fluctuations, an alternate method for collecting synoptic groundwater level measurements is being developed, with a focus on assessing the groundwater flow in each flow zone at different water-level stages in the Forebay. A detailed discussion of the Site groundwater level fluctuations and the Forebay water levels will be presented in the Langan Hydrogeological Conceptual Site Model Report, to be submitted to NYSDEC under separate cover.

A groundwater sampling event was conducted in July 2018. Groundwater samples from monitoring wells were collected using low flow sampling techniques. Groundwater indicator parameters including dissolved oxygen, oxidation reduction potential, pH and specific conductivity, were collected during well purging. All groundwater samples were analyzed for SSPL VOCs, and additional analysis was conducted at 22 wells for the following parameters: calcium, manganese, potassium, sodium, chloride, sulfate and hardness.

Groundwater samples from extraction wells were collected from the influent sample ports in the treatment system building. Low flow purge sheets are presented in Appendix C. Analytical results from the groundwater sampling event are provided in Table 4.

A field investigation to refine the CSM was completed in July and August, 2018, consisting of the following activities:

- Downhole video logging
- Groundwater Sampling
- Continuous Water-Level Monitoring
- Downhole Geophysics
- Packer Testing
- Passive Diffusion Bag (PDB) Sampling
- Aquifer Testing

The discrete depth groundwater samples from wells EW-1, EW-2, EW-3, EW-5, R-19 and R-62 using passive diffusion bag samplers (PDBs) and packer tests have been incorporated along with the annual sample results in the contaminant isoconcentration maps (see Figures 5, 6, 8, 9, 11, 12, 14, and 15). The PDB and packer test analytical results are provided in Table 5 and Table 6, respectively.

During the CSM investigation activities, potential water-bearing fracture zones were identified using the following lines of evidence:

- Direct observations of fractures or voids that can be seen in the video and acoustic televiewer logs,
- Evidence of in-flow and out-flow observed during downhole video logging,
- Increases in the borehole diameter (as measured with a caliper) over a discrete interval in the borehole,
- Fluctuations in the fluid temperature or conductivity, and
- Changes in fluid movement, direction, or velocity as measured by the heat-pulse flowmeter.

Four of these potential water-bearing zones (FZ-10 through FZ-13) are correlated across multiple boreholes and, therefore, have been identified as potentially primary groundwater flow zones. Flow was inferred in those four zones based on a combination of the following lines of evidence: mineral deposits (flows) observed on the downhole video, movement of fibrous bacterial growth adjacent to the fracture observed on the downhole video, vertical changes in borehole flow as measured by the heat pulse flow meter, and shifts in fluid conductivity measurements.

Of the four identified flow zones, the upper two are interpreted to coincide with flow zones previously identified at the Hyde Park site.[1] Accordingly, this report refers to the upper two flow zones at the SMC Site as Flow Zone 10 (FZ-10) and Flow Zone 11 (FZ-11) consistent with the naming convention used at the Hyde Park site. The lower two correlated flow zones are situated below the lower boundary of the hydrogeologic model that was developed for the Hyde Park site.[2] Nevertheless, for consistency, this report uses the Hyde Park nomenclature to identify the lower two zones – as the next numbered zones in the established sequence – Flow Zone 12 (FZ-12) and Flow Zone 13 (FZ-13). The observed characteristics of FZ-10 through FZ-13 are summarized below. A more complete description of the CSM activities will be provided in separate report to be submitted to NYSDEC in 2019.

1 Langan projected the Hyde Park flow zones onto the SMC Site using equations provided by CRA & Associates, Sayko Environmental Data Analysis, and S.S. Papadopulos & Associates, Inc. February 2002. Site Characterization Report – Revised Geologic and Hydrogeologic Characterization of the Hyde Park Landfill Site, Town of Niagara, New York.
2 The bottom of the Hyde Park model coincides with the bottom of the Lockport Group.

FZ-10 – This flow zone is located within the Lockport Group (dolomite and limestone) generally at elevations between 520 and 540 feet NAVD88. It is characterized by small solution cavities ("vugs") and sub-vertical to near horizontal fractures that vary in aperture and continuity. Groundwater inflow is apparent at FZ-10 in well EW-2 (observations from downhole video) and EW-3 (shift in fluid conductivity, changes in flow from HPFM readings), and can also be inferred in EW-1 based on data from the HPFM. These three wells all have long open intervals that intersect multiple flow zones. Outflow was apparent at FZ-10 in EW-5 based on downhole video and HPFM readings. EW-5 has a shorter open hole interval, and does not intersect with any of the deeper flow zones.

FZ-11 – This flow zone generally coincides with the contact between the Lockport Group and Rochester Shale, which occurs at elevations between 510 and 520 feet NAVD88. It is characterized by a single larger bedding-parallel fracture flanked above and below by smaller fractures and bedding features. Vugs were observed near this fracture depth in some of the boreholes (EW-2 and EW-3). Groundwater inflow was apparent at FZ-11 in EW-1 (mineralization, conductivity shift, HPFM data), EW-2 (movement of fibrous bacterial growth, conductivity shift, HPFM data), and EW-3 (mineralization, shift in conductivity).

FZ-12 – This flow zone is located within the Rochester Shale, at an elevation of around 470 feet NAVD88. It is characterized by a single, somewhat isolated, relatively small bedding-parallel fracture. Groundwater outflow was apparent at FZ-12 in EW-1 and EW-2 (movement of fibrous bacterial growth), EW-3 (mineralization, conductivity shift, HPFM data), R-19 (conductivity shift, HPFM data), and R-62 (HPFM data).

FZ-13 – This flow zone is located within the Irondequoit Limestone, at an elevation of around 440 to 445 feet NAVD88. It is characterized by a single, somewhat isolated but relatively large bedding-parallel fracture. Groundwater outflow was apparent at FZ-13 in EW-1 (conductivity shift, HPFM data). Except possibly for EW-2, the other boreholes investigated were too shallow to intersect FZ-13.

A complete description of the CSM investigation activities, and the evidence used to determine flow zones is provided in the Langan Hydrogeological Conceptual Site Model Report, submitted to NYSDEC under separate cover.

The identified flow zones (FZ-10 through FZ-13), and a shallow zone near the overburden/bedrock interface, have been used in the groundwater level monitoring and chemistry assessment for 2018. Contaminant isoconcentration maps were prepared for each flow zone and the shallow overburden/bedrock interface monitoring wells. The isoconcentration maps were generated to show the concentrations of carbon disulfide on one set of figures by flow zone, and combined concentrations of carbon tetrachloride and chloroform on the second set of figures.

Groundwater potentiometric maps were generated with Kriging interpolation methods using Golden Software's Surfer modeling tools and edited by hand. Contaminant isoconcentration maps for carbon disulfide and combined carbon tetrachloride and chloroform were by drawn hand.

6.2 Shallow Wells

Shallow groundwater wells, screened at or near the overburden/bedrock interface, were sampled in July 2018. The groundwater potentiometric map for the shallow wells is provided as Figure 4.

Contaminant isoconcentration maps for shallow wells were generated to show the concentrations of carbon disulfide on Figure 5, and combined concentrations of carbon tetrachloride and chloroform on Figure 6. The analytical results used to develop the isoconcentration maps are presented in Table 4.

6.3 Flow Zone 10

Flow Zone 10 is the most shallow bedrock water-bearing fracture zone at the Site, as described above. A groundwater potentiometric map was created for the FZ-10 wells using groundwater level data from the July 2018 sampling event as described above. Extraction wells EW-1 through EW-6 are included in this groundwater elevation assessment. The groundwater potentiometric map is provided as Figure 7.

An isoconcentration map for carbon disulfide in FZ-10 is presented as Figure 8, and combined concentrations of carbon tetrachloride and chloroform on Figure 9. The analytical results used to develop the isoconcentration maps are provided in Tables 4 through 6.

6.4 Flow Zone 11

Flow Zone 11 is the second bedrock flow zone identified at the Site, as described above. A groundwater potentiometric map was created for the FZ-11 wells using groundwater level data from the July 2018 sampling event as described above. Extraction wells EW-1 through EW-3 are included in this groundwater elevation assessment. The groundwater potentiometric map is provided as Figure 10.

An isoconcentration map for carbon disulfide in FZ-11 is presented as Figure 11, and combined concentrations of carbon tetrachloride and chloroform on Figure 12. The analytical results used to develop the isoconcentration maps are provided in Tables 4 through 6.

6.5 Flow Zone 12

Flow Zone 12 is the third flow zone encountered in the bedrock at the Site, as described above. A groundwater potentiometric map was created for the FZ-12 wells using groundwater level data from the July 2018 sampling event as described above. Extraction wells EW-1 through EW-3 are included in this groundwater elevation assessment. The groundwater potentiometric map is provided as Figure 13.

An isoconcentration map for carbon disulfide in FZ-12 is presented as Figure 14, and combined concentrations of carbon tetrachloride and chloroform on Figure 15. The analytical results used to develop the isoconcentration maps are provided in Tables 4 through 6.

6.6 Flow Zone 13

Flow zone 13 is the deepest flow zone investigated at the Site. An insufficient number of monitoring or extraction wells are present in FZ-13 to develop meaningful groundwater contour maps or contaminant isoconcentration maps, as only extraction well EW-1 and potentially EW-2 intersect FZ-13.

6.0 SUMMARY OF MASS REMOVAL

Mass removals from groundwater have been reported for the individual wells in previous sections of this report. The mass removal of VOCs from groundwater by the eight bedrock groundwater extraction wells (EW-1 through EW-6, LR-66, and OW-3), and the dual wells (DPA-201, DPA-202,

and DPA-203) was discussed in Section 3.3 of this report. The total volume of groundwater pumped from the Site in 2018 is summarized in Table 3. The total mass of VOCs removed from groundwater at the Site in 2018 is summarized in Table 2.

As Table 3 indicates, approximately 14.7 million gallons of groundwater were pumped from the Site and treated through the on-Site treatment system. This volume represents a 3% increase compared to 2017 (14.3 million gallons). As shown in Table 2, approximately 1,676 pounds of contaminants were removed by the treatment system during 2018.

TABLES

Table 1
Well Construction Summary Table
Stauffer Management Company Site
Lewiston, New York

Well ID	Northing (ft_NAD83)	Easting (ft_NAD83)	Elevation Top of Inner Casing (ft)	Northing, Easting, and Elevation of Top of Inner Casing Data Source	Ground Surface Elevation (ft)	Stickup Length (ft)	Well Depth (ft bgs)	Open Interval Top (ft bgs)	Open Interval Bottom (ft bgs)	Open Interval (ft)	Casing	Well Diameter (in)	Well Type	FLOW ZONE
B-02**	1146250.38	1027130.61	569.84	GHD	566.8	3.04	106	102.8	104.3	1.5	PVC	1.5	screened	12
B-03	1146431.00	1026443.00	--	See Notes 1 and 2	559	--	--	--	--	--	--	--	--	undetermined
D-05	1146055.00	1030610.00	--	See Notes 1 and 2	614	--	--	--	--	--	--	--	--	undetermined
D-07	1145981.00	1030470.00	--	See Notes 1 and 2	512.5	--	--	--	--	--	--	--	--	undetermined
DPA-201*	1146178.66	1027862.33	600.07	GHD	597	3.07	22	2	22	20	steel	4	screened	overburden/shallow bedrock
DPA-202*	1146133.86	1027999.73	602.08	GHD	598.5	3.58	26	5	25	20	steel	4	screened	overburden/shallow bedrock
DPA-203*	1146004.36	1028024.14	604.93	GHD	602	2.93	27.5	6.5	26.5	20	steel	4	screened	overburden/shallow bedrock
EW-1*	1146227.80	1027257.60	589.45	GHD	587	2.45	163	32	163	131	steel	6	open hole	10,11,12,13
EW-2*	1145964.82	1027521.43	592.09	GHD	588.4	3.69	150	23	150	127	steel	6	open hole	10,11,12,13
EW-3*	1145898.54	1028049.11	605.65	GHD	603.2	2.45	163	27	163	136	steel	6	open hole	10,11,12
EW-4*	1145868.64	1027640.35	595.4	GHD	592.9	2.5	71.6	16	71.6	55.6	steel	6	open hole	10
EW-5*	1146176.92	1027870.81	599.39	GHD	596.9	2.49	69	13.5	69	55.5	steel	6	open hole	10
EW-6*	1145962.39	1027927.15	601.28	GHD	598.8	2.48	71.5	16	71.5	55.5	steel	6	open hole	10
GPG-51	1146136.00	1026910.00	--	See Notes 1 and 2	577.25	--	--	--	--	--	--	--	--	undetermined
IR-49	1146068.00	1027257.00	587.22	See Notes 1 and 2	586	1.22	--	--	--	--	--	--	--	undetermined
IR-51	1146140.00	1026941.00	578.99	See Notes 1 and 2	576.75	2.24	--	--	--	--	--	--	--	undetermined
LR-16	1146290.15	1027964.42	599.89	GHD	597.9	1.99	90.5	80.5	90.5	10	PVC	2	screened	11
LR-2	1145951.27	1027666.92	594.53	GHD	592.1	*2.43*	89	78	88	10	PVC	2	screened	11
LR-20	1146329.88	1027486.05	592.06	GHD	591.5	0.56	85	75	85	10	PVC	2	screened	11
LR-48	1145850.19	1027394.73	586.85	GHD	585	*1.85*	74.7	54	64	10	PVC	2	screened	11
LR-49	1146096.36	1027350.14	588.01	GHD	586.3	1.71	73	63	73	10	PVC	2	screened	11
LR-50	1146341.31	1027230.19	589.51	GHD	587.9	1.61	75	63.7	73.7	10	PVC	2	screened	11
LR-51	1146150.99	1027010.38	579.15	GHD	577.4	1.75	65	54	64	10	PVC	2	screened	11
LR-61	1145873.86	1027848.90	601.66	GHD	598	3.66	99	78	99	21	steel	4	open hole	11
LR-62	1145761.51	1028288.01	607.94	GHD	603.5	4.44	103	83	103	20	steel	4	open hole	11
LR-66*	1146212.49	1027664.93	595.8	GHD	592.8	3	89.5	79.5	89.5	10	PVC	2	screened	11
LR-67	1146063.28	1028342.07	605.74	GHD	603.5	2.24	100	90	100	10	PVC	2	screened	11
LR-69	1146003.13	1027277.74	585.87	GHD	583.4	2.47	85	75	85	10	PVC	2	screened	11
LR-87	--	--	--	See Notes 1 and 2	--	--	--	--	--	--	--	--	--	undetermined
NX-3	1145569.00	1027916.00	--	See Notes 1 and 2	592.5	--	--	--	--	--	--	--	--	undetermined
OW-1	1146001.26	1028777.69	614.07	See Notes 1 and 2	612	2.07	139.6	118.3	139.6	21.3	steel	4	open hole	12
OW-10	1146570.00	1026783.00	573.8	See Notes 1 and 2	573.69	0.11	13.89	9	14	5	steel	2	open hole	undetermined
OW-11	1146484.76	1028230.73	574.9	GHD	577	-2.1	--	--	--	--	--	--	--	undetermined
OW-2	1146000.14	1028751.00	614.6	See Notes 1 and 2	612.3	2.3	188	160.2	188	27.8	steel	2	open hole	undetermined
OW-3*	1146319.42	1027449.45	591.8	GHD	589.7	2.1	128	108	128	20	PVC	2	screened	12
OW-4	1146300.54	1027412.96	592.26	See Notes 1 and 2	589.9	2.36	166.2	140.4	166.2	25.8	steel	2	open hole	undetermined
OW-5	1145909.41	1028437.80	609.25	GHD	607.2	2.05	101.8	88.8	101.8	13	steel	2	open hole	11
OW-6	1146043.90	1027248.63	587.87	See Notes 1 and 2	585.9	1.97	257.5	220	257.5	37.5	steel	4	open hole	undetermined
OW-7	1146234.89	1027912.33	600.24	See Notes 1 and 2	597.4	2.84	13.1	7.8	13	5.2	steel	2	screened	undetermined
OW-8	1147321.00	1026874.00	575.55	See Notes 1 and 2	575.4	0.15	11	6	11	5	steel	2	screened	undetermined
OW-9	--	--	574.9	See Notes 1 and 2	575	-0.1	14.6	9.5	14.5	5	steel	2	screened	undetermined
R-16	1146281.03	1027977.96	600.28	GHD	598	2.28	131	110	130	20	PVC	2	screened	12
R-19	1145637.56	1027895.17	598.86	GHD	594.8	4.06	151	95	151	56	steel	4	open hole	12
R-48	1145861.30	1027385.19	587.81	GHD	585.4	2.41	140	91	140	49	steel	4	open hole	12
R-49	1146056.42	1027269.79	587.57	See Notes 1 and 2	586.1	1.47	112.2	110.7	111.7	1	PVC	2	screened	12

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Stauffer Management Company Site
Lewiston, New York

Well ID		Northing (ft_NAD83)	Easting (ft_NAD83)	Elevation Top of Inner Casing (ft)	Northing, Easting, and Elevation of Top of Inner Casing Data Source	Ground Surface Elevation (ft)	Stickup Length (ft)	Well Depth (ft bgs)	Open Interval Top (ft bgs)	Open Interval Bottom (ft bgs)	Open Interval (ft)	Casing	Well Diameter (in)	Well Type	FLOW ZONE
R-50		1146322.43	1027229.32	590.41	GHD	587.6	2.81	141	90	141	51	steel	4	open hole	12
R-51**		1146167.05	1027008.21	578.78	GHD	577.2	1.58	120.3	118.6	120.1	1.5	PVC	1.5	screened	12
R-60		1146082.82	1027266.28	588.45	GHD	585.6	2.85	139	89	139	50	steel	4	open hole	12
R-61		1145873.34	1027860.10	601.6	GHD	597.9	3.7	155.5	100	155.5	55.5	steel	4	open hole	12
R-62		1145762.38	1028269.96	607.9	GHD	603.5	4.4	159.9	104	159.9	55.9	steel	4	open hole	12
R-66		1146185.36	1027669.49	591.83	GHD	589.4	2.43	150.8	130.8	150.8	20	steel	4	open hole	13
R-67		1146065.45	1028319.50	605.77	GHD	603.5	2.27	141	120	140	20	PVC	2	screened	12
R-68		1146370.17	1027111.05	587.38	GHD	585.7	1.68	121	100	120	20	PVC	2	screened	12
T-4*		1145853.89	1027644.87	595.81	GHD	590	5.81	–	–	–	–	–	–	–	undetermined
TEW2		–	–	591.38	See Notes 1 and 2	588.4	2.98	150.4	–	–	–	–	6	–	undetermined
W-1		1146193.83	1030527.00	618.49	See Notes 1 and 2	616.4	2.09	27.9	15.9	25.9	10	PVC	2	screened	undetermined
W-11		1145725.82	1029157.04	614.42	See Notes 1 and 2	612.8	1.62	31	19	29	10	PVC	2	screened	undetermined
W-12		1145881.82	1029322.03	616.59	See Notes 1 and 2	615.1	1.49	32.8	10.8	30.8	20	PVC	2	screened	undetermined
W-13		1146253.83	1028703.05	613.58	See Notes 1 and 2	611.6	1.98	21.6	15	20	5	PVC	2	screened	undetermined
W-14		1146019.82	1028766.05	614.85	See Notes 1 and 2	613	1.85	26	19	24	5	PVC	2	screened	undetermined
W-15A		1145769.82	1027936.07	612.89	See Notes 1 and 2	611	1.89	54	47	52	5	PVC	2	screened	undetermined
W-15B		1145725.82	1028672.05	613.22	See Notes 1 and 2	611.3	1.92	34	22	32	10	PVC	2	screened	undetermined
W-15C		1145718.82	1028639.05	612.99	See Notes 1 and 2	611.1	1.89	18	11	16	5	PVC	2	screened	undetermined
W-16		1146282.07	1027935.51	599.77	GHD	599.3	0.47	29.7	17.9	27.8	9.9	PVC	2	screened	shallow bedrock
W-16L		1146272.96	1027962.60	*600.16*	GHD	598.1	2.06	65	55	65	10	PVC	2	screened	10
W-17		1145957.27	1027916.00	602.36	GHD	600.2	2.16	26.8	15	24.9	9.9	PVC	2	screened	undetermined
W-18A		1145769.82	1027936.07	602.53	See Notes 1 and 2	600.7	1.83	27.5	15.5	25.5	10	PVC	2	screened	undetermined
W-18L		1145770.58	1028012.82	*601.47*	GHD	599	2.47	71	42	71	29	steel	6	open hole	10
W-18R		1145793.75	1028009.96	*601.45*	GHD	–	–	–	–	–	–	–	–	–	shallow bedrock
W-19A		1145628.66	1027876.51	597.41	GHD	595.5	1.91	39.5	33.5	38.5	5	PVC	2	screened	undetermined
W-19B		1145649.06	1027888.66	596.57	GHD	594.8	1.77	82	65	80	15	PVC	2	screened	10
W-19D		1145646.67	1027845.26	595.49	GHD	593.5	1.99	23	11	21	10	PVC	2	screened	undetermined
W-20		1146342.25	1027461.31	593.75	GHD	591.7	2.05	26.8	15	24.9	9.9	PVC	2	screened	shallow bedrock
W-22A		1145764.31	1027628.34	592.24	GHD	589.9	2.34	22.1	10.1	20.1	10	PVC	2	screened	undetermined
W-23A		1145898.82	1027507.09	594.7	See Notes 1 and 2	592.6	2.1	59	42.4	57.1	14.7	PVC	2	screened	undetermined
W-23B		1145937.55	1027602.34	594.67	GHD	592.7	1.97	41.9	30.1	40	9.9	PVC	2	screened	10
W-23C		1145919.67	1027596.09	594.89	GHD	592.8	2.09	21	14.2	19.1	4.9	PVC	2	screened	undetermined
W-29A		1146254.89	1030563.30	–	See Notes 1 and 2	615.6	–	–	–	–	–	–	–	–	undetermined
W-29B		1146257.60	1030533.10	–	See Notes 1 and 2	615.3	–	–	–	–	–	–	–	–	undetermined
W-2A		1146590.83	1030187.01	617.33	See Notes 1 and 2	615.5	1.83	31.5	15	20	5	PVC	2	screened	undetermined
W-2B		1146583.83	1030186.01	617.33	See Notes 1 and 2	615.5	1.83	51.1	26.75	41.5	14.75	PVC	2	screened	undetermined
W-2C		1146572.83	1030176.01	617.19	See Notes 1 and 2	615.5	1.69	13.2	8.2	13.2	5	PVC	2	screened	undetermined
W-34		1146152.90	1030536.20	–	See Notes 1 and 2	615.8	–	–	–	–	–	–	–	–	undetermined
W-3A		1146214.83	1029455.03	619.54	See Notes 1 and 2	617.4	2.14	60	44	54	10	PVC	2	screened	undetermined
W-3B		–	–	–	See Notes 1 and 2	–	–	–	–	–	–	–	–	–	undetermined
W-3C		1146208.83	1029462.03	619.11	See Notes 1 and 2	617.5	1.61	40.5	28.5	38.5	10	PVC	2	screened	undetermined
W-3D		1146218.83	1029466.03	619.48	See Notes 1 and 2	617.6	1.88	17.8	10.8	15.8	5	PVC	2	screened	undetermined
W-4		1146098.82	1029577.03	619.78	See Notes 1 and 2	617.8	1.98	21	9.3	19.2	9.9	PVC	2	screened	undetermined
W-48E		1145859.39	1027396.47	587.7	GHD	585.9	1.8	38.2	27.4	37.2	9.8	PVC	2	screened	undetermined
W-50L		1146328.51	1027248.64	589.96	GHD	588	1.96	65	55	65	10	PVC	2	screened	10
W-5A		1146005.82	1029865.02	619.81	See Notes 1 and 2	618	1.81	35.3	29.3	34.3	5	PVC	2	screened	undetermined
W-5B		1146007.82	1029880.02	619.75	See Notes 1 and 2	617.9	1.85	26.1	18	23	5	PVC	2	screened	undetermined

Table 1
Well Construction Summary Table
Stauffer Management Company Site
Lewiston, New York

Well ID		Northing (ft_NAD83)	Easting (ft_NAD83)	Elevation Top of Inner Casing (ft)	Northing, Easting, and Elevation of Top of Inner Casing Data Source	Ground Surface Elevation (ft)	Stickup Length (ft)	Well Depth (ft bgs)	Open Interval Top (ft bgs)	Open Interval Bottom (ft bgs)	Open Interval (ft)	Casing	Well Diameter (in)	Well Type	FLOW ZONE
W-5C		1146019.82	1029868.02	619.82	See Notes 1 and 2	617.8	2.02	19.1	11	17	6	PVC	2	screened	undetermined
W-6		1145913.82	1029764.02	619.93	See Notes 1 and 2	617.6	2.33	17	10.2	15.1	4.9	PVC	2	screened	undetermined
W-60L		1146077.85	1027246.83	588.86	GHD	585.5	3.36	–	–	–	–	–	–	–	undetermined
W-65		1145924.94	1027275.38	586.2	GHD	583.3	2.9	55	23	55	32	steel	6	open hole	10
W-66		1146185.58	1027646.92	595.1	GHD	592.5	2.6	46	19	46	27	steel	4	open hole	shallow bedrock
W-66L		1146207.72	1027640.84	594.26	GHD	592.3	1.96	64.7	55	65	10	PVC	2	screened	10
W-67		1146086.72	1028342.72	605.98	GHD	603.4	2.58	40	15	40	25	steel	4	open hole	shallow bedrock
W-67L		1146088.24	1028320.80	605.47	GHD	603.5	1.97	70	50	70	20	PVC	2	screened	10
W-70L		1145802.85	1027645.26	*594.57*	GHD	591.5	3.07	72	42	72	30	steel	6	open hole	10
W-7A		1145816.80	1029648.90	618.59	See Notes 1 and 2	616.8	1.79	34.4	28.4	33.4	5	PVC	2	screened	undetermined
W-7B		1145817.82	1029668.02	618.83	See Notes 1 and 2	616.6	2.23	61.8	45.8	59.8	14	PVC	2	screened	undetermined
W-7C		1145829.82	1029658.02	618.86	See Notes 1 and 2	616.8	2.06	19	12	17	5	PVC	2	screened	undetermined
W-8A		1145734.82	1029567.03	617.97	See Notes 1 and 2	616	1.97	24.45	7.85	22.55	14.7	PVC	2	screened	undetermined
W-9A		1145652.82	1029472.03	616.97	See Notes 1 and 2	614.9	2.07	54.5	42	52	10	PVC	2	screened	undetermined
W-9B		1145642.82	1029457.03	617.06	See Notes 1 and 2	615.1	1.96	35	28	33	5	PVC	2	screened	undetermined
W-9C		1145635.82	1029470.03	617.27	See Notes 1 and 2	615.2	2.07	26	14	24	10	PVC	2	screened	undetermined

Notes:

1 Northing and easting coordinates were obtained from GHD in electronic format on February 28, 2018. Additional northing and easting coordinates were obtained from well logs, if available, and converted from NAD27 to NAD83. Otherwise coordinates were estimated from a survey map by Niagara Boundary and Mapping Services dated July 6, 1993.

2 Elevation data were obtained from GHD in electronic format on February 28, 2018. Additional ground surface elevations were obtained from well logs, if available. Otherwise, ground surface elevations were estimated from a survey map by Niagara Boundary and Mapping Services dated July 6, 1993. Elevation datum is NAVD88

NAD27 North American Datum of 1927
NAD83 North American Datum of 1983
NAVD88 North American Vertical Datum of 1988
ft - feet
bgs - below ground surface
in - inches
– indicates no data is available.
* Extraction wells
** Well screens defined in well completion/boring logs as having a length of 1.5 feet and an outside diameter of 1.5 inches.

Table 2
Pump and Treat System Mass Removal by Well
Former Stauffer Mangement Company
Lewiston, New York
Langan Project No.: 130117301
4/2/2019

Extraction Well		EW1			EW2			EW3			EW4		
Sample Date		07/10/2018 18:25:00			07/10/2018 18:35:00			07/10/2018 19:15:00			07/16/2018 17:45:00		
Extraction Volume (gal)		Volume:	1,197,390		Volume:	1,977,008		Volume:	3,787,426		Volume:	16,978	
WATER BY 8260C (UG/L)		**Result**	**Mass Removal**	**% Removal**	**Result**	**Mass Removal**	**% Removal**	**Result**	**Mass Removal**	**% Removal**	**Result**	**Mass Removal**	**% Removal**
Benzene	0.7	0	-	0%	0	-	0%	0	-	0%	0	-	0%
Carbon disulfide	50	**39000**	391.42	75%	4.5	0.07	0%	**3800**	120.64	23%	19	0.00	0%
Carbon tetrachloride	5	**6800**	68.25	8%	**420**	6.96	1%	**5400**	171.43	21%	**480**	0.07	0%
Chlorobenzene	5	0	-	0%	0	-	0%	0	-	0%	**29**	0.00	100%
Chloroform	7	**3300**	33.12	10%	**240**	3.98	1%	**3400**	107.94	34%	**310**	0.04	0%
Methylene Chloride	5	0	-	0%	**12**	0.20	41%	0	-	0%	**12**	0.00	0%
Tetrachloroethene	5	0	-	0%	**12**	0.20	1%	**96**	3.05	16%	**30**	0.00	0%
Toluene	5	0	-	0%	0	-	0%	0	-	0%	0	-	0%
Trichloroethene	5	0	-	0%	4.9	0.08	1%	**180**	5.71	67%	**11**	0.00	0%
Total VOCs	NA	49100.0	492.79	29%	693.4	11.49	1%	12876.0	408.76	24%	891.0	0.13	0%
Removal Efficiency (lbs/1,000 gal)			0.41			0.01			0.11			0.01	7%

Notes:
- % removal column shows the % of individual compound mass removed by each well.

Table 2
Pump and Treat System Mass Removal by Well
Former Stauffer Mangement Company
Lewiston, New York
Langan Project No.: 130117301
4/2/2019

Extraction Well		EW5/DPA201			EW6			DPA202			DPA203		
Sample Date		07/11/2018 18:20:00			07/11/2018 18:40:00			07/13/2018 12:30:00			07/11/2018 18:30:00		
Extraction Volume (gal)		Volume:	3,995,688		Volume:	1,163,724		Volume:	38,545		Volume:	101	
WATER BY 8260C (UG/L)		**Result**	**Mass Removal**	**% Removal**	**Result**	**Mass Removal**	**% Removal**	**Result**	**Mass Removal**	**Result**	**Mass Removal**	**% Removal**	**% Removal**
Benzene	0.7	0	-	0%	0	-	0%	0	-	0%	0	-	0%
Carbon disulfide	50	**230**	7.70	1%	0	-	0%	**130**	0.04	0%	**8300**	0.01	0%
Carbon tetrachloride	5	**580**	19.43	2%	**56000**	546.24	67%	**320**	0.10	0%	**240000**	0.20	0%
Chlorobenzene	5	0	-	0%	0	-	0%	0	-	0%	0	-	0%
Chloroform	7	**430**	14.40	5%	**16000**	156.07	49%	**190**	0.06	0%	**55000**	0.05	0%
Methylene Chloride	5	**7.2**	0.24	50%	0	-	0%	**6.4**	0.00	0%	0	-	0%
Tetrachloroethene	5	**110**	3.68	20%	**1200**	11.71	62%	**33**	0.01	0%	**2000**	0.00	0%
Toluene	5	0	-	0%	0	-	0%	0	-	0%	0	-	0%
Trichloroethene	5	**80**	2.68	32%	0	-	0%	**20**	0.01	0%	0	-	0%
Total VOCs	NA	1437.2	48.13	3%	73200.0	714.02	43%	699.4	0.23	0%	305300.0	0.26	0%
Removal Efficiency (lbs/1,000 gal)			0.01			0.61			0.01			2.56	

Notes:
- % removal column shows the % of individual compound mass removed by each well.

Table 2
Pump and Treat System Mass Removal by Well
Former Stauffer Mangement Company
Lewiston, New York
Langan Project No.: 130117301
4/2/2019

Extraction Well		**LR66**			**OW3**			Total Mass Removal (pounds)
Sample Date		07/13/2018 12:45:00			07/12/2018 20:50:00			
Extraction Volume (gal)		Volume:	24,702		Volume:	59		
WATER BY 8260C (UG/L)		**Result**	**Mass Removal**	**% Removal**	**Result**	**Mass Removal**	**% Removal**	
Benzene	0.7	0	-	0%	0	-	0%	-
Carbon disulfide	50	**320**	0.07	0%	**1200000**	0.60	0%	520.55
Carbon tetrachloride	5	**26000**	5.38	1%	**12000**	0.01	0%	818.07
Chlorobenzene	5	0	-	0%	0	-	0%	0.00
Chloroform	7	**9300**	1.93	1%	**11000**	0.01	0%	317.59
Methylene Chloride	5	**200**	0.04	9%	0	-	0%	0.49
Tetrachloroethene	5	**510**	0.11	1%	**1600**	0.00	0%	18.76
Toluene	5	0	-	0%	0	-	0%	-
Trichloroethene	5	**53**	0.01	0%	0	-	0%	8.49
Total VOCs	NA	699.0	0.14	0%	24600.0	0.01	0%	1,676
Removal Efficiency (lbs/1,000 gal)			0.01			0.21		0.11

Notes:
- % removal column shows the % of individual compound mass removed by each well.

Table 3
System Extraction and Discharge Flow Rates
Former Stauffer Management Company, LLC
Lewiston, New York
Langan Project No.: 130117301
2/26/2019

		Totalizer Readings														Totalizer Readings									
		EW-1		EW-2		EW-3		EW-4/T-4		EW-5/DPA-201				EW-6		DPA-202		DPA-203		OW-3		LR-66		Effluent	
		Totalizer	Calculated Flow Rate	Totalizer	Calculated Flow Rate	Totalizer	Calculated Flow Rate	Totalizer	Calculated Flow Rate	Totalizer	Calculated Flow Rate	Pulses	Calculated Flow from DPA-201	Totalizer	Calculated Flow Rate	Totalizer	Calculated Flow Rate	Totalizer	Calculated Flow Rate	Totalizer	Calculated Flow Rate	Totalizer	Calculated Flow Rate	Totalizer	Calculated Flow Rate
Date	Difference in Minutes	Gallons	GPM	Gallons	GPM	Gallons	GPM	Gallons	GPM	Gallons	GPM	#	GPM	Gallons	GPM	Gallons	GPM	Gallons	GPM	Gallons	GPM	Gallons	GPM	Gallons	GPM
1/2/2018		6177254		31150698		4108720		183417		84955547		619564		648955		298643		143839						206400	41.00
1/29/2018	38880	6298879	3.13	31359872	5.38	4405108	7.62	184294	0.02	85290137	8.61		-10.36	649183	0.01	301118	0.06	143840	0.00					1424954	31.34
2/5/2018	10080	6334786	3.56	31400000	3.98	4498626	9.28	184830	0.05	85400000	10.90		-39.95	651317	0.21	303446	0.23	143840	0.00					1838234	41.00
2/7/2018	2880	6347196	4.31	31425000	8.68	4528176	10.26	184995	0.06	85433226	11.54		0.00	653679	0.82	303443	0.00	143840	0.00					1956314	41.00
2/9/2018	2880	6357381	3.54	31450000	8.68	4552143	8.32	185126	0.05	85466451	11.54		0.00	656041	0.82	303348	-0.03	143840	0.00					2074394	41.00
2/12/2018	4320	6373311	3.69	31484740	8.04	4598134	10.65	185340	0.05	85499677	7.69		0.00	658403	0.55	303378	0.01	143840	0.00					2251514	41.00
2/14/2018	2880	6383468	3.53	31502671	6.23	4615297	5.96	185480	0.05	85532903	11.54		0.00	660765	0.82	303408	0.01	143840	0.00					2369594	41.00
2/16/2018	2880	6392766	3.23	31521551	6.56	4642407	9.41	185634	0.05	85566129	11.54		0.00	663127	0.82	303438	0.01	143840	0.00					2487674	41.00
2/19/2018	4320	6402184	2.18	31543615	5.11	4676248	7.83	185839	0.05	85632580	15.38		0.00	665489	0.55	304506	0.25	143840	0.00					2664794	41.00
2/21/2018	2880	6407542	1.86	31560963	6.02	4703843	9.58	186006	0.06	85670388	13.13		0.00	677677	4.23	305574	0.37	143840	0.00					2782874	41.00
2/23/2018	2880	6414944	2.57	31577663	5.80	4729735	8.99	186134	0.04	85718728	16.78		0.00	689865	4.23	309612	1.40	143840	0.00					2900954	41.00
2/28/2018	7200	6427121	1.69	31616167	5.35	4798929	9.61	186476	0.05	85767067	6.71		0.00	702053	1.69	313649	0.56	143840	0.00					3243705	47.60
3/5/2018	7200	6438657	1.60	31654477	5.32	4851731	7.33	186785	0.04	85831262	8.92		0.00	713202	1.55	316665	0.42	143840	0.00					3500000	35.60
3/7/2018	2880	6444938	2.18	31671962	6.07	4878262	9.21	186935	0.05	85863500	11.19		0.00	714343	0.40	318827	0.75	143848	0.00					3638792	48.19
3/14/2018	10080	6458418	1.34	31718161	4.58	4956527	7.76	187475	0.05	85947972	8.38	831232	53.60	717324	0.30	320731	0.19	143848	0.00					3967366	32.60
3/16/2018	2880	6463215	1.67	31733816	5.44	4988454	11.09	187626	0.05	85977082	10.11	837348	1.38	717331	0.00	320726	0.00	143840	0.00					4076639	37.94
3/19/2018	4320	6467374	0.96	31755946	5.12	5016883	6.58	187899	0.06	86011100	7.87	845419	1.21	719217	0.44	320789	0.01	143840	0.00					4220336	33.26
3/21/2018	2880	6470783	1.18	31773066	5.94	5043293	9.17	188069	0.06	86041091	10.41	852771	1.66	722686	1.20	320713	-0.03	143840	0.00					4338892	41.17
3/23/2018	2880	6473118	0.81	31790735	6.14	5078773	12.32	188248	0.06	86071951	10.72	859555	1.53	723947.6	0.44	320829	0.04	143840	0.00					4458458	41.52
3/26/2018	4320	6477389	0.99	31817639	6.23	5111389	7.55	188530	0.07	86119436	10.99	869072	1.43	723957	0.00	320819	0.00	143840	0.00					4639202	41.84
3/28/2018	2880	6479819	0.84	31832698	5.23	5133331	7.62	188679	0.05	86146319	9.33	874598	1.25	723958	0.00	320916	0.03	143840	0.00					4738535	34.49
3/29/2018	1440	6481145	0.92	31841138	5.86	5146223	8.95	188766	0.06	86160647	9.95	877570	1.34	723958	0.00	320918	0.00	143840	0.00					4796318	40.13
3/30/2018	1440	6482578	1.00	31850643	6.60	5166245	13.90	188861	0.07	86177204	11.50	881534	1.79	723958.8	0.00	321002	0.06	143840	0.00					4857385	42.41
4/2/2018	4320	6486825	0.98	31887778	8.60	5202128	8.31	189130	0.06	86220589	10.04	893061	1.73	731476.6	1.74	321181	0.04	143840	0.00					5042953	42.96
4/4/2018	2880	6490649	1.33	31896518	3.03	5231373	10.15	189314	0.06	86249997	10.21	900737	1.73	740016	2.97	321439	0.09	143840	0.00					5172880	45.11
4/6/2018	2880	6493709	1.06	31915318	6.53	5259707	9.84	189510	0.07	86275163	8.74	903850	0.70	750098.3	3.50	321562	0.04	143840	0.00					5296212	42.82
4/9/2018	4320	6498818	1.18	31944038	6.65	5304152	10.29	189798	0.07	86319980	10.37	915835	1.80	765395.7	3.54	321637	0.02	143840	0.00					5497069	46.49
4/11/2018	2880	6501726	1.01	31961676	6.12	5331033	9.33	189965	0.06	86347861	9.68	919470	0.82	772833.6	2.58	321729	0.03	143840	0.00					5618699	42.23
4/13/2018	2880	6504823	1.08	31981723	6.96	5361351	10.53	190151	0.06	86378897	10.78	919470	0.00	780956.9	2.82	321629	-0.03	143840	0.00					5755171	47.39
4/16/2018	4320	6508823	0.93	32010863	6.75	5403863	9.84	190499	0.08	86418124	9.08	920989	0.23	794554.8	3.15	321627	0.00	143840	0.00					5942186	43.29
4/18/2018	2880	6512158	1.16	32029016	6.30	5432614	9.98	190671	0.06	86445567	9.53	925534	1.03	806387.8	4.11	321686	0.02	143840	0.00					6072416	45.22
4/20/2018	2880	6515295	1.09	32046933	6.22	5461589	10.06	190869	0.07	86473428	9.67	925939	0.09	818947.6	4.36	321716	0.01	143840	0.00					6202419	45.14
4/23/2018	4320	6517282	0.46	32065398	4.27	5493241	7.33	191128	0.06	86495995	5.22	934368	1.27	829895.3	2.53	322383	0.15	143840	0.00					6329553	29.43
4/25/2018	2880	6521303	1.40	32084143	6.51	5523466	10.49	191299	0.06	86528300	11.22	937821	0.78	842121.8	4.25	322412	0.01	143840	0.00					6469943	48.75
4/27/2018	2880	6524571	1.13	32101065	5.88	5551889	9.87	191439	0.05	86551505	8.06	941023	0.72	851339.8	3.20	322410	0.00	143840	0.00					6592901	42.69
5/2/2018	7200	6530898	0.88	32140978	5.54	5617841	9.16	191798	0.05	86607905	7.83	950485	0.85	869758.2	2.56	322392	0.00	143840	0.00					6868140	38.23
5/9/2018	10080	6541512	1.05	32200212	5.88	5709959	9.14	192247	0.04	86700142	9.15	957493	0.45	884364.2	1.45	322381	0.00	143840	0.00					7279475	40.81
5/16/2018	10080	6552176	1.06	32261886	6.12	5882557	17.12	192690	0.04	86798684	9.78	966448	0.58	886288.4	0.19	322923	0.05	143840	0.00					7692722	41.00
5/23/2018	10080	6561729	0.95	32320737	5.84	5888379	0.58	193114	0.04	86903695	10.42	967820	0.09	887280	0.10	323282	0.04	143840	0.00					8078660	38.29
5/30/2018	10080	6568516	0.67	32380279	5.91	5972444	8.34	193578	0.05	86983837	7.95	974394	0.42	887288.4	0.00	324425	0.11	143840	0.00					8499324	41.73
6/6/2018	10080	6570516	0.20	32380279	0.00	5972444	0.00	193982	0.04	86984458	0.06	989936	1.00	887288.4	0.00	326206	0.18	143840	0.00					8582644	8.27
6/22/2018	23040	6575335	0.21	32380279	0.00	6099086	5.50	194343	0.02	87016112	1.37	2568	0.36	887288.4	0.00	328358	0.09	143840	0.00					8667810	3.70
6/25/2018	4320	6590545	3.52	32380467	0.04	6131172	7.43	194449	0.02	87052422	8.41	3543	0.15	887288.4	0.00	328358	0.00	143840	0.00					8776662	25.20
7/2/2018	10080	6632539	4.17	32380555	0.01	6267854	13.56	194666	0.02	87162903	10.96	3559	0.00	887288.4	0.00	328358	0.00	143840	0.00					8874534	9.71
7/24/2018	31680	6742657	3.48	32388789	0.26	6426591	5.01	195101	0.01	87465187	9.54	3559	0.00	894233.3	0.22	328381	0.00	143840	0.00					371088	11.71
8/3/2018	14400	6749878	0.50	32388789	0.00	6448298	1.51	197453	0.16	87484998	1.38	3559	0.00	895268.2	0.07	329688	0.09	143840	0.00					437718	4.63
8/8/2018	7200	6749878	0.00	32388789	0.00	6448298	0.00	197462	0.00	87485153	0.02	3559	0.00	895268.2	0.00	332284	0.36	143840	0.00					453578	2.20
8/15/2018	10080	6749878	0.00	32388798	0.00	6448298	0.00	197464	0.00	87485298	0.01	3559	0.00	895268.2	0.00	335026	0.27	143840	0.00					468309	1.46
8/24/2018	12960	6749897	0.00	32388790	0.00	6460871	0.97	197476	0.00	87485732	0.03	3559	0.00	895268.4	0.00	337017	0.15	143840	0.00					499049	2.37
8/27/2018	4320	6751382	0.34	32390810	0.47	6467249	1.48	197939	0.11	87490876	1.19	3559	0.00	897451.8	0.51	337014	0.00	143840	0.00					522938	5.53
8/30/2018	4320	6751606	0.05	32391796	0.23	6478386	2.58	198187	0.06	87493176	0.53	3559	0.00	898438.4	0.23	337023	0.00	143840	0.00					533779	2.51
9/4/2018	7200	6778760	3.77	32435815	6.11	6532169	7.47	199033	0.12	87591384	13.64	3559	0.00	899983.2	0.21	337036	0.00	143840	0.00	1388	0.19	0	0.00	828295	40.91
9/5/2018	1440	6783783	3.49	32444333	5.92	6543567	7.92	199179	0.10	87608604	11.96	3559	0.00	899983.3	0.00	337037	0.00	143840	0.00	1388	0.00	0	0.00	882208	37.44
9/6/2018	1440	6788871	3.53	32452403	5.60	6554695	7.73	199292	0.08	87628163	13.58	3559	0.00	900003.2	0.01	337043	0.00	143840	0.00	1415	0.02	9667.5	6.71	939981	40.12
9/10/2018	5760	6805668	2.92	32474286	3.80	6597765	7.48	200020	0.13	87680385	9.07	3559	0.00	985568.8	14.86	337042	0.00	143848	0.00	1416	0.00	15420.10	1.00	1119470	31.16
9/12/2018	2880	6815652	3.47	32486325	4.18	6618147	7.08	200243	0.08	87708987	9.93	3559	0.00	985818.2	0.09	337042	0.00	143848	0.00	1416	0.00	16825.00	0.49	1209885	31.39
9/14/2018	2880	6822868	2.51	32493322	2.43	6631572	4.66	200295	0.02	87727695	6.50	3559	0.00	986568.7	0.26	337040	0.00	143848	0.00	1416	0.00	19065.80	0.78	1269724	20.78
9/19/2018	7200	6858383	4.93	32518194	3.45	6694988	8.81	200395	0.01	87820644	12.91	3559	0.00	988837.4	0.32	337852	0.11	143848	0.00	1416	0.00	24576.00	0.77	1549636	38.88
9/26/2018	10080	6888934	3.03	32549619	3.12	6788684	9.30	200395	0.00	87947646	12.60	3559	0.00	988837.4	0.00	337856	0.00	143940	0.01	1416	0.00	24576.10	0.00	1932412	37.97
9/28/2018	2880	6923124	11.87	32557290	2.66	6803883	5.28	200395	0.00	87983668	12.51	3559	0.00	988837.4	0.00	337856	0.00	143940	0.00	1416	0.00	24576.10	0.00	2038349	36.78
10/5/2018	10080	6971558	4.80	32586716	2.92	6884718	8.02	200395	0.00	88105229	12.06	3559	0.00	987837.4	-0.10	337856	0.00	143940	0.00	1416	0.00	24576.10	0.00	2403975	36.27
10/10/2018	7200	7004398	4.56	32611428	3.43	6945846	8.49	200395	0.00	88186110	11.23	3559	0.00	988236.1	0.06	337089	-0.11	143940	0.00	1416	0.00	24576.10	0.00	2665848	36.37
10/15/2018	7200	7048778	6.16	32621919	1.46	6988238	5.89	200395	0.00	88272499	12.00	3559	0.00	988944.4	0.10	337089	0.00	143940	0.00	1416	0.00	24576.10	0.00	2935172	37.41
10/23/2018	11520	7074389	2.22	32657203	3.06	7075145	7.54	200395	0.00	88353306	7.01	3559	0.00	912663.2	-6.62	337089	0.00	143940	0.00	1416	0.00	24576.10	0.00	3631198	60.42
10/30/2018	10080	7113749	3.90	32720989	6.33	7167185	9.13	200395	0.00	88473067	11.88	3559	0.00	914571.2	0.19	337096	0.00	143940	0.00	1416	0.00	24576.10	0.00	3631198	0.00
11/14/2018	21600	7185865	3.34	32800731	3.69	7334675	7.75	200395	0.00	88668190	9.03	3559	0.00	917737.4	0.15	337089	0.00	143940	0.00	1416	0.00	24576.10	0.00	4304146	31.16
11/27/2018	18720	7241138	2.95	32896363	5.11	7488799	8.23	200395	0.00	88843244	9.35	3559	0.00	918813.6	0.06	337089	0.00	143940	0.00	1416	0.00	24576.00	0.00	4924858	33.16
12/5/2018	11520	7288711	4.13	32962007	5.70	7583678	8.24	200395	0.00	88932848	7.78	3559	0.00	937528.8	1.62	337188	0.01	143940	0.00	1416	0.00	24576.00	0.00	5352858	37.15
12/12/2018	10080	7324453	3.55	33026476	6.40	7716687	13.20	200395	0.00	88945735	1.28	3359	-0.01	937528.8	0.00	337188	0.00	143940	0.00	1416	0.00	24702.00	0.01	5645675	29.05
12/26/2018	20160	7374644	2.49	33127706	5.02	7896146	8.90	200395	0.00	88951235	0.27	3359	-0.01	1812679	43.41	337188	0.00	143940	0.00	3.3	0.00	24702.00	0.00	6069909	21.04

Notes:
GPM - Gallons per Minute
Greyed boxes denote calculated data

Table 4
Summary of Groundwater Analytical Data
July 2018 Low Flow Sampling Event
Former Stauffer Management Company Site
Lewiston, New York
Langan Project No.: 130117301
3/8/2019

		Shallow Bedrock/Overburden Wells															
		W16				W18R				W20				W66			
Client ID		W16-071118				W18R_07142018				W20-071218				W66-071018			
Lab Sample ID		480-138935-8				480-139047-13				480-138935-24				480-138935-3			
Sampling Date		07/11/2018 10:55:00				07/14/2018 00:45:00				07/12/2018 13:45:00				07/10/2018 11:45:00			
Matrix		Water				Water				Water				Water			
Dilution Factor		2				1000				1				10			
	NY NYSDEC Groundwater Criteria	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL
WATER BY 8260C (UG/L)																	
Benzene	0.7	**3.6**		0.82	2.0	**10**	J	8.2	20	0.41	U	0.41	1.0	4.1	U	4.1	10
Carbon disulfide	50	4.7		0.38	2.0	**970**	J D B	190	1000	0.19	U	0.19	1.0	1.9	U	1.9	10
Carbon tetrachloride	5	0.54	U	0.54	2.0	**27000**	D	270	1000	0.27	U	0.27	1.0	**650**		2.7	10
Chlorobenzene	5	1.5	U	1.5	2.0	15	U	15	20	0.75	U	0.75	1.0	7.5	U	7.5	10
Chloroform	7	2.6		0.68	2.0	**18000**	D	340	1000	0.34	U	0.34	1.0	**490**		3.4	10
Methylene Chloride	5	0.88	U	0.88	2.0	**820**	J D	440	1000	0.44	U	0.44	1.0	4.4	U	4.4	10
Tetrachloroethene	5	2.3		0.72	2.0	**280**		7.2	20	0.36	U	0.36	1.0	**60**		3.6	10
Toluene	5	2.6		1.0	2.0	10	U	10	20	0.51	U	0.51	1.0	5.1	U	5.1	10
Trichloroethene	5	3.0		0.92	2.0	**17**	J	9.2	20	0.46	U	0.46	1.0	**22**		4.6	10
Total Conc	NA	18.8		NA	NA	45000.0		NA	NA	0.0		NA	NA	1222.0		NA	NA
WATER BY 200.7 REV 4.4(UG/L)																	
Calcium	NA	2.97E+05		6.08E+02	5.00E+03	6260		100	500	3.03E+05		6.08E+02	5.00E+03	1.95E+05		6.08E+02	5.00E+03
Manganese	NA	3010		5.0	15.0	30.5	B	0.40	3.0	54.2		5.0	15.0	763		5.0	15.0
Potassium	NA	11300		207	5000	5960		100	500	9240		207	5000	1950	J	207	5000
Sodium	NA	6.03E+05		4.23E+03	2.50E+04	1240000		1620	5000	3.56E+05		8.46E+02	5.00E+03	5.29E+04		8.46E+02	5.00E+03
WATER BY 300.0 (MG/L)																	
Chloride	NA	468	D	7.80	12.0	307		5.6	10.0	355	D	7.80	12.0	21.8	D	0.78	1.20
Sulfate	NA	961	D	33.2	60.0	462		7.0	40.0	900	D	33.2	60.0	434	D	9.96	18.0
WATER BY SM 2340C (MG/L)																	
Hardness as calcium carbonate (mg/l)	NA	1220		50.0	50.0	20.0		2.6	10.0	1160		50.0	50.0	706		50.0	50.0
Field Parameters																	
pH (S.U.)	NA	6.80				10.32				7.59				7.21			
Specific Conductivity (mS/cm)	NA	4.67				3.76				2.73				1.26			
Redox Potential (mV)	NA	-297				-198				31				159			
Dissolved Oxygen (mg/L)	NA	0.03				2.20				0.40				1.48			
Turbidity (NTU)	NA	4				4				0				0			

Notes:

NYSDEC	New York State Department of Environmental Concervation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
1	RL exceeds NYSDEC groundwater criteria.

Table 4
Summary of Groundwater Analytical Data
July 2018 Low Flow Sampling Event
Former Stauffer Management Company Site
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Langan Project No.: 130117301
3/8/2019

		Flow Zone 10 Wells																			
		W18L				W-16L				W67				W50L				W65			
Client ID		W18L-071218				W16L-071018				W67-071218				W50L-071218				W65-071218			
Lab Sample ID		480-138935-21				480-138935-7				480-138935-25				480-138935-22				480-138935-29			
Sampling Date		07/12/2018 10:30:00				07/10/2018 10:45:00				07/12/2018 14:40:00				07/12/2018 10:50:00				07/12/2018 18:05:00			
Matrix		Water				Water				Water				Water				Water			
Dilution Factor		10				2				40				1				1			
	NY NYSDEC Groundwater Criteria	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL
WATER BY 8260C (UG/L)																					
Benzene	0.7	4.1	U	4.1	10	0.82	U	0.82	2.0	16	U	16	40	0.41	U	0.41	1.0	**1.0**		0.41	1.0
Carbon disulfide	50	1.9	U	1.9	10	23		0.38	2.0	**93**		7.6	40	0.49	J	0.19	1.0	0.41	J	0.19	1.0
Carbon tetrachloride	5	**280**		2.7	10	0.54	U	0.54	2.0	**1800**		11	40	0.27	U	0.27	1.0	0.27	U	0.27	1.0
Chlorobenzene	5	7.5	U	7.5	10	1.5	U	1.5	2.0	30	U	30	40	0.75	U	0.75	1.0	**6.5**		0.75	1.0
Chloroform	7	**740**	F1	3.4	10	**12**		0.68	2.0	**1400**		14	40	0.34	U	0.34	1.0	0.41	J	0.34	1.0
Methylene Chloride	5	**82**		4.4	10	0.88	U	0.88	2.0	18	U	18	40	0.44	U	0.44	1.0	0.44	U	0.44	1.0
Tetrachloroethene	5	**39**		3.6	10	0.72	U	0.72	2.0	**150**		14	40	0.36	U	0.36	1.0	0.36	U	0.36	1.0
Toluene	5	5.1	U	5.1	10	1.0	U	1.0	2.0	20	U	20	40	0.51	U	0.51	1.0	0.51	U	0.51	1.0
Trichloroethene	5	**65**		4.6	10	2.8		0.92	2.0	**140**		18	40	0.46	U	0.46	1.0	0.46	U	0.46	1.0
Total Conc	NA	1206.0		NA	NA	37.8		NA	NA	3583.0		NA	NA	0.49		NA	NA	8.32		NA	NA
WATER BY 200.7 REV 4.4(UG/L)																					
Calcium	NA					5.36E+05		1.82E+03	1.50E+04					2.55E+05		6.08E+02	5.00E+03				
Manganese	NA					104		5.0	15.0					444		5.0	15.0				
Potassium	NA					10400		207	5000					5880		207	5000				
Sodium	NA					3.69E+05		8.46E+02	5.00E+03					5.01E+05		4.23E+03	2.50E+04				
WATER BY 300.0 (MG/L)																					
Chloride	NA					594	D	15.6	24.0					896	D	15.6	24.0				
Sulfate	NA					964	D	66.4	120					377	D	66.4	120				
WATER BY SM 2340C (MG/L)																					
Hardness as calcium carbonate (mg/l)	NA					1530		50.0	50.0					1020		50.0	50.0				
Field Parameters																					
pH (S.U.)	NA	7.28				7.11				6.78				7.11				7.12			
Specific Conductivity (mS/cm)	NA	2.54				4.15				1.92				3.19				2.58			
Redox Potential (mV)	NA	-179				-280				-112				18				-55			
Dissolved Oxygen (mg/L)	NA	0.09				0.00				0.04				0.41				0.08			
Turbidity (NTU)	NA	0				4				3				3				0			

Notes:

NYSDEC	New York State Department of Environmental Concervation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
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Lewiston, New York
Langan Project No.: 130117301
3/8/2019

		Flow Zone 10 Wells																		
		W66L				W67L				W70L				W19B						
Client ID		W66L-071018				W67L-071218				W70L-071218				W19B_07132018				DUP3_07132018 (W19B)			
Lab Sample ID		480-138935-2				480-138935-23				480-138935-26				480-139047-1				480-139047-2			
Sampling Date		07/10/2018 16:10:00				07/12/2018 12:35:00				07/12/2018 16:10:00				07/13/2018 11:10:00				07/13/2018 11:10:00			
Matrix		Water				Water				Water				Water				Water			
Dilution Factor		1				5				1				1				80			
	NY NYSDEC Groundwater Criteria	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL
WATER BY 8260C (UG/L)																					
Benzene	0.7	0.41	U	0.41	1.0	2.1	U	2.1	5.0	**2.5**		0.41	1.0	**1.9**		0.41	1.0	33	U	33	80
Carbon disulfide	50	0.19	U	0.19	1.0	17		0.95	5.0	9.7		0.19	1.0	**62**	J B D	19	100	**69**	J B	15	80
Carbon tetrachloride	5	0.27	U	0.27	1.0	**92**		1.4	5.0	0.27	U	0.27	1.0	**1200**	D	27	100	**2100**		22	80
Chlorobenzene	5	0.75	U	0.75	1.0	3.8	U	3.8	5.0	**57**		0.75	1.0	**120**	D	75	100	**130**		60	80
Chloroform	7	0.34	U	0.34	1.0	**290**		1.7	5.0	0.60	J	0.34	1.0	**1100**	D	34	100	**4200**		27	80
Methylene Chloride	5	0.44	U	0.44	1.0	2.2	U	2.2	5.0	0.44	U	0.44	1.0	**300**	D	44	100	**340**		35	80
Tetrachloroethene	5	0.36	U	0.36	1.0	**26**		1.8	5.0	0.36	U	0.36	1.0	**51**		0.36	1.0	**56**	J	29	80
Toluene	5	0.51	U	0.51	1.0	2.6	U	2.6	5.0	0.59	J	0.51	1.0	2.0		0.51	1.0	41	U	41	80
Trichloroethene	5	0.46	U	0.46	1.0	**32**		2.3	5.0	**8.4**		0.46	1.0	**350**	D	46	100	**330**		37	80
Total Conc	NA	0.0		NA	NA	457.0		NA	NA	78.79		NA	NA	70.9		NA	NA	7225.0		NA	NA
WATER BY 200.7 REV 4.4(UG/L)																					
Calcium	NA	2.54E+05		6.08E+02	5.00E+03	2.99E+05		6.08E+02	5.00E+03	1.01E+06		6080	50000	370000		100	500				
Manganese	NA	36.4		5.0	15.0	13.0	J	5.0	15.0	1240		5.0	15.0	362	B	0.40	3.0				
Potassium	NA	4530	J	207	5000	12400		207	5000	44100		207	5000	8300		100	500				
Sodium	NA	2.69E+05		8.46E+02	5.00E+03	5.41E+05		4.23E+03	2.50E+04	1.10E+06		8460	50000	183000		324	1000				
WATER BY 300.0 (MG/L)																					
Chloride	NA	485	D	7.80	12.0	1040	D	23.4	36.0	2580	D	78.0	120	310		2.8	5.0				
Sulfate	NA	391	D	33.2	60.0	430	D	99.6	180	1720	D	332	600	887		3.5	20.0				
WATER BY SM 2340C (MG/L)																					
Hardness as calcium carbonate (mg/l)	NA	823		25.0	25.0	1140		50.0	50.0	3770		125	125	1300		5.3	20.0				
Field Parameters																					
pH (S.U.)	NA	7.30				6.85				6.85				6.80				6.80			
Specific Conductivity (mS/cm)	NA	2.71				4.29				10.40				2.82				2.82			
Redox Potential (mV)	NA	-4				63				-205				-138				-138			
Dissolved Oxygen (mg/L)	NA	0.01				4.29				0.93				0.00				0.00			
Turbidity (NTU)	NA	0				0				0				7				7			

Notes:

NYSDEC	New York State Department of Environmental Concervation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
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Table 4
Summary of Groundwater Analytical Data
July 2018 Low Flow Sampling Event
Former Stauffer Management Company Site
Lewiston, New York
Langan Project No.: 130117301
3/8/2019

		Flow Zone 11 Wells																		
		LR16				LR67				LR20				LR48				LR50			
Client ID		LR16-071118				LR67_07132018				LR20-071018				LR48_07162018				LR50-071118			
Lab Sample ID		480-138935-9				480-139047-7				480-138935-1				480-139047-14				480-138935-13			
Sampling Date		07/11/2018 13:40:00				07/13/2018 14:35:00				07/10/2018 18:25:00				07/16/2018 13:25:00				07/11/2018 17:45:00			
Matrix		Water				Water				Water				Water				Water			
Dilution Factor		5000				200				1				10				1			
	NY NYSDEC Groundwater Criteria	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL
WATER BY 8260C (UG/L)																					
Benzene	0.7	2100	U	2100	5000	82	U	82	200	0.41	U	0.41	1.0	4.1	U	4.1	10	0.41	U	0.41	1.0
Carbon disulfide	50	**140000**		950	5000	**12000**	B	38	200	0.19	U	0.19	1.0	16	B	1.9	10	0.44	J	0.19	1.0
Carbon tetrachloride	5	1400	U	1400	5000	54	U	54	200	0.27	U	0.27	1.0	**480**	F1	2.7	10	0.27	U	0.27	1.0
Chlorobenzene	5	3800	U	3800	5000	150	U	150	200	0.75	U	0.75	1.0	**110**		7.5	10	0.75	U	0.75	1.0
Chloroform	7	**36000**		1700	5000	**100**	J	68	200	0.40	J	0.34	1.0	**430**	F1	3.4	10	0.34	U	0.34	1.0
Methylene Chloride	5	**15000**		2200	5000	88	U	88	200	0.44	U	0.44	1.0	**24**		4.4	10	0.44	U	0.44	1.0
Tetrachloroethene	5	**5600**		1800	5000	**450**		72	200	0.36	U	0.36	1.0	**31**		3.6	10	0.36	U	0.36	1.0
Toluene	5	2600	U	2600	5000	100	U	100	200	0.51	U	0.51	1.0	5.1	U	5.1	10	0.51	U	0.51	1.0
Trichloroethene	5	2300	U	2300	5000	**210**		92	200	0.46	U	0.46	1.0	**17**		4.6	10	0.46	U	0.46	1.0
Total Conc	NA	196600.0		NA	NA	12760.0		NA	NA	0.4		NA	NA	1108.0		NA	NA	0.44		NA	NA
WATER BY 200.7 REV 4.4(UG/L)																					
Calcium	NA	2.33E+06		1.22E+04	1.00E+05	459000		100	500	1.38E+05		6.08E+02	5.00E+03	164000		100	500	2.41E+05		6.08E+02	5.00E+03
Manganese	NA	942		99.2	300	119	B	0.40	3.0	65.8		5.0	15.0	140	B	0.40	3.0	42.3		5.0	15.0
Potassium	NA	71200	J	4140	100000	16100		100	500	4140	J	207	5000	4130		100	500	7110		207	5000
Sodium	NA	2.44E+06		1.69E+04	1.00E+05	415000		324	1000	2.02E+05		8.46E+02	5.00E+03	262000		324	1000	4.88E+05		4.23E+03	2.50E+04
WATER BY 300.0 (MG/L)																					
Chloride	NA	7440	D	156	240	678		5.6	10.0	330	D	7.80	12.0	529		2.8	5.0	870	D	15.6	24.0
Sulfate	NA	1360	D	33.2	60.0	1190		7.0	40.0	110	D	3.32	6.00	248		3.5	20.0	324	D	66.4	120
WATER BY SM 2340C (MG/L)																					
Hardness as calcium carbonate (mg/l)	NA	7450		250	250	1500		13.1	50.0	494		10.0	10.0	660		2.6	10.0	1040		50.0	50.0
Field Parameters																					
pH (S.U.)	NA	6.04				6.67				7.21				7.06				7.12			
Specific Conductivity (mS/cm)	NA	22.40				4.07				1.71				2.33				3.63			
Redox Potential (mV)	NA	-226				-260				186				-216				-214			
Dissolved Oxygen (mg/L)	NA	0.00				0.07				0.28				0.26				0.16			
Turbidity (NTU)	NA	5				13				48				6				0			

Notes:

NYSDEC	New York State Department of Environmental Concervation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
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Summary of Groundwater Analytical Data
July 2018 Low Flow Sampling Event
Former Stauffer Management Company Site
Lewiston, New York
Langan Project No.: 130117301
3/8/2019

		Flow Zone 11 Wells												Flow Zone 12 Wells							
		LR51								LR62				R16				R19			
Client ID		LR51-071218				DUP2-071218 (LR-51)				LR62-071118				R16-071118				R19_07132018			
Lab Sample ID		480-138935-27				480-138935-28				480-138935-18				480-138935-10				480-139047-3			
Sampling Date		07/12/2018 17:25:00				07/12/2018 17:25:00				07/11/2018 20:25:00				07/11/2018 16:45:00				07/13/2018 11:10:00			
Matrix		Water				Water				Water				Water				Water			
Dilution Factor		1				1				4				2				200			
	NY NYSDEC Groundwater Criteria	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
WATER BY 8260C (UG/L)																					
Benzene	0.7	0.41	U	0.41	1.0	0.41	U	0.41	1.0	**7.2**		1.6	4.0	**110**		0.82	2.0	**33**	J	33	80
Carbon disulfide	50	0.19	U	0.19	1.0	0.19	U	0.19	1.0	1.7	J	0.76	4.0	0.38	U	0.38	2.0	**260**	B D	38	200
Carbon tetrachloride	5	0.27	U	0.27	1.0	0.27	U	0.27	1.0	1.1	U	1.1	4.0	0.54	U	0.54	2.0	**8100**	D	54	200
Chlorobenzene	5	4.7		0.75	1.0	**5.2**		0.75	1.0	3.0	U	3.0	4.0	1.5	U	1.5	2.0	150	U	150	200
Chloroform	7	0.34	U	0.34	1.0	0.34	U	0.34	1.0	3.4	J	1.4	4.0	0.68	U	0.68	2.0	**3100**	D	68	200
Methylene Chloride	5	0.44	U	0.44	1.0	0.44	U	0.44	1.0	1.8	U	1.8	4.0	0.88	U	0.88	2.0	**600**	D	88	200
Tetrachloroethene	5	0.36	U	0.36	1.0	0.36	U	0.36	1.0	1.4	U	1.4	4.0	0.72	U	0.72	2.0	**33**	J	29	80
Toluene	5	0.51	U	0.51	1.0	0.51	U	0.51	1.0	2.0	U	2.0	4.0	**37**		1.0	2.0	41	U	41	80
Trichloroethene	5	0.46	U	0.46	1.0	0.46	U	0.46	1.0	3.7	J	1.8	4.0	0.92	U	0.92	2.0	37	U	37	80
Total Conc	NA	4.7		NA	NA	5.2		NA	NA	16.0		NA	NA	147.0		NA	NA	8100.0		NA	NA
WATER BY 200.7 REV 4.4(UG/L)																					
Calcium	NA									3.72E+05		6.08E+02	5.00E+03	2.38E+07		3.04E+04	2.50E+05	725000		100	500
Manganese	NA									499		5.0	15.0	4070		248	750	362	B	0.40	3.0
Potassium	NA									33800		207	5000	829000		10400	250000	54800		100	500
Sodium	NA									1.31E+06		8.46E+03	5.00E+04	4.25E+07		1.69E+05	1.00E+06	1990000		1620	5000
WATER BY 300.0 (MG/L)																					
Chloride	NA									828	D	31.2	48.0	152000	D	3900	6000	4710		28.2	50.0
Sulfate	NA									2020	D	33.2	60.0	145	D	3.32	6.00	705		34.9	200
WATER BY SM 2340C (MG/L)																					
Hardness as calcium carbonate (mg/l)	NA									1350		50.0	50.0	99000		2500	2500	2850		13.1	50.0
Field Parameters																					
pH (S.U.)	NA	7.12				7.12				8.08				6.20				7.18			
Specific Conductivity (mS/cm)	NA	2.37				2.37				7.40				100.00				16.00			
Redox Potential (mV)	NA	-70				-70				-164				16				-225			
Dissolved Oxygen (mg/L)	NA	0.00				0.00				0.05				1.17				0.17			
Turbidity (NTU)	NA	0				0				24				58				38			

Notes:

NYSDEC	New York State Department of Environmental Concervation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
1	RL exceeds NYSDEC groundwater criteria.

Table 4
Summary of Groundwater Analytical Data
July 2018 Low Flow Sampling Event
Former Stauffer Management Company Site
Lewiston, New York
Langan Project No.: 130117301
3/8/2019

		Flow Zone 12 Wells																			
		R68				R48				R50								R60			
Client ID		R68_07132018				R48_07162018				R50-071118				DUP1-071118 (R50)				R60_07132018			
Lab Sample ID		480-139047-8				480-139047-15				480-138935-19				480-138935-20				480-139047-11			
Sampling Date		07/13/2018 19:55:00				07/16/2018 14:45:00				07/11/2018 21:10:00				07/11/2018 21:10:00				07/13/2018 23:25:00			
Matrix		Water				Water				Water				Water				Water			
Dilution Factor		10000				80				4000				4000				20			
	NY NYSDEC Groundwater Criteria	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL	Result	Q	MDL	RL
WATER BY 8260C (UG/L)																					
Benzene	0.7	**480**		160	400	**75**	J	33	80	1600	U	1600	4000	1600	U	1600	4000	**94**		8.2	20
Carbon disulfide	50	**520000**	B D	1900	10000	22	J B	15	80	**160000**		760	4000	**140000**		760	4000	**950**	B	3.8	20
Carbon tetrachloride	5	**70000**	D	2700	10000	**150**		22	80	**12000**		1100	4000	**11000**		1100	4000	**70**		5.4	20
Chlorobenzene	5	300	U	300	400	60	U	60	80	3000	U	3000	4000	3000	U	3000	4000	15	U	15	20
Chloroform	7	**81000**	D	3400	10000	**2900**		27	80	**11000**		1400	4000	**12000**		1400	4000	**60**		6.8	20
Methylene Chloride	5	**2700**		180	400	**4500**		35	80	1800	U	1800	4000	1800	U	1800	4000	8.8	U	8.8	20
Tetrachloroethene	5	**890**		140	400	29	U	29	80	1400	U	1400	4000	1400	U	1400	4000	7.2	U	7.2	20
Toluene	5	**330**	J	200	400	41	U	41	80	2000	U	2000	4000	2000	U	2000	4000	10	U	10	20
Trichloroethene	5	180	U	180	400	37	U	37	80	1800	U	1800	4000	1800	U	1800	4000	**13**	J	9.2	20
Total Conc	NA	671000.0		NA	NA	7647.0		NA	NA	183000.0		NA	NA	163000.0		NA	NA	1187.0		NA	NA
WATER BY 200.7 REV 4.4(UG/L)																					
Calcium	NA	2740000		2000	10000	2810000		1000	5000												
Manganese	NA	937	B	0.40	3.0	1840	B	0.40	3.0												
Potassium	NA	237000		100	500	170000		100	500												
Sodium	NA	9340000		6480	20000	6990000		3240	10000												
WATER BY 300.0 (MG/L)																					
Chloride	NA	22400		141	250	18500		56.4	100												
Sulfate	NA	1970		69.8	400	574		69.8	400												
WATER BY SM 2340C (MG/L)																					
Hardness as calcium carbonate (mg/l)	NA	10000		131	500	11100		26.3	100												
Field Parameters																					
pH (S.U.)	NA	6.00				6.82				6.01				6.01				6.79			
Specific Conductivity (mS/cm)	NA	60.70				51.40				100.00				100.00				0.56			
Redox Potential (mV)	NA	-213				-75				-104				-104				-84			
Dissolved Oxygen (mg/L)	NA	0.24				1.93				0.21				0.21				0.62			
Turbidity (NTU)	NA	22				5				23				23				8			

Notes:

NYSDEC	New York State Department of Environmental Concervation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
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1	RL exceeds NYSDEC groundwater criteria.

Table 4
Summary of Groundwater Analytical Data
July 2018 Low Flow Sampling Event
Former Stauffer Management Company Site
Lewiston, New York
Langan Project No.: 130117301
3/8/2019

		Flow Zone 12 Wells								Extraction Wells											
		R62				R67				EW1				EW2				EW3			
Client ID		R62-071118				R67_07132018				EW1-071018				EW2-071018				EW3-071018			
Lab Sample ID		480-138935-17				480-139047-6				480-138935-4				480-138935-5				480-138935-6			
Sampling Date		07/11/2018 16:30:00				07/13/2018 18:20:00				07/10/2018 18:25:00				07/10/2018 18:35:00				07/10/2018 19:15:00			
Matrix		Water				Water				Water				Water				Water			
Dilution Factor		125				2000				400				8				125			
	NY NYSDEC Groundwater Criteria	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
WATER BY 8260C (UG/L)																					
Benzene	0.7	**190**		51	130	210	U	210	500	160	U	160	400	3.3	U	3.3	8.0	51	U	51	130
Carbon disulfide	50	**6900**		24	130	**67000**	E B	95	500	**39000**		76	400	4.5	J	1.5	8.0	**3800**		24	130
Carbon tetrachloride	5	34	U	34	130	**1000**		140	500	**6800**		110	400	**420**		2.2	8.0	**5400**		34	130
Chlorobenzene	5	94	U	94	130	380	U	380	500	300	U	300	400	6.0	U	6.0	8.0	94	U	94	130
Chloroform	7	43	U	43	130	**630**		170	500	**3300**		140	400	**240**		2.7	8.0	**3400**		43	130
Methylene Chloride	5	55	U	55	130	220	U	220	500	180	U	180	400	**12**		3.5	8.0	55	U	55	130
Tetrachloroethene	5	45	U	45	130	180	U	180	500	140	U	140	400	**12**		2.9	8.0	**96**	J	45	130
Toluene	5	**64**	J	64	130	260	U	260	500	200	U	200	400	4.1	U	4.1	8.0	64	U	64	130
Trichloroethene	5	58	U	58	130	230	U	230	500	180	U	180	400	4.9	J	3.7	8.0	**180**		58	130
Total Conc	NA	7154.0		NA	NA	68000.0		NA	NA	49100.0		NA	NA	693.4		NA	NA	12876.0		NA	NA
WATER BY 200.7 REV 4.4(UG/L)																					
Calcium	NA	1.75E+07		3.04E+04	2.50E+05	6850000		1000	5000												
Manganese	NA	4810		248	750	942	B	4.0	30.0												
Potassium	NA	673000		10400	250000	408000		100	500												
Sodium	NA	3.79E+07		1.69E+05	1.00E+06	19400000		16200	50000												
WATER BY 300.0 (MG/L)																					
Chloride	NA	115000	D	3900	6000	60300		282	500												
Sulfate	NA	292	D	3.32	6.00	1580		175	1000												
WATER BY SM 2340C (MG/L)																					
Hardness as calcium carbonate (mg/l)	NA	91100		2500	2500	26000		263	1000												
Field Parameters																					
pH (S.U.)	NA	6.30				5.67				7.23				7.06				6.74			
Specific Conductivity (mS/cm)	NA	100.00				100.00				5.56				1.49				2.96			
Redox Potential (mV)	NA	-49				-175				-156				29				54			
Dissolved Oxygen (mg/L)	NA	0.55				0.54				9.22				4.21				2.66			
Turbidity (NTU)	NA	0				3				17				11				31			

Notes:

NYSDEC	New York State Department of Environmental Concervation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
1	RL exceeds NYSDEC groundwater criteria.

Table 4
Summary of Groundwater Analytical Data
July 2018 Low Flow Sampling Event
Former Stauffer Management Company Site
Lewiston, New York
Langan Project No.: 130117301
3/8/2019

		Extraction Wells																			
		EW4								EW5/DPA201				EW6				DPA203			
Client ID		EW4_07162018				EW4_07162018 DUP				EW5-071118				EW6-071118				DPA203-071118			
Lab Sample ID		480-139047-16				480-139047-17				480-138935-14				480-138935-15				480-138935-16			
Sampling Date		07/16/2018 17:45:00				07/16/2018 17:45:00				07/11/2018 18:20:00				07/11/2018 18:40:00				07/11/2018 18:30:00			
Matrix		Water				Water				Water				Water				Water			
Dilution Factor		10				10				8				1000				2500			
	NY NYSDEC Groundwater Criteria	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
WATER BY 8260C (UG/L)																					
Benzene	0.7	4.1	U	4.1	10	4.1	U	4.1	10	3.3	U	3.3	8.0	410	U	410	1000	1000	U	1000	2500
Carbon disulfide	50	18	B	1.9	10	19	B	1.9	10	**230**		1.5	8.0	190	U	190	1000	**8300**		480	2500
Carbon tetrachloride	5	**460**		2.7	10	**480**		2.7	10	**580**		2.2	8.0	**56000**		270	1000	**240000**		680	2500
Chlorobenzene	5	**30**		7.5	10	**29**		7.5	10	6.0	U	6.0	8.0	750	U	750	1000	1900	U	1900	2500
Chloroform	7	**300**		3.4	10	**310**		3.4	10	**430**		2.7	8.0	**16000**		340	1000	**55000**		850	2500
Methylene Chloride	5	**11**		4.4	10	**12**		4.4	10	**7.2**	J	3.5	8.0	440	U	440	1000	1100	U	1100	2500
Tetrachloroethene	5	**29**		3.6	10	**30**		3.6	10	**110**		2.9	8.0	**1200**		360	1000	**2000**	J	900	2500
Toluene	5	5.1	U	5.1	10	5.1	U	5.1	10	4.1	U	4.1	8.0	510	U	510	1000	1300	U	1300	2500
Trichloroethene	5	**12**		4.6	10	**11**		4.6	10	**80**		3.7	8.0	460	U	460	1000	1200	U	1200	2500
Total Conc	NA	860.0		NA	NA	891.0		NA	NA	1437.2		NA	NA	73200.0		NA	NA	305300.0		NA	NA
WATER BY 200.7 REV 4.4(UG/L)																					
Calcium	NA																				
Manganese	NA																				
Potassium	NA																				
Sodium	NA																				
WATER BY 300.0 (MG/L)																					
Chloride	NA																				
Sulfate	NA																				
WATER BY SM 2340C (MG/L)																					
Hardness as calcium carbonate (mg/l)	NA																				
Field Parameters																					
pH (S.U.)	NA	7.10				7.10				6.95				7.03							
Specific Conductivity (mS/cm)	NA	2.78				2.78				3.56				1.58							
Redox Potential (mV)	NA	0				0				-191				-17							
Dissolved Oxygen (mg/L)	NA	5.40				5.40				6.24				3.50							
Turbidity (NTU)	NA	115				115				14				12							

Notes:

NYSDEC	New York State Department of Environmental Concervation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
1	RL exceeds NYSDEC groundwater criteria.

Table 4
Summary of Groundwater Analytical Data
July 2018 Low Flow Sampling Event
Former Stauffer Management Company Site
Lewiston, New York
Langan Project No.: 130117301
3/8/2019

		Extraction Wells												Field Blanks											
		DPA202				LR66				OW3															
Client ID		DPA202_07132018				LR66_07132018				OW3-071218				FB1-071118				FB3_07132018				FB4_07162018			
Lab Sample ID		480-139047-4				480-139047-5				480-138935-31				480-138935-12				480-139047-9				480-139047-18			
Sampling Date		07/13/2018 12:30:00				07/13/2018 12:45:00				07/12/2018 20:50:00				07/11/2018 17:40:00				07/13/2018 20:30:00				07/16/2018 18:55:00			
Matrix		Water				Water				Water				Water				Water				Water			
Dilution Factor		10				10				4000				1				20				20			
	NY NYSDEC Groundwater Criteria	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
WATER BY 8260C (UG/L)																									
Benzene	0.7	4.1	U	4.1	10	4.1	U	4.1	10	1600	U	1600	4000	0.41	U	0.41	1.0	8.2	U	8.2	20	8.2	U	8.2	20
Carbon disulfide	50	**130**	B	1.9	10	**320**	J B D	150	800	**1200000**	E	760	4000	0.97	J	0.19	1.0	**51**	B	3.8	20	15	J B	3.8	20
Carbon tetrachloride	5	**320**		2.7	10	**26000**	D	220	800	**12000**		1100	4000	0.27	U	0.27	1.0	5.4	U	5.4	20	5.4	U	5.4	20
Chlorobenzene	5	7.5	U	7.5	10	7.5	U	7.5	10	3000	U	3000	4000	0.75	U	0.75	1.0	15	U	15	20	15	U	15	20
Chloroform	7	**190**		3.4	10	**9300**	D	270	800	**11000**		1400	4000	0.34	U	0.34	1.0	6.8	U	6.8	20	6.8	U	6.8	20
Methylene Chloride	5	**6.4**	J	4.4	10	**200**		4.4	10	1800	U	1800	4000	0.44	U	0.44	1.0	8.8	U	8.8	20	8.8	U	8.8	20
Tetrachloroethene	5	**33**		3.6	10	**510**	J D	290	800	**1600**	J	1400	4000	0.36	U	0.36	1.0	7.2	U	7.2	20	7.2	U	7.2	20
Toluene	5	5.1	U	5.1	10	5.1	U	5.1	10	2000	U	2000	4000	0.51	U	0.51	1.0	10	U	10	20	10	U	10	20
Trichloroethene	5	**20**		4.6	10	**53**		4.6	10	1800	U	1800	4000	0.46	U	0.46	1.0	9.2	U	9.2	20	9.2	U	9.2	20
Total Conc	NA	699.4		NA	NA	699.0		NA	NA	24600.0		NA	NA	0.97		NA	NA	51.0		NA	NA	15.0		NA	NA
WATER BY 200.7 REV 4.4(UG/L)																									
Calcium	NA																								
Manganese	NA																								
Potassium	NA																								
Sodium	NA																								
WATER BY 300.0 (MG/L)																									
Chloride	NA																								
Sulfate	NA																								
WATER BY SM 2340C (MG/L)																									
Hardness as calcium carbonate (mg/l)	NA																								
Field Parameters																									
pH (S.U.)	NA	7.06				6.77				6.55															
Specific Conductivity (mS/cm)	NA	4.30				1.95				41.90															
Redox Potential (mV)	NA	-169				-24				-119															
Dissolved Oxygen (mg/L)	NA	8.21				6.61				0.06															
Turbidity (NTU)	NA	51				140				171															

Notes:

NYSDEC	New York State Department of Environmental Concervation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
1	RL exceeds NYSDEC groundwater criteria.

Table 4
Summary of Groundwater Analytical Data
July 2018 Low Flow Sampling Event
Former Stauffer Management Company Site
Lewiston, New York
Langan Project No.: 130117301
3/8/2019

		Trip Blanks							
Client ID		**TB1-070518**				**TRIP BLANK**			
Lab Sample ID		480-138935-11				480-139047-10			
Sampling Date		07/05/2018 00:00:00				07/13/2018 00:00:00			
Matrix		Water				Water			
Dilution Factor		1				1			
	NY NYSDEC Groundwater Criteria	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
WATER BY 8260C (UG/L)									
Benzene	0.7	0.41	U	0.41	1.0	0.41	U	0.41	1.0
Carbon disulfide	50	0.75	J B	0.19	1.0	21	B	0.19	1.0
Carbon tetrachloride	5	0.27	U	0.27	1.0	0.27	U	0.27	1.0
Chlorobenzene	5	0.75	U	0.75	1.0	0.75	U	0.75	1.0
Chloroform	7	5.2		0.34	1.0	5.4		0.34	1.0
Methylene Chloride	5	0.44	U	0.44	1.0	0.44	U	0.44	1.0
Tetrachloroethene	5	0.36	U	0.36	1.0	0.36	U	0.36	1.0
Toluene	5	0.51	U	0.51	1.0	0.51	U	0.51	1.0
Trichloroethene	5	0.46	U	0.46	1.0	0.46	U	0.46	1.0
Total Conc	NA	5.95		NA	NA	26.4		NA	NA
WATER BY 200.7 REV 4.4(UG/L)									
Calcium	NA								
Manganese	NA								
Potassium	NA								
Sodium	NA								
WATER BY 300.0 (MG/L)									
Chloride	NA								
Sulfate	NA								
WATER BY SM 2340C (MG/L)									
Hardness as calcium carbonate (mg/l)	NA								
Field Parameters									
pH (S.U.)	NA								
Specific Conductivity (mS/cm)	NA								
Redox Potential (mV)	NA								
Dissolved Oxygen (mg/L)	NA								
Turbidity (NTU)	NA								

Notes:

NYSDEC	New York State Department of Environmental Concervation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
1	RL exceeds NYSDEC groundwater criteria.

Table 5
Passive Diffusion Bag - Summary of Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

Sample Location and Depth				**EW-1 - 55'**				**EW-1 - 67'**				**EW-1 - 76'**				**EW-1 0 107'**				**EW-1 - 120'**			
Client ID				**EW-1-55-081618**				**EW-1-67-081618**				**EW-1-76-081618**				**EW-1-107-081618**				**EW-1-120-081618**			
Lab Sample ID				480-140618-1				480-140618-2				480-140618-3				480-140618-4				480-140618-5			
Sampling Date				8/16/2018 9:20				8/16/2018 9:25				8/16/2018 9:30				8/16/2018 9:35				8/16/2018 9:40			
Matrix				Water				Water				Water				Water				Water			
Dilution Factor				1				1				1				1				1			
VOCs by Method 8260C	**CAS#**	**NYSDEC Groundwater Criteria**	**Unit**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
Benzene	71-43-2	0.7	µg/l	ND	U	0.41	*1*	ND	U	0.41	*1*	ND	U	0.41	*1*	ND	U	0.41	*1*	ND	U	0.41	*1*
Carbon disulfide	75-15-0	50	µg/l	0.21	J B	0.19	1	ND	U	0.19	1	ND	U	0.19	1	ND	U	0.19	1	13	B	0.19	1
Carbon tetrachloride	56-23-5	5	µg/l	1		0.27	1	1		0.27	1	1.1		0.27	1	1.1		0.27	1	1.3		0.27	1
Chlorobenzene	108-90-7	5	µg/l	ND	U	0.75	1	ND	U	0.75	1	ND	U	0.75	1	ND	U	0.75	1	ND	U	0.75	1
Chloroform	67-66-3	7	µg/l	ND	U	0.34	1	ND	U	0.34	1	0.44	J	0.34	1	0.55	J	0.34	1	1.5		0.34	1
Methylene Chloride	75-09-2	5	µg/l	ND	U	0.44	1	ND	U	0.44	1	ND	U	0.44	1	ND	U	0.44	1	ND	U	0.44	1
Tetrachloroethene	127-18-4	5	µg/l	ND	U	0.36	1	ND	U	0.36	1	ND	U	0.36	1	ND	U	0.36	1	ND	U	0.36	1
Toluene	108-88-3	5	µg/l	ND	U	0.51	1	ND	U	0.51	1	ND	U	0.51	1	ND	U	0.51	1	ND	U	0.51	1
Trichloroethene	79-01-6	5	µg/l	ND	U	0.46	1	ND	U	0.46	1	ND	U	0.46	1	ND	U	0.46	1	ND	U	0.46	1
Total Conc	NA	NA	µg/l	1.21		NA	NA	1		NA	NA	1.54		NA	NA	1.65		NA	NA	15.8		NA	NA

Notes:

NYSDEC	New York State Department of Environmental Conservation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
1	RL exceeds NYSDEC groundwater criteria.

Table 5
Passive Diffusion Bag - Summary of Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

Sample Location and Depth				**EW-1 - 137'**				**EW-1 - 149'**				**EW-1 - 157'**				**EW-3 - 54'**				**EW-3 - 66'**			
Client ID				**EW-1-137-081618**				**EW-1-149-081618**				**EW-1-157-081618**				**EW-3-54-081618**				**EW-3-66-081618**			
Lab Sample ID				480-140618-6				480-140618-7				480-140618-8				480-140618-9				480-140618-10			
Sampling Date				8/16/2018 9:40				8/16/2018 9:50				8/16/2018 9:55				8/16/2018 10:30				8/16/2018 10:35			
Matrix				Water				Water				Water				Water				Water			
Dilution Factor				1				80				200				200				50			
VOCs by Method 8260C	**CAS#**	**NYSDEC Groundwater Criteria**	**Unit**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
Benzene	71-43-2	0.7	µg/l	ND	U	0.41	*1*	ND	U	***33***	*80*	ND	U	***82***	*200*	ND	U	***82***	*200*	ND	U	***21***	*50*
Carbon disulfide	75-15-0	50	µg/l	1.1	B	0.19	1	5700	B	15	*80*	13000	B	38	*200*	190	J B	38	*200*	29	J B	9.5	50
Carbon tetrachloride	56-23-5	5	µg/l	1.1		0.27	1	800		***22***	*80*	2400		***54***	*200*	3700		***54***	*200*	2500		***14***	*50*
Chlorobenzene	108-90-7	5	µg/l	ND	U	0.75	1	ND	U	***60***	*80*	ND	U	***150***	*200*	ND	U	***150***	*200*	ND	U	***38***	*50*
Chloroform	67-66-3	7	µg/l	0.59	J	0.34	1	1300		***27***	*80*	2900		***68***	*200*	12000		***68***	*200*	3400	F1	***17***	*50*
Methylene Chloride	75-09-2	5	µg/l	ND	U	0.44	1	110		***35***	*80*	280		***88***	*200*	210		***88***	*200*	460		***22***	*50*
Tetrachloroethene	127-18-4	5	µg/l	ND	U	0.36	1	ND	U	***29***	*80*	ND	U	***72***	*200*	260		***72***	*200*	22	J	***18***	*50*
Toluene	108-88-3	5	µg/l	ND	U	0.51	1	ND	U	***41***	*80*	ND	U	***100***	*200*	ND	U	***100***	*200*	ND	U	***26***	*50*
Trichloroethene	79-01-6	5	µg/l	ND	U	0.46	1	ND	U	***37***	*80*	ND	U	***92***	*200*	250		***92***	*200*	180		***23***	*50*
Total Conc		NA	NA	µg/l	2.79		NA	NA	7910		NA	NA	18580		NA	NA	16610		NA	NA	6591		NA	NA

Notes:

NYSDEC	New York State Department of Environmental Conservation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
1	RL exceeds NYSDEC groundwater criteria.

Table 5
Passive Diffusion Bag - Summary of Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

Sample Location and Depth				**EW-3 - 76'**				**EW-3 - 84'**				**EW-3 - 94'**				**EW-3 - 108'**				**EW-3 - 117'**			
Client ID				**EW-3-76-081618**				**EW-3-84-081618**				**EW-3-94-081618**				**EW-3-108-081618**				**EW-3-117-081618**			
Lab Sample ID				480-140618-11				480-140618-12				480-140618-13				480-140618-14				480-140618-15			
Sampling Date				8/16/2018 10:40				8/16/2018 10:45				8/16/2018 10:50				8/16/2018 10:55				8/16/2018 11:00			
Matrix				Water				Water				Water				Water				Water			
Dilution Factor				50				50				50				50				50			
VOCs by Method 8260C	**CAS#**	**NYSDEC Groundwater Criteria**	**Unit**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
Benzene	71-43-2	0.7	µg/l	ND	U	***21***	*50*	ND	U	***21***	*50*	ND	U	***21***	*50*	ND	U	***21***	*50*	ND	U	***21***	*50*
Carbon disulfide	75-15-0	50	µg/l	18	J B	9.5	50	14	J B	9.5	50	17	J B	9.5	50	29	J B	9.5	50	13	J B	9.5	50
Carbon tetrachloride	56-23-5	5	µg/l	2400		***14***	*50*	2000		***14***	*50*	2200		***14***	*50*	2000		***14***	*50*	2400		***14***	*50*
Chlorobenzene	108-90-7	5	µg/l	ND	U	***38***	*50*	ND	U	***38***	*50*	ND	U	***38***	*50*	ND	U	***38***	*50*	ND	U	***38***	*50*
Chloroform	67-66-3	7	µg/l	2600		***17***	*50*	2600		***17***	*50*	2700		***17***	*50*	2600		***17***	*50*	2900		***17***	*50*
Methylene Chloride	75-09-2	5	µg/l	450		***22***	*50*	450		***22***	*50*	450		***22***	*50*	460		***22***	*50*	470		***22***	*50*
Tetrachloroethene	127-18-4	5	µg/l	18	J	***18***	*50*	20	J	***18***	*50*	ND	U	***18***	*50*	ND	U	***18***	*50*	19	J	***18***	*50*
Toluene	108-88-3	5	µg/l	ND	U	***26***	*50*	ND	U	***26***	*50*	ND	U	***26***	*50*	ND	U	***26***	*50*	ND	U	***26***	*50*
Trichloroethene	79-01-6	5	µg/l	170		***23***	*50*	160		***23***	*50*	170		***23***	*50*	150		***23***	*50*	170		***23***	*50*
Total Conc		NA	NA	µg/l	5656		NA	NA	5244		NA	NA	5537		NA	NA	5239		NA	NA	5972		NA	NA

Notes:

NYSDEC	New York State Department of Environmental Conservation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
1	RL exceeds NYSDEC groundwater criteria.

Table 5
Passive Diffusion Bag - Summary of Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

Sample Location and Depth				**EW-3 - 127'**				**EW-3 - 140'**				**EW-3 - 157'**				**EW-5 - 48'**				**EW-5 - 57'**			
Client ID				**EW-3-127-081618**				**EW-3-140-081618**				**EW-3-157-081618**				**EW-5-48-081618**				**EW-5-57-081618**			
Lab Sample ID				480-140618-16				480-140618-17				480-140618-18				480-140618-19				480-140618-20			
Sampling Date				8/16/2018 11:05				8/16/2018 11:10				8/16/2018 11:15				8/16/2018 11:35				8/16/2018 11:40			
Matrix				Water				Water				Water				Water				Water			
Dilution Factor				50				50				80				50				50			
VOCs by Method 8260C	**CAS#**	**NYSDEC Groundwater Criteria**	**Unit**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
Benzene	71-43-2	0.7	µg/l	ND	U	***21***	*50*	ND	U	***21***	*50*	ND	U	***33***	*80*	ND	U	***21***	*50*	ND	U	***21***	*50*
Carbon disulfide	75-15-0	50	µg/l	14	J B	9.5	50	22	J B	9.5	50	25	J B	15	*80*	ND	U	9.5	50	ND	U	9.5	50
Carbon tetrachloride	56-23-5	5	µg/l	2000		***14***	*50*	1700		***14***	*50*	2000		***22***	*80*	1500		***14***	*50*	1500		***14***	*50*
Chlorobenzene	108-90-7	5	µg/l	ND	U	***38***	*50*	ND	U	***38***	*50*	ND	U	***60***	*80*	ND	U	***38***	*50*	ND	U	***38***	*50*
Chloroform	67-66-3	7	µg/l	2600		***17***	*50*	2600		***17***	*50*	2500		***27***	*80*	2200		***17***	*50*	2200		***17***	*50*
Methylene Chloride	75-09-2	5	µg/l	430		***22***	*50*	470		***22***	*50*	440		***35***	*80*	40	J	***22***	*50*	24	J	***22***	*50*
Tetrachloroethene	127-18-4	5	µg/l	19	J	***18***	*50*	ND	U	***18***	*50*	ND	U	***29***	*80*	570		***18***	*50*	410		***18***	*50*
Toluene	108-88-3	5	µg/l	ND	U	***26***	*50*	ND	U	***26***	*50*	ND	U	***41***	*80*	ND	U	***26***	*50*	ND	U	***26***	*50*
Trichloroethene	79-01-6	5	µg/l	150		***23***	*50*	150		***23***	*50*	170		***37***	*80*	720		***23***	*50*	700		***23***	*50*
Total Conc		NA	NA	µg/l	5213		NA	NA	4942		NA	NA	5135		NA	NA	5030		NA	NA	4834		NA	NA

Notes:

NYSDEC	New York State Department of Environmental Conservation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
1	RL exceeds NYSDEC groundwater criteria.

Table 5
Passive Diffusion Bag - Summary of Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

Sample Location and Depth				**EW-5 - 62'**				**EW-5 - 67'**				**R-19 - 97'**				**R-19 - 117'**				**R-19 - 126'**			
Client ID				**EW-5-62-081618**				**EW-5-67-081618**				**R-19-97-081618**				**R-19-117-081618**				**R-19-126-081618**			
Lab Sample ID				480-140618-21				480-140618-22				480-140618-23				480-140618-24				480-140618-25			
Sampling Date				8/16/2018 11:45				8/16/2018 11:50				8/16/2018 13:20				8/16/2018 13:25				8/16/2018 13:30			
Matrix				Water				Water				Water				Water				Water			
Dilution Factor				4				1				100				100				100			
VOCs by Method 8260C	**CAS#**	**NYSDEC Groundwater Criteria**	**Unit**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
Benzene	71-43-2	0.7	µg/l	ND	U	***1.6***	*4*	ND	U	0.41	*1*	ND	U	***41***	*100*	ND	U	***41***	*100*	50	J	***41***	*100*
Carbon disulfide	75-15-0	50	µg/l	0.93	J B	0.76	4	1	B	0.19	1	34	J B	19	*100*	200	B	19	*100*	1200	B	19	*100*
Carbon tetrachloride	56-23-5	5	µg/l	160		1.1	4	28		0.27	1	390		***27***	*100*	1600		***27***	*100*	7900		***27***	*100*
Chlorobenzene	108-90-7	5	µg/l	ND	U	3	4	ND	U	0.75	1	ND	U	***75***	*100*	ND	U	***75***	*100*	ND	U	***75***	*100*
Chloroform	67-66-3	7	µg/l	130		1.4	4	16		0.34	1	3300		***34***	*100*	4500		***34***	*100*	4200		***34***	*100*
Methylene Chloride	75-09-2	5	µg/l	5.1		1.8	4	0.9	J	0.44	1	940		***44***	*100*	730		***44***	*100*	720		***44***	*100*
Tetrachloroethene	127-18-4	5	µg/l	80		1.4	4	31		0.36	1	ND	U	***36***	*100*	ND	U	***36***	*100*	ND	U	***36***	*100*
Toluene	108-88-3	5	µg/l	ND	U	2	4	ND	U	0.51	1	ND	U	***51***	*100*	ND	U	***51***	*100*	ND	U	***51***	*100*
Trichloroethene	79-01-6	5	µg/l	47		1.8	4	11		0.46	1	ND	U	***46***	*100*	ND	U	***46***	*100*	ND	U	***46***	*100*
Total Conc		NA	NA	µg/l	423.03		NA	NA	87.9		NA	NA	4664		NA	NA	7030		NA	NA	14070		NA	NA

Notes:

NYSDEC	New York State Department of Environmental Conservation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
1	RL exceeds NYSDEC groundwater criteria.

Table 5
Passive Diffusion Bag - Summary of Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

Sample Location and Depth				**R-19 - 136'**				**R-62 - 72'**				**R-62 - 82'**				**R-62 - 107'**				**R-62 - 127'**			
Client ID				**R-19-136-081618**				**R-62-72-081618**				**R-62-82-081618**				**R-62-107-081618**				**R-62-127-081618**			
Lab Sample ID				480-140618-26				480-140618-27				480-140618-28				480-140618-29				480-140618-30			
Sampling Date				8/16/2018 13:35				8/16/2018 14:20				8/16/2018 14:25				8/16/2018 14:30				8/16/2018 14:35			
Matrix				Water				Water				Water				Water				Water			
Dilution Factor				200				500				500				500				500			
VOCs by Method 8260C	**CAS#**	**NYSDEC Groundwater Criteria**	**Unit**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
Benzene	71-43-2	0.7	µg/l	240		***82***	*200*	300	J	***210***	*500*	320	J	***210***	*500*	320	J	***210***	*500*	370	J	***210***	*500*
Carbon disulfide	75-15-0	50	µg/l	9900	B	38	*200*	33000	B	***95***	*500*	34000	B	***95***	*500*	38000	B	***95***	*500*	42000	B	***95***	*500*
Carbon tetrachloride	56-23-5	5	µg/l	6800		***54***	*200*	ND	U	***140***	*500*	ND	U	***140***	*500*	ND	U	***140***	*500*	ND	U	***140***	*500*
Chlorobenzene	108-90-7	5	µg/l	ND	U	***150***	*200*	ND	U	***380***	*500*	ND	U	***380***	*500*	ND	U	***380***	*500*	ND	U	***380***	*500*
Chloroform	67-66-3	7	µg/l	2000		***68***	*200*	ND	U	***170***	*500*	ND	U	***170***	*500*	ND	U	***170***	*500*	ND	U	***170***	*500*
Methylene Chloride	75-09-2	5	µg/l	400		***88***	*200*	300	J	***220***	*500*	280	J	***220***	*500*	ND	U	***220***	*500*	320	J	***220***	*500*
Tetrachloroethene	127-18-4	5	µg/l	ND	U	***72***	*200*	ND	U	***180***	*500*	ND	U	***180***	*500*	ND	U	***180***	*500*	ND	U	***180***	*500*
Toluene	108-88-3	5	µg/l	240		***100***	*200*	ND	U	***260***	*500*	ND	U	***260***	*500*	ND	U	***260***	*500*	ND	U	***260***	*500*
Trichloroethene	79-01-6	5	µg/l	ND	U	***92***	*200*	ND	U	***230***	*500*	ND	U	***230***	*500*	ND	U	***230***	*500*	ND	U	***230***	*500*
Total Conc		NA	NA	µg/l	19580		NA	NA	33600		NA	NA	34600		NA	NA	38320		NA	NA	42690		NA	NA

Notes:

NYSDEC	New York State Department of Environmental Conservation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
1	RL exceeds NYSDEC groundwater criteria.

Table 5
Passive Diffusion Bag - Summary of Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			Sample Location and Depth	**R-62 - 135'**				**R-62 - 147'**			
			Client ID	**R-62-135-081618**				**R-62-147-081618**			
			Lab Sample ID	480-140618-31				480-140618-32			
			Sampling Date	8/16/2018 14:40				8/16/2018 14:45			
			Matrix	Water				Water			
			Dilution Factor	800				200			
VOCs by Method 8260C	**CAS#**	**NYSDEC Groundwater Criteria**	**Unit**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
Benzene	71-43-2	0.7	µg/l	340	J	***330***	*800*	420		***82***	*200*
Carbon disulfide	75-15-0	50	µg/l	45000	B	***150***	*800*	9600	B	38	*200*
Carbon tetrachloride	56-23-5	5	µg/l	ND	U	***220***	*800*	ND	U	***54***	*200*
Chlorobenzene	108-90-7	5	µg/l	ND	U	***600***	*800*	ND	U	***150***	*200*
Chloroform	67-66-3	7	µg/l	ND	U	***270***	*800*	ND	U	***68***	*200*
Methylene Chloride	75-09-2	5	µg/l	500	J	***350***	*800*	110	J	***88***	*200*
Tetrachloroethene	127-18-4	5	µg/l	ND	U	***290***	*800*	ND	U	***72***	*200*
Toluene	108-88-3	5	µg/l	ND	U	***410***	*800*	ND	U	***100***	*200*
Trichloroethene	79-01-6	5	µg/l	ND	U	***370***	*800*	ND	U	***92***	*200*
Total Conc		NA	NA	µg/l	45840		NA	NA	10130		NA	NA

Notes:

NYSDEC	New York State Department of Environmental Conservation.
VOC	Volatile organic compound.
CAS #	Chemical abstract service number.
µg/L	micrograms per liter.
Q	Laboratory qualifier.
MDL	Laboratory method detection limit.
RL	Laboratory reporting limit.
ND	Analyte not detected above corresponding laboratory MDL.
NA	Not applicable.
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
250	Concentration exceeds NYSDEC groundwater criteria.
22	MDL exceeds NYSDEC groundwater criteria.
1	RL exceeds NYSDEC groundwater criteria.

Table 6
Packer Test Sampling Results
Former Stauffer Management Company Site
Lewiston, New York
Langan Project No. 130117301
3/26/2019

mple Location - Depth (ft)				EW-2 - 55'				EW-2 -58'				EW-2 -73'				EW-2 -105'				EW-2 -118'				EW-2 -138'			
Client ID				**EW-2- 55-080918**				**EW-2-58 -080918**				**EW-2-73**				**EW-2-105 -080918**				**EW-2-118**				**EW-2-138-080718**			
Lab Sample ID				480-140248-2				480-140248-1				480-140172-1				480-140248-3				480-140172-2				480-140079-1			
Sampling Date				08/09/2018 16:20:00				08/09/2018 12:30:00				8/8/2018 19:00				08/09/2018 09:20:00				8/8/2018 13:05				8/7/2018 16:30			
Matrix				Water				Water				Water				Water				Water				Water			
Dilution Factor				40				10				100				40				20				25			
VOCs-8260C	**CAS#**	**NYSDEC Groundwater Criteria**	**Unit**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
Benzene	71-43-2	0.7	µg/L	ND	U	16	40	ND	U	4.1	10	ND	U	41	100	ND	U	16	40	ND	U	8.2	20	ND	U	10	25
Carbon disulfide	75-15-0	50	µg/L	73		7.6	40	3.2	J	1.9	10	270	B	19	100	99		7.6	40	43	B	3.8	20	21	J	4.8	25
Carbon tetrachloride	56-23-5	5	µg/L	1800		11	40	540		2.7	10	3400		27	100	1900	F1	11	40	710		5.4	20	1900	F1	6.8	25
Chlorobenzene	108-90-7	5	µg/L	ND	U	30	40	ND	U	7.5	10	ND	U	75	100	ND	U	30	40	ND	U	15	20	ND	U	19	25
Chloroform	67-66-3	7	µg/L	1100		14	40	210		3.4	10	1800		34	100	1100		14	40	710		6.8	20	1100	F1	8.5	25
Methylene Chloride	75-09-2	5	µg/L	91		18	40	15		4.4	10	160		44	100	110		18	40	61		8.8	20	63		11	25
Tetrachloroethene	127-18-4	5	µg/L	34	J	14	40	18		3.6	10	61	J	36	100	31	J	14	40	27		7.2	20	44		9	25
Toluene	108-88-3	5	µg/L	31	J	20	40	ND	U	5.1	10	ND	U	51	100	28	J	20	40	ND	U	10	20	ND	U	13	25
Trichloroethene	79-01-6	5	µg/L	ND	U	18	40	7.9	J	4.6	10	ND	U	46	100	ND	U	18	40	10	J	9.2	20	16	J F2	12	25

Notes:

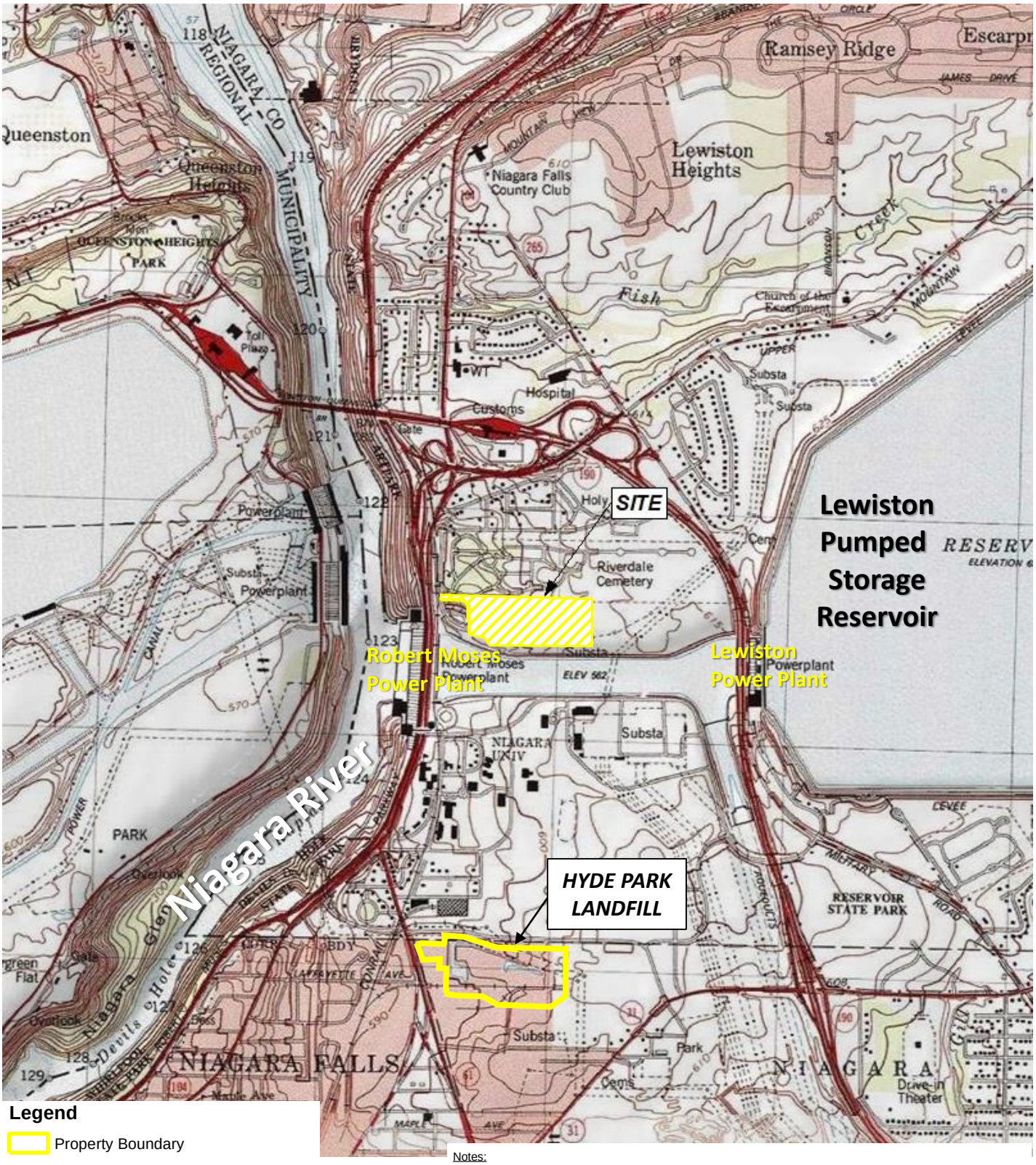
VOC	Volatile organic compound
CAS #	Chemical abstract service number
µg/L	micrograms per liter
Q	Laboratory qualifier
MDL	Laboratory method detection limit
RL	Laboratory reporting limit
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
MS	Laboratory matrix spike
MSD	Laboratory matrix spike deplicate
270	Concentration exceedes NYSDEC groundwater criteria

Table 7
Emerging Contaminant Sampling Results
Former Stauffer Management Site
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

	Sample Location	DPA-203				DPA-203 (Duplicate)				W-67				W-66				Field Blank			
	Client ID	DPA203-101718				DUP-101718 (DPA-203)				W672-101718				W66-101818				FB-101718			
	Lab Sample ID	480-143845-1				480-143845-3				480-143845-2				480-143845-5				480-143845-4			
	Sampling Date	10/17/2018 15:00:00				10/17/2018 00:00:00				10/17/2018 17:25:00				10/18/2018 16:30:00				10/17/2018 17:00:00			
	Matrix	Water				Water				Water				Water				Water			
	Dilution Factor	1				1				1				1				1			
SVOA-8270D SIM ID-WATER	**NY NYSDEC Groundwater Criteria**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
WATER BY 8270D SIM ID (µg/L)																					
1,4-Dioxane	NA	0.060	J	0.016	0.20	0.046	J	0.016	0.20	0.034	J	0.016	0.20	0.016	U	0.016	0.20	0.016	U	0.016	0.20
LCMS-537 (MODIFIED)-WATER		**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**	**Result**	**Q**	**MDL**	**RL**
WATER BY 537 (MODIFIED) (ng/L)																					
6:2 FTS	NA	1.74	U	1.74	17.4	1.66	U	1.66	16.6	1.73	U	1.73	17.3	14.5	J	1.64	16.4	1.82	U	1.82	18.2
8:2 FTS	NA	1.74	U	1.74	17.4	1.66	U	1.66	16.6	1.73	U	1.73	17.3	1.64	U	1.64	16.4	1.82	U	1.82	18.2
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	NA	1.65	U	1.65	17.4	1.58	U	1.58	16.6	1.64	U	1.64	17.3	1.55	U	1.55	16.4	1.72	U	1.72	18.2
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	NA	2.69	U	2.69	17.4	2.57	U	2.57	16.6	2.68	U	2.68	17.3	2.53	U	2.53	16.4	2.81	U	2.81	18.2
Perfluorobutanesulfonic acid (PFBS)	NA	0.85	J	0.17	1.74	0.36	J	0.17	1.66	0.98	J	0.17	1.73	1.21	J	0.16	1.64	0.18	U	0.18	1.82
Perfluorobutanoic acid (PFBA)	NA	0.30	U	0.30	1.74	0.29	U	0.29	1.66	16.3		0.30	1.73	7.34		0.29	1.64	0.32	U	0.32	1.82
Perfluorodecanesulfonic acid (PFDS)	NA	0.28	U	0.28	1.74	0.27	U	0.27	1.66	0.28	U	0.28	1.73	0.26	U	0.26	1.64	0.29	U	0.29	1.82
Perfluorodecanoic acid (PFDA)	NA	0.27	U	0.27	1.74	0.26	U	0.26	1.66	0.27	U	0.27	1.73	0.84	J	0.25	1.64	0.28	U	0.28	1.82
Perfluorododecanoic acid (PFDoA)	NA	0.48	U	0.48	1.74	0.46	U	0.46	1.66	0.48	U	0.48	1.73	0.45	U	0.45	1.64	0.50	U	0.50	1.82
Perfluoroheptanesulfonic Acid (PFHpS)	NA	0.17	U	0.17	1.74	0.16	U	0.16	1.66	0.16	U	0.16	1.73	0.16	U	0.16	1.64	0.17	U	0.17	1.82
Perfluoroheptanoic acid (PFHpA)	NA	1.39	J	0.22	1.74	1.09	J	0.21	1.66	1.67	J	0.22	1.73	1.99		0.20	1.64	0.23	U	0.23	1.82
Perfluorohexanesulfonic acid (PFHxS)	NA	1.08	J B	0.15	1.74	0.87	J B	0.14	1.66	1.39	J B	0.15	1.73	0.69	J B	0.14	1.64	0.28	J B	0.15	1.82
Perfluorohexanoic acid (PFHxA)	NA	1.93		0.50	1.74	1.96		0.48	1.66	2.32		0.50	1.73	2.40		0.47	1.64	0.53	U	0.53	1.82
Perfluorononanoic acid (PFNA)	NA	0.23	U	0.23	1.74	0.25	J	0.22	1.66	0.23	U	0.23	1.73	0.46	J	0.22	1.64	0.25	U	0.25	1.82
Perfluorooctanesulfonamide (FOSA)	NA	0.30	U	0.30	1.74	0.29	U	0.29	1.66	0.30	U	0.30	1.73	0.29	U	0.29	1.64	0.32	U	0.32	1.82
Perfluorooctanesulfonic acid (PFOS)	NA	1.73	J	0.47	1.74	1.62	J	0.45	1.66	2.72		0.47	1.73	2.01		0.44	1.64	0.49	U	0.49	1.82
Perfluorooctanoic acid (PFOA)	NA	6.35		0.74	1.74	6.18		0.71	1.66	8.20		0.74	1.73	3.66		0.69	1.64	0.77	U	0.77	1.82
Perfluoropentanoic acid (PFPeA)	NA	0.98	J	0.43	1.74	1.37	J	0.41	1.66	0.42	U	0.42	1.73	1.99		0.40	1.64	0.44	U	0.44	1.82
Perfluorotetradecanoic acid (PFTeA)	NA	0.25	U	0.25	1.74	0.24	U	0.24	1.66	0.25	U	0.25	1.73	0.24	U	0.24	1.64	0.26	U	0.26	1.82
Perfluorotridecanoic acid (PFTriA)	NA	1.13	U	1.13	1.74	1.08	U	1.08	1.66	1.12	U	1.12	1.73	1.06	U	1.06	1.64	1.18	U	1.18	1.82
Perfluoroundecanoic acid (PFUnA)	NA	0.96	U	0.96	1.74	0.91	U	0.91	1.66	0.95	U	0.95	1.73	0.90	U	0.90	1.64	1.0	U	1.0	1.82
Total Detected Perfluorinateds:		14.31				13.7				33.58				37.09				0.28			

Notes:
B Compound was found in the blank and sample.
J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U Indicates the analyte was analyzed for but not detected.

FIGURES



Notes:
1. Topographic basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online © 2013 National Geographic Society, i-cubed.
2. Property boundary (parcel number 5715) referenced from Niagara County online GIS mapping system.

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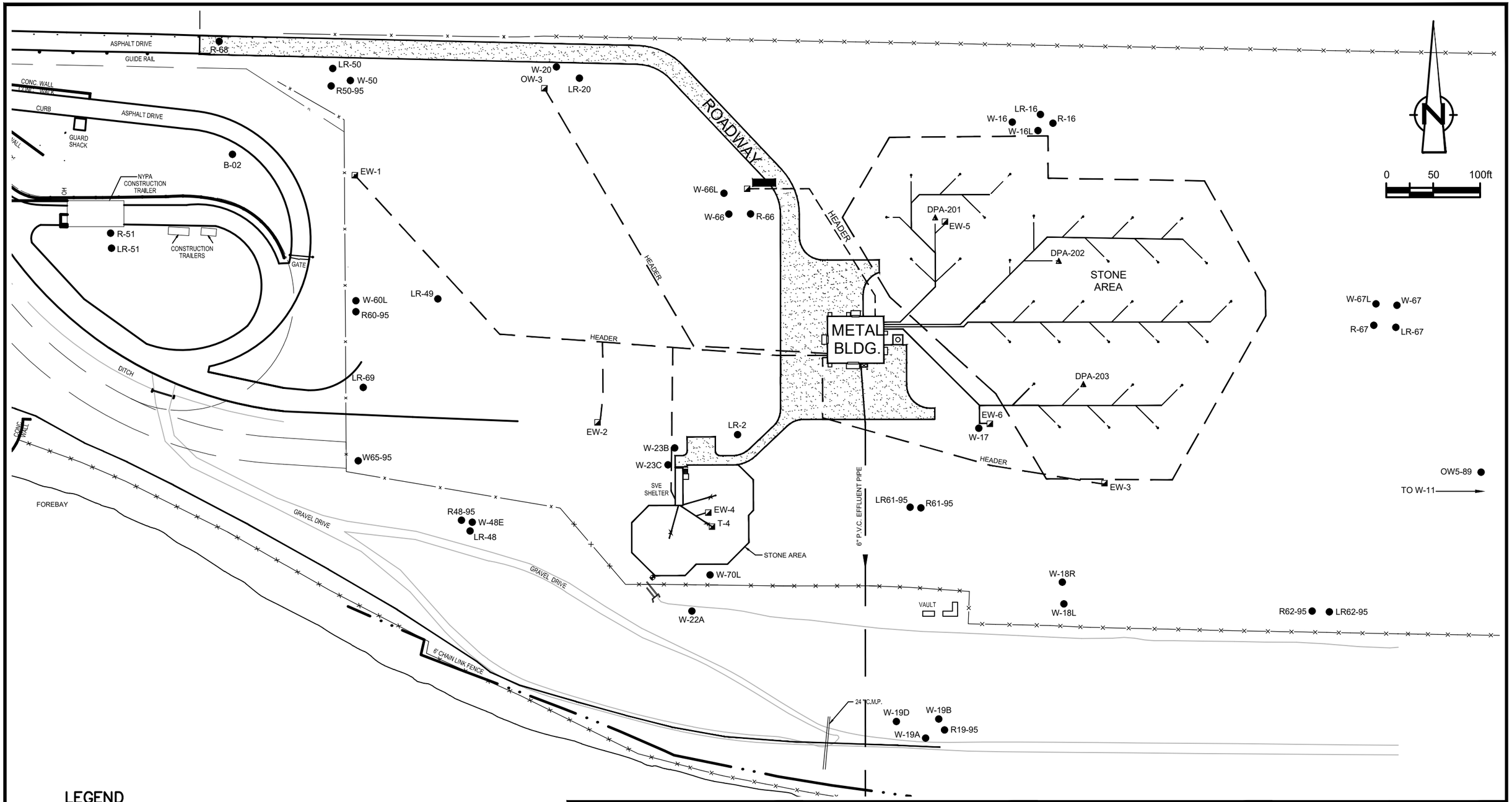
Langan International LLC
Collectively known as Langan
NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
STAUFFER MANAGEMENT COMPANY, LLC
LEWISTON
NIAGARA COUNTY NEW YORK

Drawing Title
SITE LOCATION MAP

Project No.	130117301
Date	1/30/2019
Scale	As Noted
Drawn By	TS
Submission Date	02/01/19
Figure	1



LEGEND

W-66 ● MONITORING WELL

EW-2 ◪ GROUNDWATER EXTRACTION WELL

DPA-201 ◭ DUAL PHASE EXTRACTION WELLS

NOTES:

1. MAP PROVIDED BY GHD, TITLED FIGURE 1.3 EXTRACTION AND MONITORING WELLS.

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Project	STAUFFER MANAGEMENT COMPANY, LLC LEWISTOWN NIAGARA COUNTY NEW YORK
Figure Title	SITE PLAN
Project No.	130117301
Date	2/18/2019
Scale	1"=100'
Drawn By / Checked By	MH / MS
Submission Date	
Figure No.	2
Sheet	of

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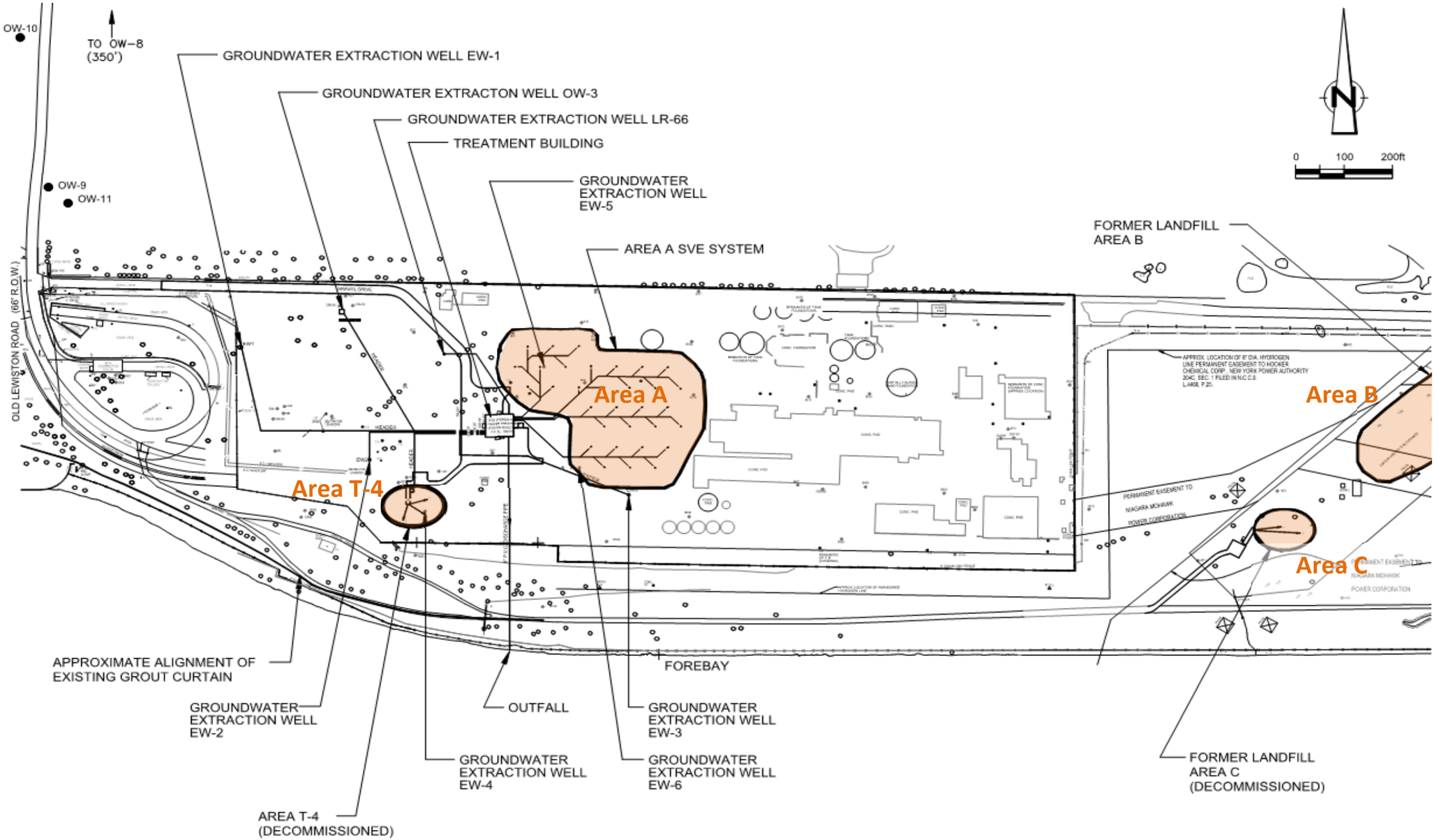

Source: CRA Operations & Maintenance Report, August 2015

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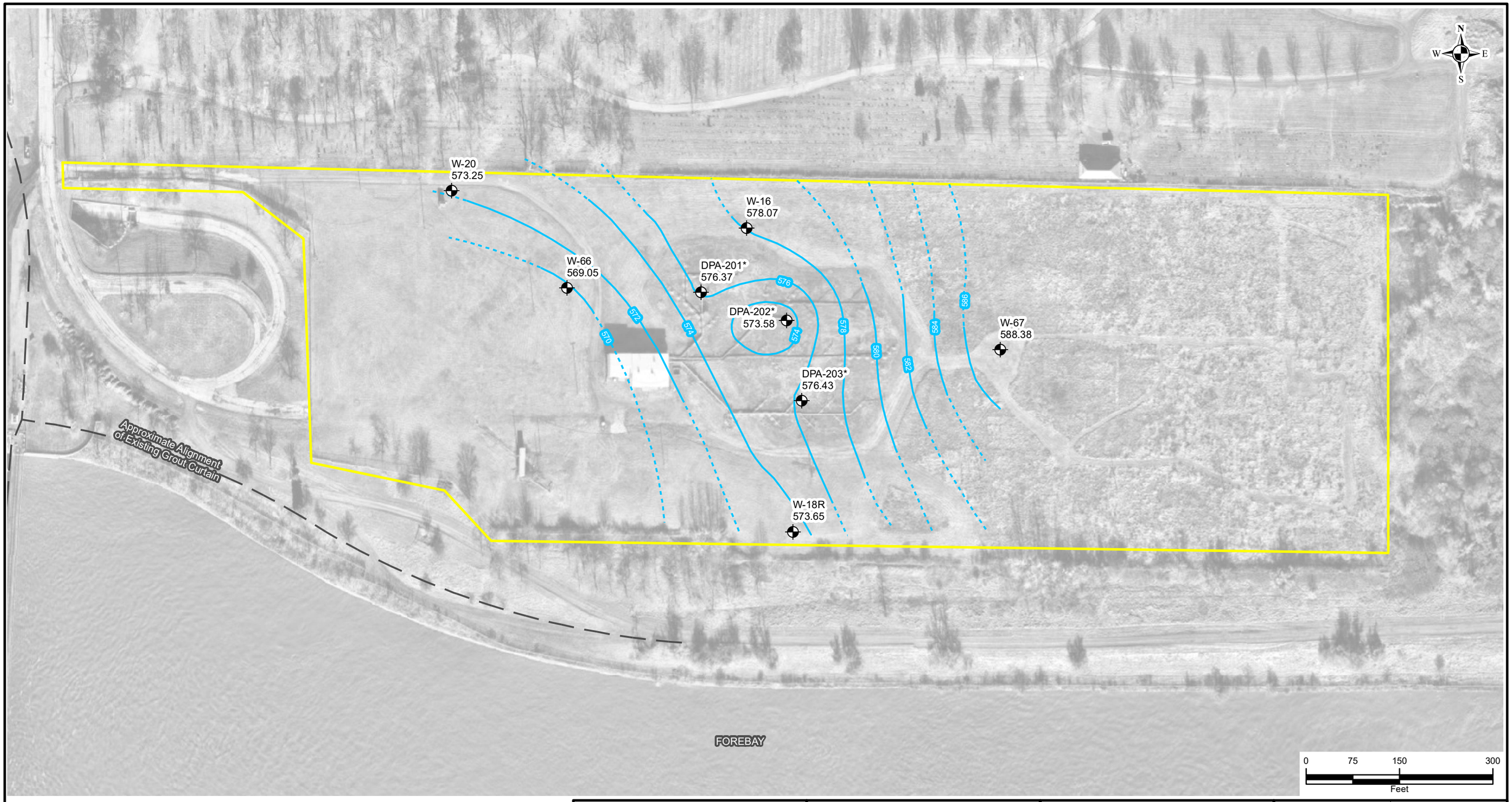
Project
STAUFFER MANAGEMENT COMPANY, LLC
LEWISTON
NIAGARA COUNTY NEW YORK

Drawing Title
SITE FEATURES

Project No.	130117301
Date	1/30/2019
Scale	As Noted
Drawn By	TS
Submission Date	02/01/19

Figure 3



Legend

- Approximate Well Location
- Inferred Groundwater Potentials
- Groundwater Potentials
- Approximate Stauffer Management Company Property Boundary

Notes:
1. Aerial imagery provided by Langan's subscription to Nearmap.com. Aerial flown 1/4/2019.
2. Property boundary digitized from Niagara County online GIS system.
3. Groundwater elevation contours generated with GoldenSoftware's Surfer modeling tools and edited manually.
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5. Measurements recorded in feet (ft).
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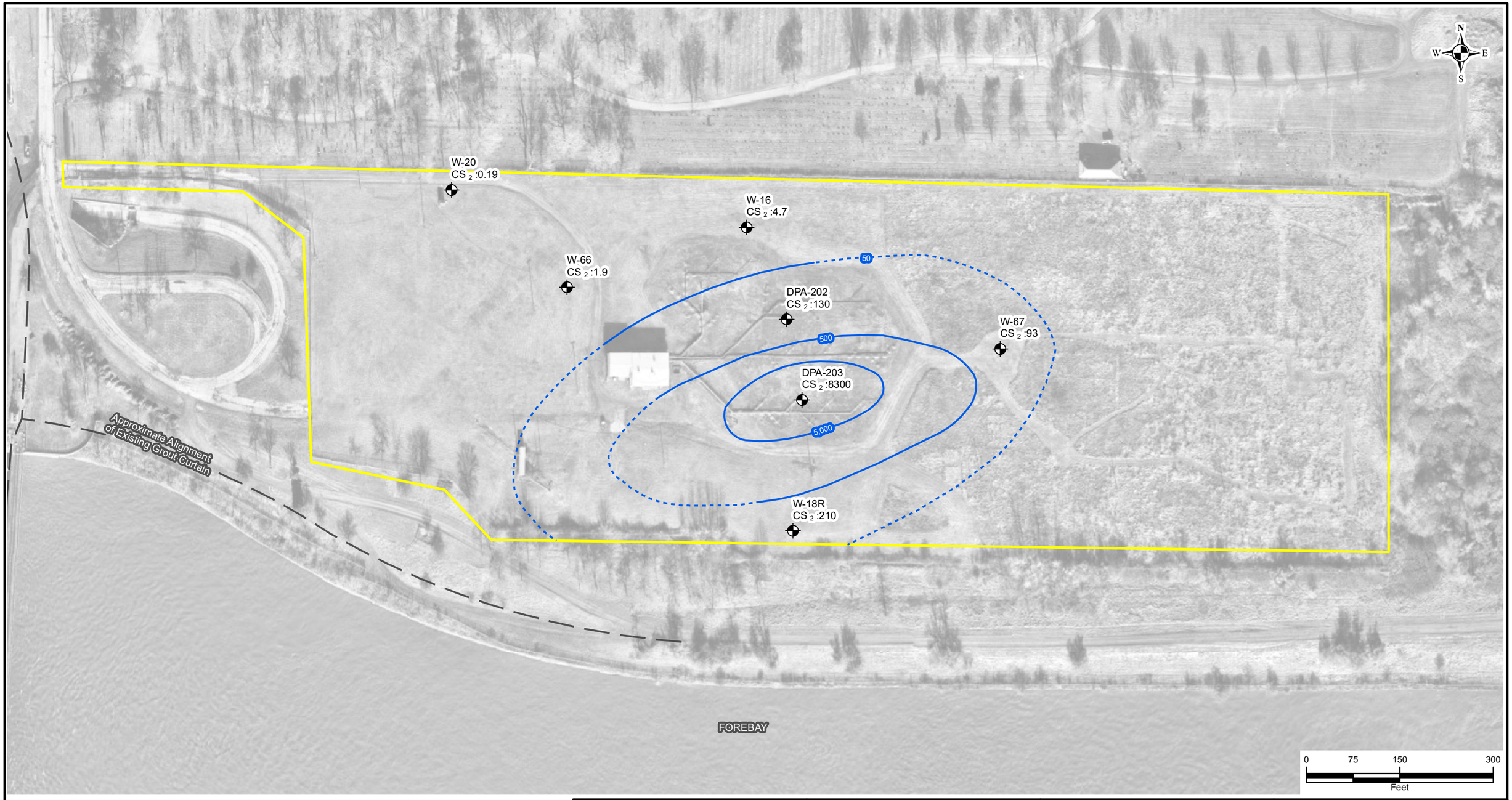
NIAGARA NEW YORK

Drawing Title
GROUNDWATER POTENTIOMETRIC SURFACE - OVERBURDEN AND SHALLOW BEDROCK WELLS (7/10/18)

Project No.	130117301
Date	4/1/2019
Scale	1"=150'
Drawn By	OGODFREY
Submission Date	
Figure	4
	Sheet ### of ###

Path: \\langan.com\data\LAW\data3\130117301\Project Data\ArcGIS\MXD\Environmental_Figures\Figures_March2019\4_GW Elevation Contours_Overburden.mxd Date: 4/1/2019 User: Ogodfrey Time: 1:37:07 PM



Legend

- Approximate Well Location
- Inferred Carbon Disulfide Isoconcentration Contour
- Carbon Disulfide Isoconcentration Contour
- Approximate Stauffer Management Company Property Boundary

Notes:
1. Aerial imagery provided by Langan's subscription to Nearmap.com. Aerial flown 1/4/2019.
2. Property boundary digitized from Niagara County online GIS system.
3. Carbon Disulfide isoconcentration contours generated with GoldenSoftware's Surfer modeling tools and edited manually. All contours are inferred.
4. Measurements recorded in micrograms per liter (ug/L).
5. CS_2 - Carbon Disulfide
6. Concentrations reported from passive diffusion bag samples at specific depths (as shown) for EW-1, EW-3, EW-5, R-19, and R-62 and packer test samples for EW-2.
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NIAGARA NEW YORK

Drawing Title
2018 ISOCONCENTRATIONS - OVERBURDEN AND SHALLOW BEDROCK WELLS (CARBON DISULFIDE)

Project No. 130117301	Figure 5
Date 4/1/2019	
Scale 1"=150'	
Drawn By OGODFREY	
Submission Date	Sheet ### of ###

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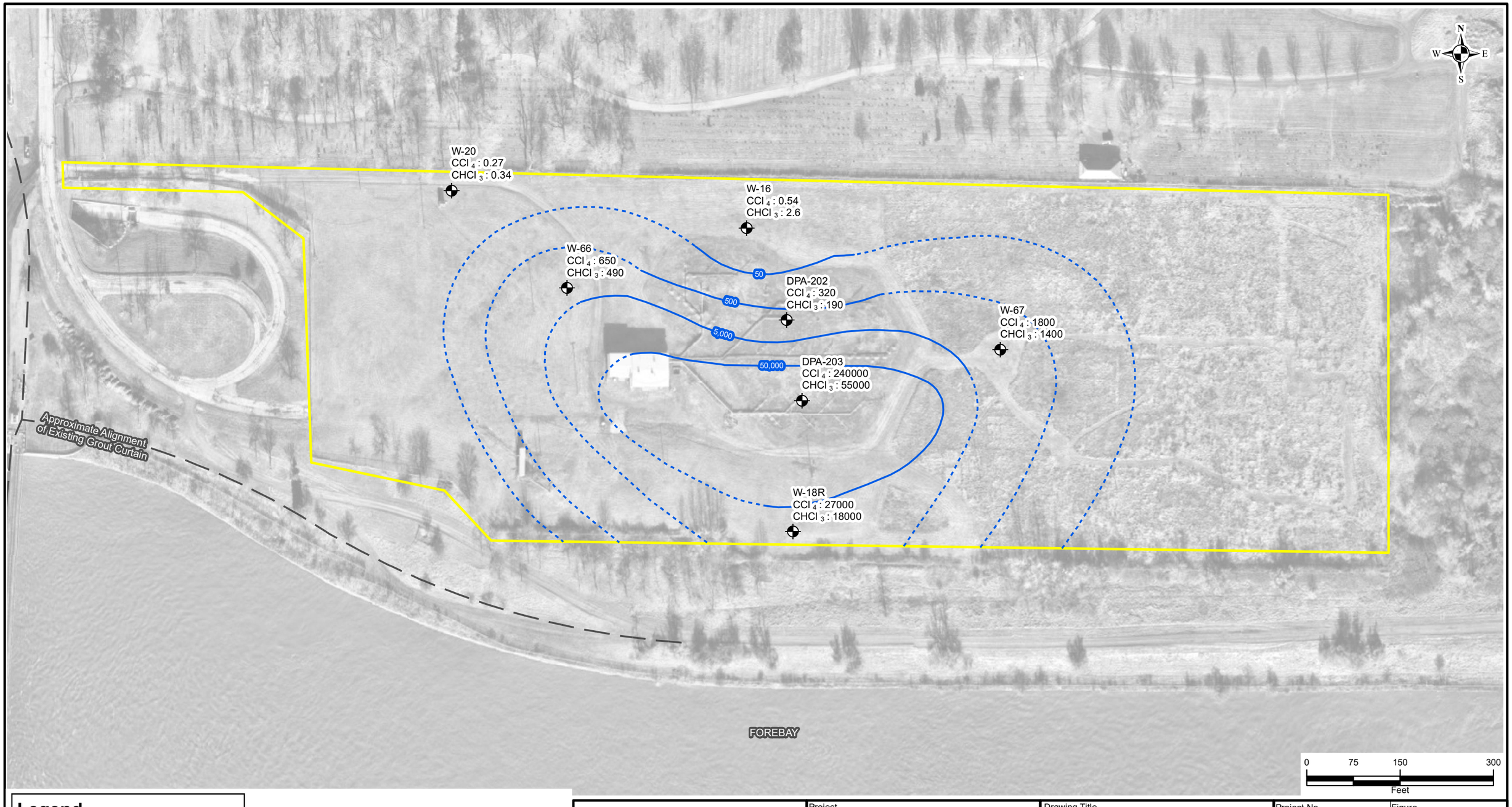

Legend

- Approximate Well Location
- Inferred Carbon Tetrachloride/Chloroform Isoconcentration Contour
- Carbon Tetrachloride/Chloroform Isoconcentration Contour
- Approximate Stauffer Management Company Property Boundary

Notes:
1. Aerial imagery provided by Langan's subscription to Nearmap.com. Aerial flown 1/4/2019.
2. Property boundary digitized from Niagara County online GIS system.
3. Carbon Tetrachloride/Chloroform Isoconcentration contours are hand-drawn.
4. Isoconcentration contours are based off the combined result values of carbon tetrachloride and chloroform.
5. Measurements recorded in micrograms per liter (ug/L).
6. CCl_4 - Carbon Tetrachloride; $CHCl_3$ - Chloroform
7. Concentrations reported from passive diffusion bag samples at specific depths (as shown) for EW-1, EW-3, EW-5, R-19, and R-62 and packer test samples for EW-2.
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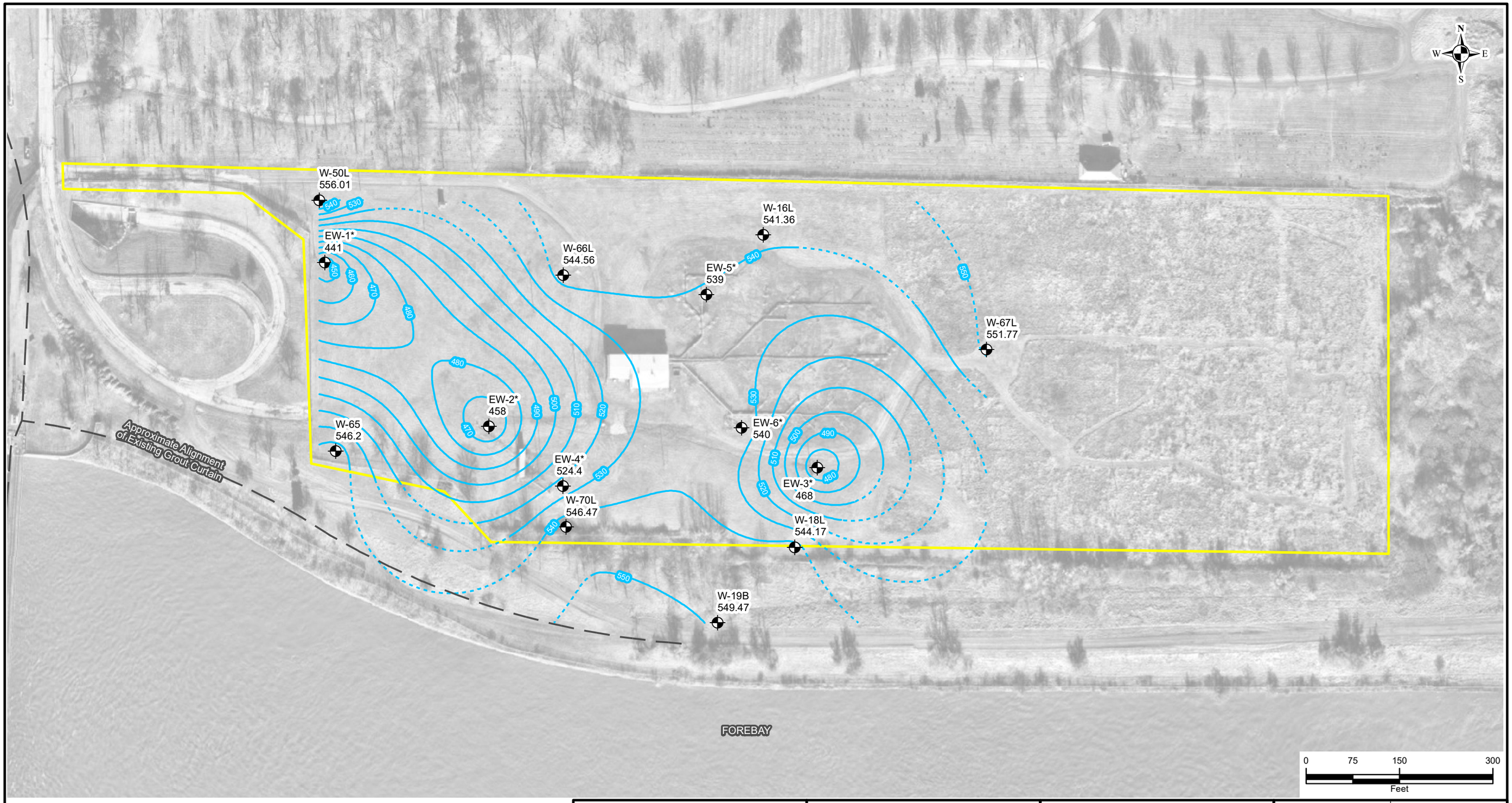
Drawing Title
2018 ISOCONCENTRATIONS - OVERBURDEN AND SHALLOW BEDROCK WELLS (CABRON TETRACHLORIDE/ CHLOROFORM)

Project No.	130117301
Date	4/1/2019
Scale	1"=150'
Drawn By	OGODFREY
Submission Date	
Figure	6
	Sheet ### of ###

Path: \\langan.com\data\LAW\data3\130117301\Project Data\ArcGIS\MXD\Environmental_Figures\Figures_March2019\6_Carbon Tet_Chloroform_Shallow Bedrock.mxd Date: 4/1/2019 User: Ogodfrey Time: 2:11:52 PM



Legend

- Approximate Well Location
- Inferred Groundwater Potentials
- Groundwater Potentials
- Approximate Stauffer Management Company Property Boundary

Notes:
1. Aerial imagery provided by Langan's subscription to Nearmap.com. Aerial flown 1/4/2019.
2. Property boundary digitized from Niagara County online GIS system.
3. Groundwater elevation contours generated with GoldenSoftware's Surfer modeling tools and edited manually.
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NIAGARA NEW YORK

Drawing Title
GROUNDWATER POTENTIOMETRIC SURFACE - FLOW ZONE 10 (7/10/18)

Project No.	130117301
Date	4/1/2019
Scale	1"=150'
Drawn By	OGODFREY
Submission Date	
Figure	7
	Sheet ### of ###

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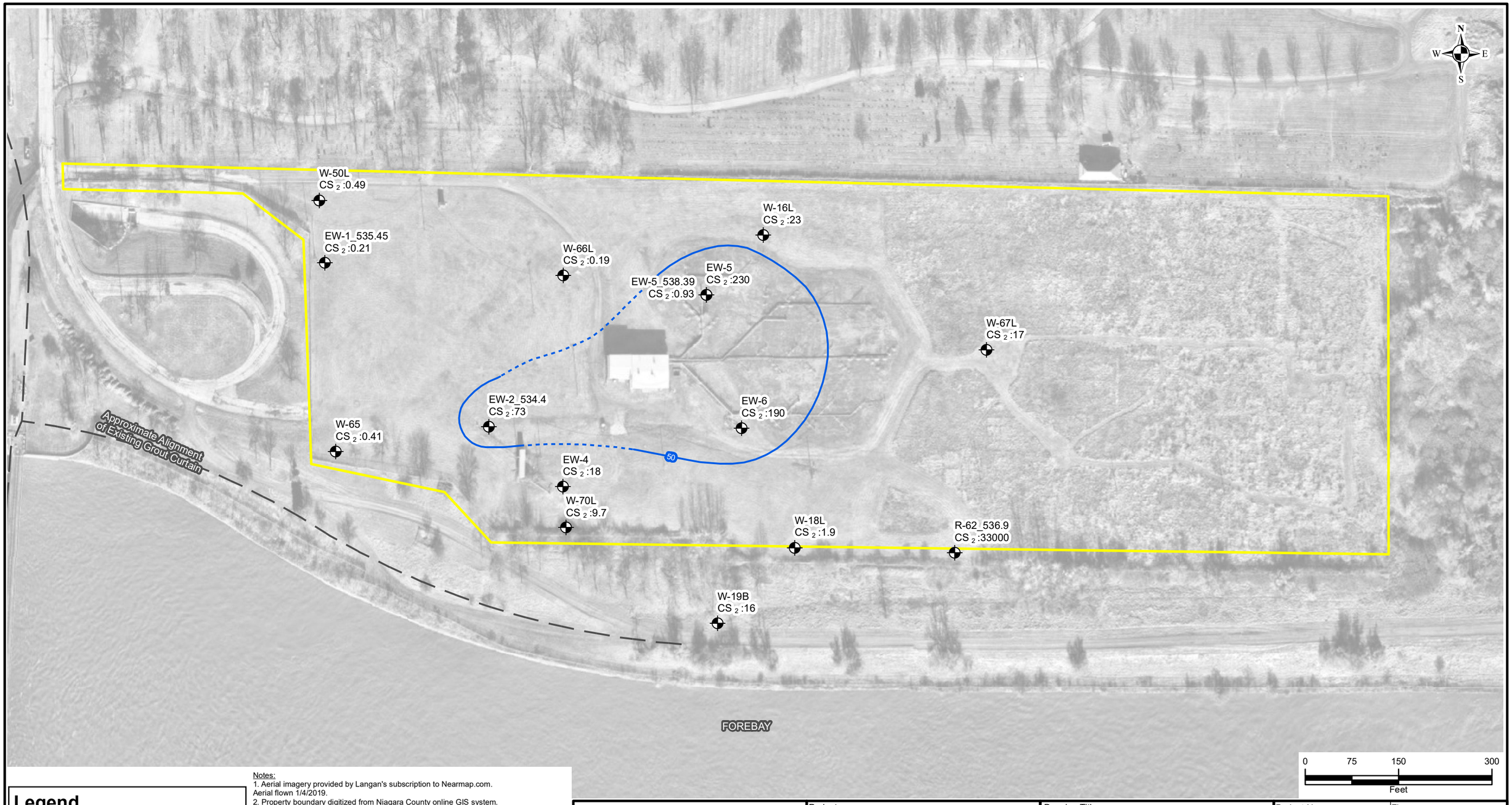

Legend

- Approximate Well Location
- Inferred Carbon Disulfide Isoconcentration Contour
- Carbon Disulfide Isoconcentration Contour
- Approximate Stauffer Management Company Property Boundary

Notes:
1. Aerial imagery provided by Langan's subscription to Nearmap.com. Aerial flown 1/4/2019.
2. Property boundary digitized from Niagara County online GIS system.
3. Carbon Disulfide isoconcentration contours generated with GoldenSoftware's Surfer modeling tools and edited manually. All contours are inferred.
4. Measurements recorded in micrograms per liter (ug/L).
5. CS_2 - Carbon Disulfide
6. Concentrations reported from passive diffusion bag samples at specific depths (as shown) for EW-1, EW-3, EW-5, R-19, and R-62 and packer test samples for EW-2.
7. Pumping wells are screened within the overburden and shallow bedrock. Screened/open intervals for other wells depicted on this map are within the shallow bedrock.
8. For R-62, analytical data are shown for groundwater samples collected during the 2018 annual monitoring event in July 2018 and for depth-discrete samples collected using passive diffusion bags (PDBs) during the hydrogeologic investigation in August 2018. However, because of variance between these datasets, only the 2018 annual monitoring data have been considered for drawing isoconcentration lines.

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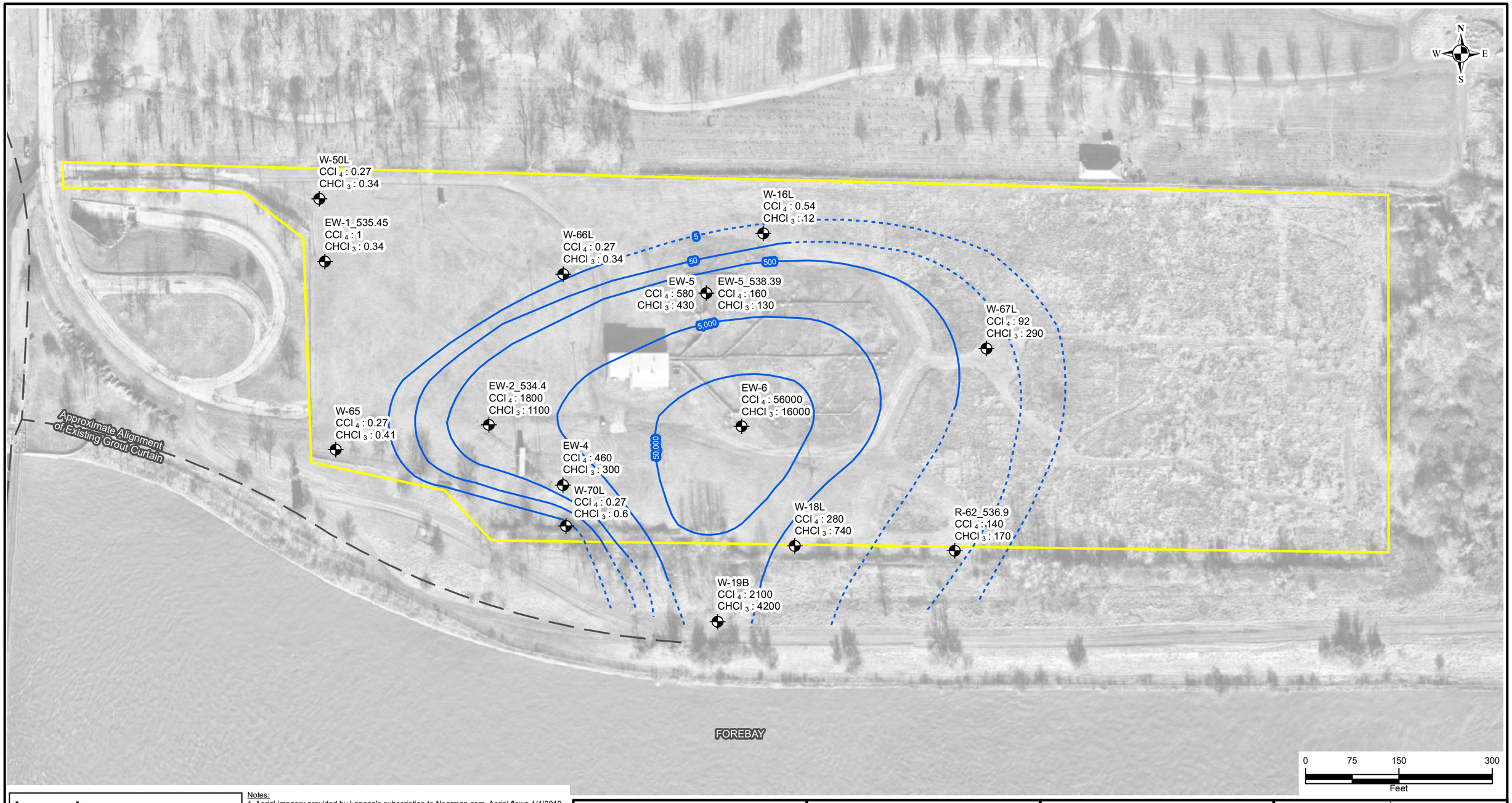
Drawing Title
2018 ISOCONCENTRATIONS - FLOW ZONE 10 (CARBON DISULFIDE)

Project No.	130117301
Date	4/1/2019
Scale	1"=150'
Drawn By	OGODFREY
Submission Date	

Figure 8

Sheet ### of ###



Legend

- Approximate Well Location
- Inferred Carbon Tetrachloride/Chloroform Isoconcentration Contour
- Carbon Tetrachloride/Chloroform Isoconcentration Contour
- Approximate Stauffer Management Company Property Boundary

Notes:

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Project	STAUFFER MANAGEMENT COMPANY LEWISTON NIAGARA NEW YORK
Drawing Title	2018 ISOCONCENTRATIONS - FLOW ZONE 10 (CABRON TETRACHLORIDE/ CHLOROFORM)
Project No.	130117301
Date	4/1/2019
Scale	1"=150'
Drawn By	OGODFREY
Submission Date	
Figure	9
	Sheet ### of ###

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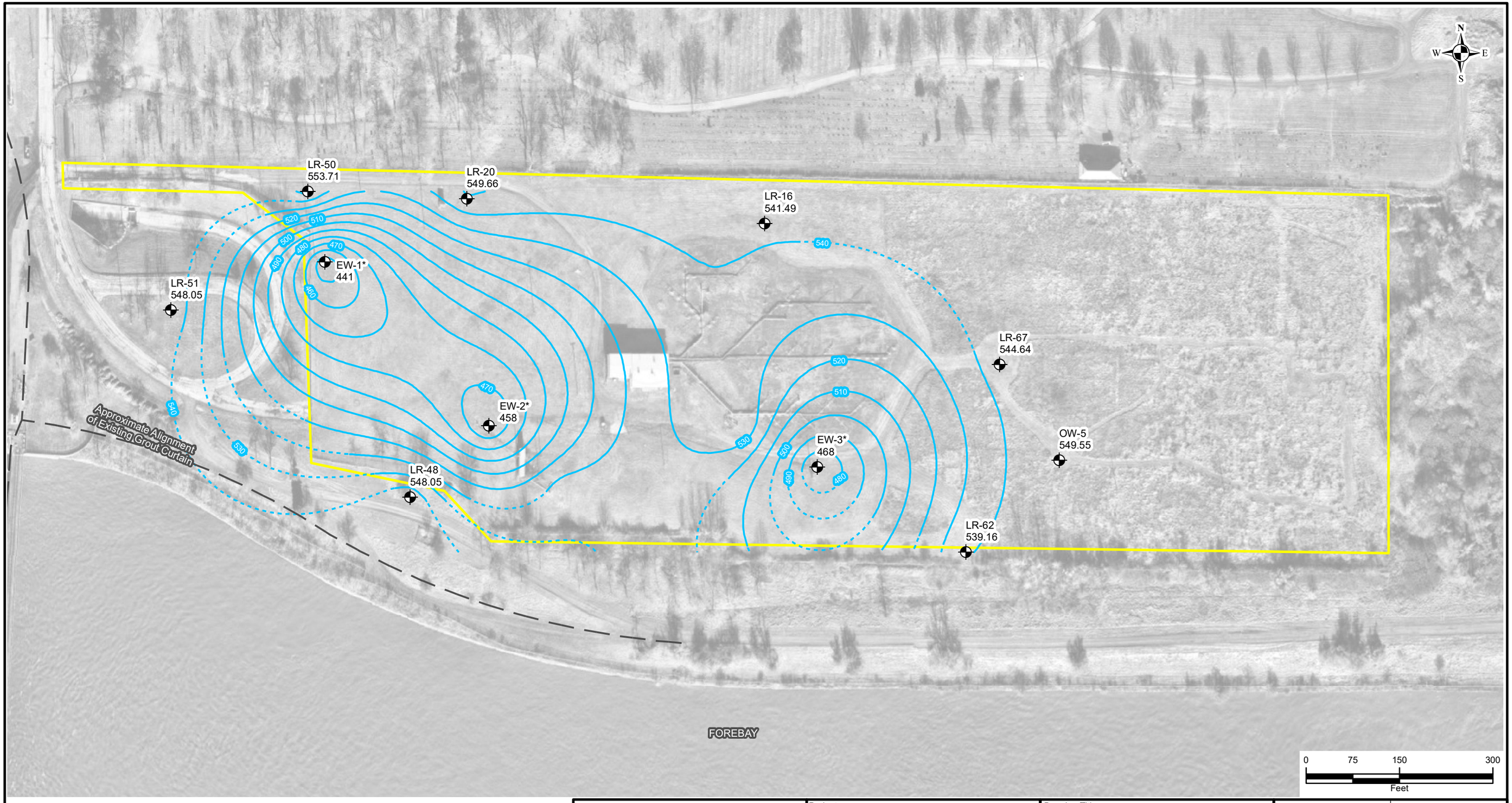

Legend

- Approximate Well Location
- Inferred Groundwater Potentials
- Groundwater Potentials
- Approximate Stauffer Management Company Property Boundary

Notes:
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Project	STAUFFER MANAGEMENT COMPANY LEWISTON NIAGARA NEW YORK
Drawing Title	GROUNDWATER POTENTIOMETRIC SURFACE - FLOW ZONE 11 (7/10/18)
Project No.	130117301
Date	4/1/2019
Scale	1"=150'
Drawn By	OGODFREY
Submission Date	
Figure	10
	Sheet ### of ###

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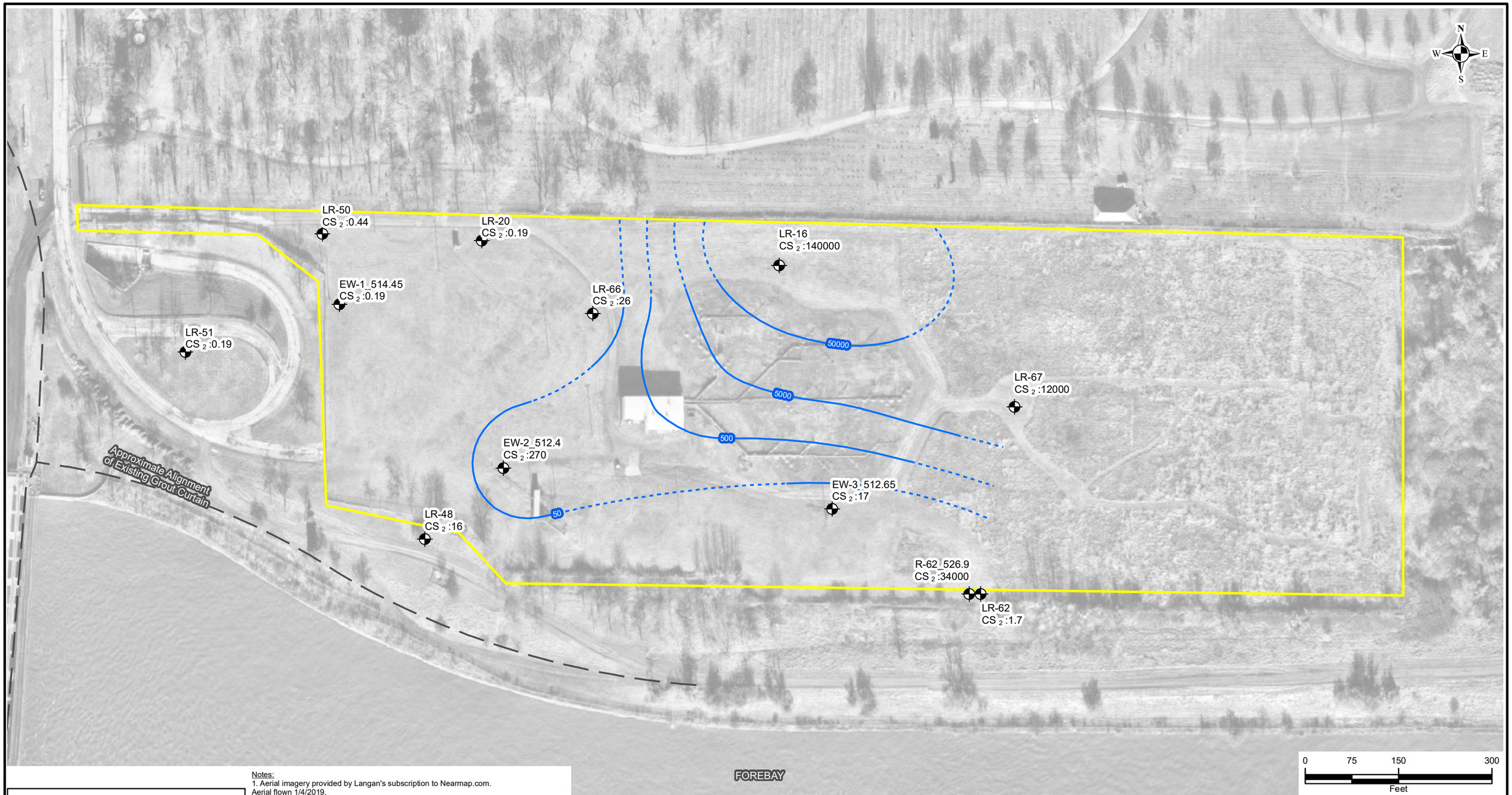

Legend

- Approximate Well Location
- Approximate Stauffer Management Company Property Boundary
- Inferred Carbon Disulfide Isoconcentration Contour
- Carbon Disulfide Isoconcentration Contour

Notes:
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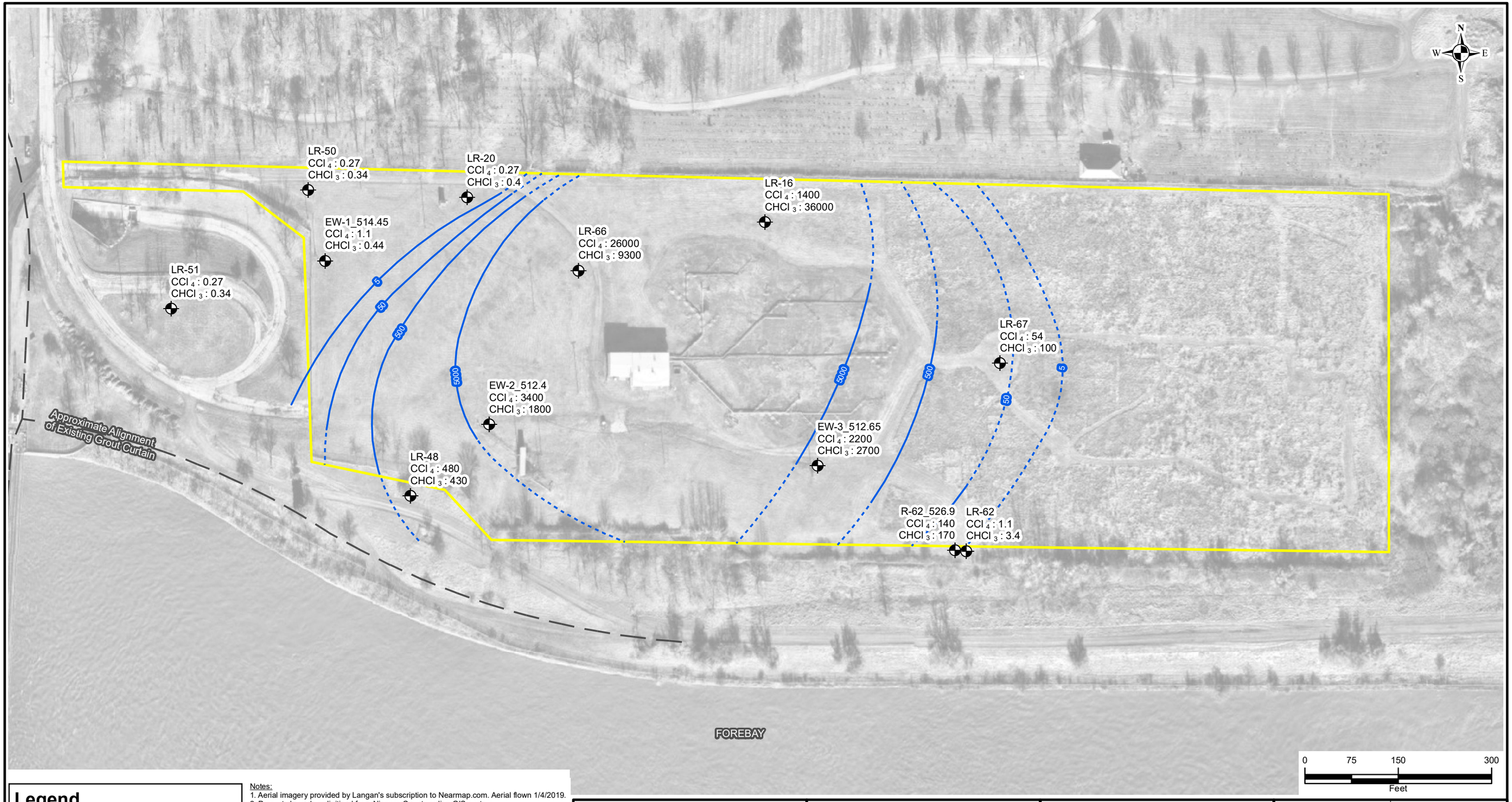
Project	STAUFFER MANAGEMENT COMPANY LEWISTON NIAGARA NEW YORK
Drawing Title	2018 ISOCONCENTRATIONS - FLOW ZONE 11 (CARBON DISULFIDE)
Project No.	130117301
Date	4/1/2019
Scale	1"=150'
Drawn By	OGODFREY
Submission Date	
Figure	11
	Sheet ### of ###

Path: \\langan.com\data\LAW\data3\130117301\Project Data\ArcGIS\MXD\Environmental_Figures\Figures_March2019\11_Carbon Disulfide_FZ-11.mxd Date: 4/1/2019 User: Ogodfrey Time: 2:12:17 PM



Legend

- Approximate Well Location
- Inferred Carbon Tetrachloride/Chloroform Isoconcentration Contour
- Carbon Tetrachloride/Chloroform Isoconcentration Contour
- Approximate Stauffer Management Company Property Boundary

Notes:
1. Aerial imagery provided by Langan's subscription to Nearmap.com. Aerial flown 1/4/2019.
2. Property boundary digitized from Niagara County online GIS system.
3. Carbon Tetrachloride/Chloroform Isoconcentration contours are hand-drawn.
4. Isoconcentration contours are based off the combined result values of carbon tetrachloride and chloroform.
5. Measurements recorded in micrograms per liter (ug/L).
6. CCl_4 - Carbon Tetrachloride; $CHCl_3$ - Chloroform
7. Concentrations reported from passive diffusion bag samples at specific depths (as shown) for EW-1, EW-3, EW-5, R-19, and R-62 and packer test samples for EW-2.
8. For R-62, analytical data are shown for groundwater samples collected during the 2018 annual monitoring event in July 2018 and for depth-discrete samples collected using passive diffusion bags (PDBs) during the hydrogeologic investigation in August 2018. However, because of variance between these datasets, only the 2018 annual monitoring data have been considered for drawing isoconcentration lines.

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Langan International LLC

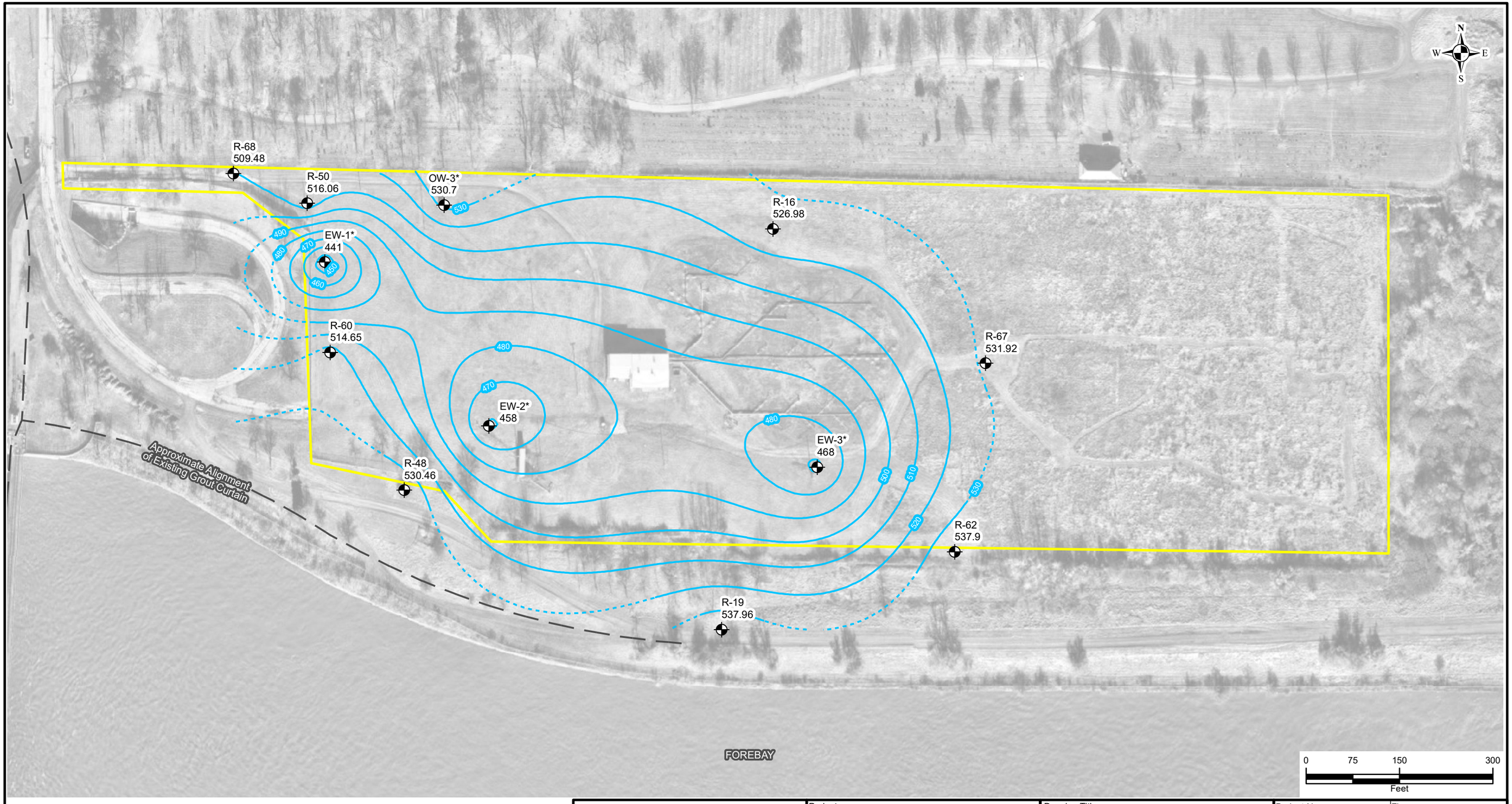
Collectively known as Langan

Project
STAUFFER MANAGEMENT COMPANY
LEWISTON
NIAGARA NEW YORK

Drawing Title
2018 ISOCONCENTRATIONS - FLOW ZONE 11 (CABRON TETRACHLORIDE/ CHLOROFORM)

Project No. 130117301	Figure 12
Date 4/1/2019	
Scale 1"=150'	
Drawn By OGODFREY	
Submission Date	Sheet ### of ###

Path: \\langan.com\data\LAW\data3\130117301\Project Data\ArcGIS\MXD\Environmental_Figures\Figures_March2019\12_Carbon Tet_Chloroform_FZ-11.mxd Date: 4/1/2019 User: Ogodfrey Time: 2:12:30 PM



Legend

- Approximate Well Location
- Inferred Groundwater Potentials
- Groundwater Potentials
- Approximate Stauffer Management Company Property Boundary

Notes:
1. Aerial imagery provided by Langan's subscription to Nearmap.com. Aerial flown 1/4/2019.
2. Property boundary digitized from Niagara County online GIS system.
3. Groundwater elevation contours generated with GoldenSoftware's Surfer modeling tools and edited manually.
4. Water level elevations used for contouring may vary due to different stages in the daily cycle of groundwater elevation fluctuations.
5. Measurements recorded in feet (ft).
6. Pumping wells are screened within the overburden and shallow bedrock. Screened/open intervals for other wells depicted on this map are within the shallow bedrock.
* For active pumping wells, the potentiometric elevation shown is either: 1) the pump intake elevation (for wells with pneumatic pumps, which do not have level controls), or 2) the pump shut-off elevation (for wells with submersible electric pumps, which have automated level controls).

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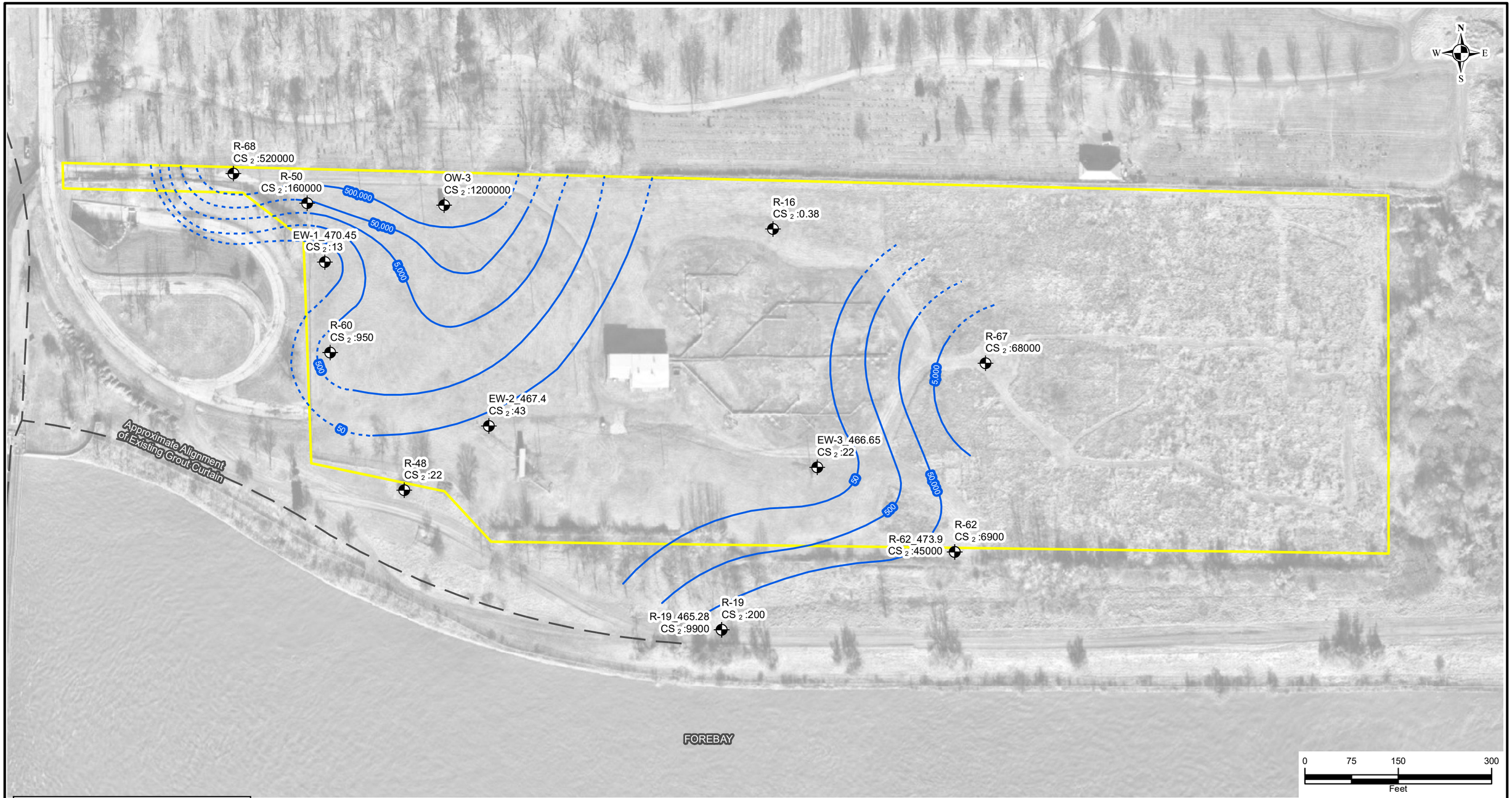
NIAGARA NEW YORK

Drawing Title
GROUNDWATER POTENTIOMETRIC SURFACE - FLOW ZONE 12 (7/10/18)

Project No.	130117301
Date	4/1/2019
Scale	1"=150'
Drawn By	OGODFREY
Submission Date	

Figure
13
Sheet ### of ###

Path: \\langan.com\data\LAW\data3\130117301\Project Data\ArcGIS\MXD\Environmental_Figures\Figures_March2019\13_GW Elevation Contours_FZ-12.mxd Date: 4/1/2019 User: Ogodfrey Time: 1:36:31 PM



Legend

- Approximate Well Location
- Inferred Carbon Disulfide Isoconcentration Contour
- Carbon Disulfide Isoconcentration Contour
- Approximate Stauffer Management Company Property Boundary

Notes:
1. Aerial imagery provided by Langan's subscription to Nearmap.com. Aerial flown 1/4/2019.
2. Property boundary digitized from Niagara County online GIS system.
3. Carbon Disulfide isoconcentration contours generated with GoldenSoftware's Surfer modeling tools and edited manually. All contours are inferred.
4. Measurements recorded in micrograms per liter (ug/L).
5. CS_2 - Carbon Disulfide
6. Concentrations reported from passive diffusion bag samples at specific depths (as shown) for EW-1, EW-3, EW-5, R-19, and R-62 and packer test samples for EW-2.
7. Pumping wells are screened within the overburden and shallow bedrock. Screened/ open intervals for other wells depicted on this map are within the shallow bedrock.

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Project	STAUFFER MANAGEMENT COMPANY LEWISTON NIAGARA NEW YORK
Drawing Title	2018 ISOCONCENTRATIONS - FLOW ZONE 12 (CARBON DISULFIDE)
Project No.	130117301
Date	4/1/2019
Scale	1"=150'
Drawn By	OGODFREY
Submission Date	
Figure	14
	Sheet ### of ###

Path: \\langan.com\data\LAW\data3\130117301\Project Data\ArcGIS\MXD\Environmental_Figures\Figures_March2019\14_Carbon Disulfide_FZ-12.mxd Date: 4/1/2019 User: Ogodfrey Time: 2:11:22 PM

R-68
CCl_4 : 70000
$CHCl_3$: 81000

R-50
CCl_4 : 12000
$CHCl_3$: 11000

OW-3
CCl_4 : 12000
$CHCl_3$: 11000

R-16
CCl_4 : 0.54
$CHCl_3$: 0.68

EW-1_470.45
CCl_4 : 1.3
$CHCl_3$: 1.5

50,000
5,000
500
50
5

R-60
CCl_4 : 70
$CHCl_3$: 60

R-67
CCl_4 : 1000
$CHCl_3$: 630

EW-2_467.4
CCl_4 : 710
$CHCl_3$: 710

EW-3_466.65
CCl_4 : 1700
$CHCl_3$: 2600

R-48
CCl_4 : 150
$CHCl_3$: 2900

R-62
CCl_4 : 34
$CHCl_3$: 43

R-62_473.9
CCl_4 : 220
$CHCl_3$: 270

R-19
CCl_4 : 8100
$CHCl_3$: 3100

R-19_465.28
CCl_4 : 6800
$CHCl_3$: 2000

Approximate Alignment of Existing Grout Curtain

FOREBAY

N
W
E
S

0 75 150 300
Feet

Legend

- Approximate Well Location
- Inferred Carbon Tetrachloride/Chloroform Isoconcentration Contour
- Carbon Tetrachloride/Chloroform Isoconcentration Contour
- Approximate Stauffer Management Company Property Boundary

Notes:
1. Aerial imagery provided by Langan's subscription to Nearmap.com. Aerial flown 1/4/2019.
2. Property boundary digitized from Niagara County online GIS system.
3. Carbon Tetrachloride/Chloroform Isoconcentration contours are hand-drawn.
4. Isoconcentration contours are based off the combined result values of carbon tetrachloride and chloroform..
5. Measurements recorded in micrograms per liter (ug/L).
6. CCl_4 - Carbon Tetrachloride; $CHCl_3$ - Chloroform
7. Concentrations reported from passive diffusion bag samples at specific depths (as shown) for EW-1, EW-3, EW-5, R-19, and R-62 and packer test samples for EW-2.

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NIAGARA NEW YORK

Drawing Title
2018 ISOCONCENTRATIONS - FLOW ZONE 12 (CABRON TETRACHLORIDE/ CHLOROFORM)

Project No. 130117301	Figure 15
Date 4/1/2019	
Scale 1"=150'	
Drawn By OGODFREY	
Submission Date	Sheet ### of ###

Path: \\langan.com\data\LAW\data3\130117301\Project Data\ArcGIS\MXD\Environmental_Figures\Figures_March2019\15_Carbon Tet_Chloroform_FZ-12.mxd Date: 4/1/2019 User: Ogodfrey Time: 2:11:05 PM

APPENDICES

APPENDIX A
GROUNDWATER TREATMENT SYSTEM 2018 PROCESS MONITORING DATA

Appendix A-1
Pump and Treat System Monthly Influent Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			LOCATION	INFLUENT			INFLUENT			INFLUENT			INFLUENT			INFLUENT			INFLUENT		
			SAMPLE ID	INF			INF_140318			INF_110418			INF_110418			INF-05092018			INF-06222018		
			LAB SAMPLE ID	480-131483-1			480-132695-1			480-134193-1			480-134193-1-DL			480-135695-1			480-138178-1		
			SAMPLING DATE	2/15/2018 16:30			3/14/2018 13:00			4/11/2018 12:00			4/11/2018 12:00			05/09/2018 08:00:00			06/22/2018 11:00:00		
			SAMPLE TYPE	Water			Water			Water			Water			Water			Water		
			DILLUTION FACTOR	100			50			1			80			1			1		
Analyte	**CasNum**	**NYSDEC Groundwater Criteria**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**
Volatile Organic Compounds (µg/L)																				
Benzene	71-43-2	0.7	41	U	41	21	U	21	**3.1**		0.41	NR			0.41	U	0.41	**7.2**		0.41
Carbon disulfide	75-15-0	50	**5000**		19	**3800**	F1	9.5	**NR**			**2,000**	D	15	0.19	U	0.19	**NR**		
Carbon tetrachloride	56-23-5	5	**5300**		27	**3100**		14	**NR**			**2,100**	D	22	**11**		0.27	**NR**		
Chlorobenzene	108-90-7	5	75	U	75	38	U	38	2.5		0.75	NR			0.75	U	0.75	2.2		0.75
Chloroform	67-66-3	7	**1700**		34	**1400**		17	**NR**			**1,500**	D	27	0.68	J	0.34	**NR**		
Methylene chloride	75-09-2	5	**67**	J	44	**65**		22	**64**		0.44	**NR**			0.44	U	0.44	**NR**		
Tetrachloroethene	127-18-4	5	**230**		36	**95**		18	**96**		0.36	**NR**			0.46	J	0.36	**NR**		
Toluene	108-88-3	5	51	U	51	26	U	26	2		0.51	NR			0.51	U	0.51	5		0.51
Trichloroethene	79-01-6	5	**100**		46	**74**		23	**59**		0.46	**NR**			0.46	U	0.46	**65**		0.46
Total Concentration	–	–	10697			8534.0						5,827			12.1					

NOTES:

NYSDEC : New York State Department of Environmental Conservation
Q : Data Qualifier
MDL : Method Detection Limit
F1 : MS and/or MSD Recovery is outside acceptance limits.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U : Indicates the analyte was analyzed for but not detected.
D : Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.

Appendix A-1
Pump and Treat System Monthly Influent Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			LOCATION	INFLUENT			INFLUENT			INFLUENT			INFLUENT			INFLUENT			INFLUENT		
			SAMPLE ID	INF-06222018			INF_07272018			INF-08082018			INF 08312018			INF-09122018			INF-09122018		
			LAB SAMPLE ID	480-138178-1-DL			480-139703-1			480-140160-1			480-141309-1			480-141619-1			480-141619-1		
			SAMPLING DATE	06/22/2018 11:00:00			07/27/2018 16:00:00			8/8/2018 14:00			08/31/2018 16:00:00			9/12/2018 11:00			9/12/2018 11:00		
			SAMPLE TYPE	Water			Water			Water			Water			Water			Water		
			DILLUTION FACTOR	100			200			100			80			80			80		
Analyte	**CasNum**	**NYSDEC Groundwater Criteria**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**
Volatile Organic Compounds (µg/L)																				
Benzene	71-43-2	0.7	NR			82	U	82	41	U	41	33	U	33	33	U	33	33	U	33
Carbon disulfide	75-15-0	50	**6,800**	D	19	38	U	38	19	U	19	**3900**		15	**5200**		15	**5200**		15
Carbon tetrachloride	56-23-5	5	**7,400**	D	27	**8200**		54	**47000**	E	27	**3300**		22	**2000**		22	**2000**		22
Chlorobenzene	108-90-7	5	NR			150	U	150	75	U	75	60	U	60	60	U	60	60	U	60
Chloroform	67-66-3	7	**4,100**	D	34	**4600**		68	**9600**		34	**1700**		27	**1300**		27	**1300**		27
Methylene chloride	75-09-2	5	**170**	D	44	88	U	88	**64**	J	44	**110**		35	**110**		35	**110**		35
Tetrachloroethene	127-18-4	5	**120**	D	36	**100**	J	72	**1000**		36	**48**	J	29	**38**	J	29	**38**	J	29
Toluene	108-88-3	5	NR			100	U	100	51	U	51	41	U	41	41	U	41	41	U	41
Trichloroethene	79-01-6	5	NR			92	U	92	**52**	J	46	**67**	J	37	**68**	J	37	**68**	J	37
Total Concentration	–	–	18,669			12,900			57,716			9,125		NA	8,716		NA	8716.0		NA

NOTES:

NYSDEC : New York State Department of Environmental Conservation
Q : Data Qualifier
MDL : Method Detection Limit
F1 : MS and/or MSD Recovery is outside acceptance limits.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U : Indicates the analyte was analyzed for but not detected.
D : Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.

Appendix A-1
Pump and Treat System Monthly Influent Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			LOCATION	INFLUENT			INFLUENT			INFLUENT		
			SAMPLE ID	INF-10102018			INF_11142018			INF-12122018		
			LAB SAMPLE ID	480-143322-1			480-145327-1			480-146744-1		
			SAMPLING DATE	10/10/2018 08:30:00			11/14/2018 12:00			12/12/2018 15:10		
			SAMPLE TYPE	Water			Water			Water		
			DILLUTION FACTOR	80			80			80		
Analyte	**CasNum**	**NYSDEC Groundwater Criteria**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**
Volatile Organic Compounds (µg/L)											
Benzene	71-43-2	0.7	33	U	33	33	U	33	33	U	33
Carbon disulfide	75-15-0	50	**3900**		15	**3000**		15	**5700**		15
Carbon tetrachloride	56-23-5	5	**3300**		22	**2200**		22	**5900**	F1	22
Chlorobenzene	108-90-7	5	60	U	60	60	U	60	60	U	60
Chloroform	67-66-3	7	**1500**		27	**1200**		27	**2600**		27
Methylene chloride	75-09-2	5	**100**		35	**96**		35	**140**		35
Tetrachloroethene	127-18-4	5	29	U	29	**47**	J	29	**110**		29
Toluene	108-88-3	5	41	U	41	41	U	41	41	U	41
Trichloroethene	79-01-6	5	**55**	J	37	**60**	J	37	**95**		37
Total Concentration	--	--	8855		NA	6603		NA	14545		NA

NOTES:

NYSDEC : New York State Department of Environmental Conservation
Q : Data Qualifier
MDL : Method Detection Limit
F1 : MS and/or MSD Recovery is outside acceptance limits.
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U : Indicates the analyte was analyzed for but not detected.
D : Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.

Appendix A-2
Pump and Treat System Weekly Mid-carbon Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			LOCATION	MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON		
			SAMPLE ID	WG-6488-010218-CBT			WG-6488-010818-CBT			WG-6488-011518-CBT			WG-6488-012418-CBT			WG-6488-012918-CBT			Mid Carbon		
			LAB SAMPLE ID	R1800036-001			R1800198-001			R1800397-001			R1800689-001			R1800835-001			460-150057-1		
			SAMPLING DATE	1/2/2018 12:20			1/8/2018 12:00			1/15/2018 11:00			1/24/2018 11:15			1/29/2018 12:30			2/7/2018 16:00		
			SAMPLE TYPE	Water			Water			Water			Water			Water			Water		
Analyte	**CasNum**	**Discharge Limit (Daily Maximum)**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**
Volatile Organic Compounds (µg/L)																				
Benzene	71-43-2	10	1.0	U	0.20	1.0	U	0.20	1.0	U	0.20	1.0	U	0.20	1.0	U	0.20	0.41	U	0.41
Carbon disulfide	75-15-0	Monitor	1.0	U	0.22	0.23	J	0.22	1.0	U	0.22	1.0	U	0.22	1.0	U	0.22	0.19	U	0.19
Carbon tetrachloride	56-23-5	10	1.0	U	0.45	1.0	U	0.45	1.0	U	0.45	1.0	U	0.45	1.0	U	0.45	0.27	U	0.27
Chlorobenzene	108-90-7	10	1.0	U	0.29	1.0	U	0.29	1.0	U	0.29	1.0	U	0.29	1.0	U	0.29	0.75	U	0.75
Chloroform	67-66-3	10	1.6		0.25	4.0		0.25	1.0	U	0.25	1.0	U	0.25	1.0	U	0.25	0.34	U	0.34
Methylene chloride	75-09-2	10	3.5		0.60	3.4		0.60	1.0	U	0.60	1.0	U	0.60	1.0	U	0.60	0.44	U	0.44
Tetrachloroethene	127-18-4	10	1.0	U	0.30	1.0	U	0.30	1.0	U	0.30	1.0	U	0.30	1.0	U	0.30	0.36	U	0.36
Toluene	108-88-3	10	1.0	U	0.20	1.0	U	0.20	1.0	U	0.20	1.0	U	0.20	1.0	U	0.20	0.51	U	0.51
Trichloroethene	79-01-6	10	1.0	U	0.22	1.0	U	0.22	1.0	U	0.22	1.0	U	0.22	0.22	J	0.22	0.46	U	0.46
Total Concentration	–	–	5.1			7.6			0.0			0.0			0.22			0.0		

Notes:

* - CBT and Effluent samples were miss labeled on the sample bottle ware

Q : Data Qualifier

MDL : Method Detection Limit

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U : Indicates the analyte was analyzed for but not detected.

D : Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.

B : Compound was found in blank and sample.

U $^{t,-}$ Analyte not detected, LCS or LCSD is outside acceptance limits

Appendix A-2
Pump and Treat System Weekly Mid-carbon Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			LOCATION	MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON		
			SAMPLE ID	CBT			LAN-SMC-WVOC-001			CBT-280218			CBT_070318			CBT_140318			CBT_210318		
			LAB SAMPLE ID	480-131483-2			480-131678-1			480-132001-1			480-132341-1			480-132695-2			480-132984-1		
			SAMPLING DATE	2/15/2018 16:40			2/21/2018 2:50			2/28/2018 10:30			3/7/2018 12:30			3/14/2018 13:10			3/21/2018 9:45		
			SAMPLE TYPE	Water			Water			Water			Water			Water			Water		
Analyte	**CasNum**	**Discharge Limit (Daily Maximum)**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**
Volatile Organic Compounds (µg/L)																				
Benzene	71-43-2	10	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41
Carbon disulfide	75-15-0	Monitor	0.77	J	0.19	0.22	J	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19
Carbon tetrachloride	56-23-5	10	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27
Chlorobenzene	108-90-7	10	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75
Chloroform	67-66-3	10	0.34	U	0.34	0.34	U	0.34	0.34	U	0.34	0.34	U	0.34	0.34	U	0.34	0.34	U	0.34
Methylene chloride	75-09-2	10	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44	0.97	J	0.44	2.5		0.44
Tetrachloroethene	127-18-4	10	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36
Toluene	108-88-3	10	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51
Trichloroethene	79-01-6	10	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46
Total Concentration	–	–	0.77			0.22			0.0			0.0			0.97			0.0		

Notes:
* - CBT and Effluent samples were miss labeled on the sample bottle ware

Q : Data Qualifier

MDL : Method Detection Limit
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U : Indicates the analyte was analyzed for but not detected.

D : Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.

B : Compound was found in blank and sample.

U $^{t-}$ Analyte not detected, LCS or LCSD is outside acceptance limits

Appendix A-2
Pump and Treat System Weekly Mid-carbon Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			LOCATION	MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON		
			SAMPLE ID	CBT_280318			CBT_110418			CBT_04182018			CBT_04252018			CBT_05022018			CBT-05092018		
			LAB SAMPLE ID	480-133737-1			480-134193-2			480-134535-1			480-134922-1			480-135343-1			480-135695-2		
			SAMPLING DATE	3/28/2018 12:30			4/11/2018 12:10			4/18/2018 12:00			04/25/2018 12:00:00			05/02/2018 12:00:00			05/09/2018 08:00:00		
			SAMPLE TYPE	Water			Water			Water			Water			Water			Water		
Analyte	**CasNum**	**Discharge Limit (Daily Maximum)**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**
Volatile Organic Compounds (µg/L)																							
Benzene	71-43-2	10	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41
Carbon disulfide	75-15-0	Monitor	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19
Carbon tetrachloride	56-23-5	10	0.27	U	0.27	0.72	J	0.27	1.9		0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27
Chlorobenzene	108-90-7	10	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75
Chloroform	67-66-3	10	0.34	U	0.34	2.8		0.34	13		0.34	0.34	U	0.34	0.34	U	0.34	0.34	U	0.34	0.34	U	0.34
Methylene chloride	75-09-2	10	4.8		0.44	7.7		0.44	9.5		0.44	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44
Tetrachloroethene	127-18-4	10	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36
Toluene	108-88-3	10	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51
Trichloroethene	79-01-6	10	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46
Total Concentration	--	--	0.0			11.2			24.4			0.0			0.0			0.0					

Notes:

* - CBT and Effluent samples were miss labeled on the sample bottle ware

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MDL : Method Detection Limit

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U : Indicates the analyte was analyzed for but not detected.

D : Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.

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Appendix A-2
Pump and Treat System Weekly Mid-carbon Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			LOCATION	MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON		
			SAMPLE ID	CBT_05162018			CBT_05232018			CBT_05302018			CBT 06062018			CBT-06222018			CBT_06272018		
			LAB SAMPLE ID	480-136106-1			480-136493-1			480-136737-1			480-137091-1			480-138178-2			480-138179-1		
			SAMPLING DATE	05/16/2018 12:00:00			05/23/2018 11:00:00			05/30/2018 19:40:00			06/06/2018 11:00:00			06/22/2018 11:00:00			06/27/2018 16:00:00		
			SAMPLE TYPE	Water			Water			Water			Water			Water			Water		
Analyte	**CasNum**	**Discharge Limit (Daily Maximum)**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**
Volatile Organic Compounds (µg/L)																				
Benzene	71-43-2	10	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41
Carbon disulfide	75-15-0	Monitor	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19	1.2		0.19	NR		
Carbon tetrachloride	56-23-5	10	0.27	U	0.27	0.27	U	0.27	0.43	J	0.27	0.27	U	0.27	15		0.27	NR		
Chlorobenzene	108-90-7	10	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75
Chloroform	67-66-3	10	0.34	U	0.34	2.1		0.34	5.4		0.34	0.48	J	0.34	40		0.34	NR		
Methylene chloride	75-09-2	10	0.44	U	0.44	5.8		0.44	3.5		0.44	0.44	U	0.44	6.5		0.44	19		0.44
Tetrachloroethene	127-18-4	10	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.47	J	0.36
Toluene	108-88-3	10	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51
Trichloroethene	79-01-6	10	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.5	J	0.46
Total Concentration	--	--	0.0			7.90			9.33			0.48			62.7			1.0		

Notes:
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Appendix A-2
Pump and Treat System Weekly Mid-carbon Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			LOCATION	MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON		
			SAMPLE ID	CBT_06272018			CBT_07062018			CBT-07182018			CBT_07272018*			CBT_08022018			CBT-08082018*		
			LAB SAMPLE ID	480-138179-1-DL			480-138546-1			480-139257-1			480-139703-3			480-139978-1			480-140160-3		
			SAMPLING DATE	06/27/2018 16:00:00			07/06/2018 14:00:00			07/18/2018 11:45:00			07/27/2018 16:00:00			8/2/2018 13:50			8/8/2018 14:05		
			SAMPLE TYPE	Water			Water			Water			Water			Water			Water		
Analyte	**CasNum**	**Discharge Limit (Daily Maximum)**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**
Volatile Organic Compounds (µg/L)																				
Benzene	71-43-2	10	NR			1.6	U	1.6	1.6	U	1.6	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41
Carbon disulfide	75-15-0	Monitor	96	D	0.76	41		0.76	17		0.76	2.5		0.19	0.19	U	0.19	2.1		0.19
Carbon tetrachloride	56-23-5	10	160	D	1.1	110		1.1	37		1.1	2.8		0.27	0.27	U	0.27	0.27	U	0.27
Chlorobenzene	108-90-7	10	NR			3	U	3	3	U	3	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75
Chloroform	67-66-3	10	180	D	1.4	160		1.4	200		1.4	72		0.34	0.47	J	0.34	50		0.34
Methylene chloride	75-09-2	10	NR			14		1.8	19		1.8	2.6		0.44	0.44	U	0.44	0.96	J	0.44
Tetrachloroethene	127-18-4	10	NR			1.4	U	1.4	1.4	U	1.4	0.36	U [t]	0.36	0.36	U	0.36	0.36	U	0.36
Toluene	108-88-3	10	NR			2	U	2	2	U	2	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51
Trichloroethene	79-01-6	10	NR			1.8	U	1.8	1.8	U	1.8	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46
Total Concentration	--	--	456			325.0			273.0			79.9			0.47			53.06		

Notes:

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Appendix A-2
Pump and Treat System Weekly Mid-carbon Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			LOCATION	MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON		
			SAMPLE ID	CBT_08152018			CBT 08312018*			CBT_09062018			CBT-09122018*			CBT_09192018			CBT_09262018		
			LAB SAMPLE ID	480-140504-1			480-141309-3			480-141696-1			480-141619-3			480-142027-1			480-142496-1		
			SAMPLING DATE	08/15/2018 14:10:00			08/31/2018 16:05:00			09/06/2018 15:30:00			9/12/2018 11:05			09/19/2018 10:00:00			09/26/2018 11:00:00		
			SAMPLE TYPE	Water			Water			Water			Water			Water			Water		
Analyte	**CasNum**	**Discharge Limit (Daily Maximum)**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**
Volatile Organic Compounds (µg/L)																				
Benzene	71-43-2	10	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41
Carbon disulfide	75-15-0	Monitor	0.19	U	0.19	0.79	J	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19
Carbon tetrachloride	56-23-5	10	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27
Chlorobenzene	108-90-7	10	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75
Chloroform	67-66-3	10	0.34	U	0.34	9.0		0.34	0.34	U	0.34	0.36	J	0.34	0.34	U	0.34	0.34	U	0.34
Methylene chloride	75-09-2	10	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44	1.5		0.44	10		0.44
Tetrachloroethene	127-18-4	10	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36
Toluene	108-88-3	10	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51
Trichloroethene	79-01-6	10	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46
Total Concentration	–	–	0.0			9.79			0.0			0.36			0.0			0.0		

Notes:

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Appendix A-2
Pump and Treat System Weekly Mid-carbon Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			LOCATION	MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON		
			SAMPLE ID	CBT_10032018			CBT-10102018			CBT_10192018			CBT_10242018			CBT_10312018			CBT_11142018		
			LAB SAMPLE ID	480-142980-1			480-143322-2			480-143846-1			480-144222-1			480-144561-1			480-145327-2		
			SAMPLING DATE	10/03/2018 15:00:00			10/10/2018 08:35:00			10/19/2018 13:30			10/24/2018 12:00			10/31/2018 12:00			11/14/2018 12:07		
			SAMPLE TYPE	Water			Water			Water			Water			Water			Water		
Analyte	**CasNum**	**Discharge Limit (Daily Maximum)**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**
Volatile Organic Compounds (µg/L)																				
Benzene	71-43-2	10	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41
Carbon disulfide	75-15-0	Monitor	0.19	U	0.19	0.19	U	0.19	0.84	J	0.19	0.37	J	0.19	0.42	J	0.19	0.37	J	0.19
Carbon tetrachloride	56-23-5	10	0.27	U	0.27	0.27	U	0.27	1.4		0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27
Chlorobenzene	108-90-7	10	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75
Chloroform	67-66-3	10	0.34	U	0.34	0.69	J	0.34	2.4		0.34	1.9		0.34	1.6		0.34	1		0.34
Methylene chloride	75-09-2	10	19		0.44	30		0.44	0.59	J	0.44	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44
Tetrachloroethene	127-18-4	10	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36
Toluene	108-88-3	10	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51
Trichloroethene	79-01-6	10	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46
Total Concentration	–	–	0.0			0.0			5.2			2.3			2.0			1.4		

Notes:

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Appendix A-2
Pump and Treat System Weekly Mid-carbon Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			LOCATION	MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON			MID-CARBON		
			SAMPLE ID	CBT 11222018			CBT-11282018			CBT_1252018			CBT-12122018			CBT_12192018			CBT_12272018		
			LAB SAMPLE ID	480-145665-1			480-145887-1			480-146407-1			480-146744-2			480-146744-1			480-147339-1		
			SAMPLING DATE	11/22/2018 19:45			11/28/2018 11:00			12/5/2018 18:00			12/12/2018 15:15			12/19/2018 14:00			12/27/2018 16:00		
			SAMPLE TYPE	Water			Water			Water			Water			Water			Water		
Analyte	**CasNum**	**Discharge Limit (Daily Maximum)**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**
Volatile Organic Compounds (µg/L)																				
Benzene	71-43-2	10	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41
Carbon disulfide	75-15-0	Monitor	0.26	J	0.19	0.2	J	0.19	0.43	J B	0.19	0.29	J	0.19	0.23	J B	0.19	0.56	J	0.19
Carbon tetrachloride	56-23-5	10	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	12		0.27
Chlorobenzene	108-90-7	10	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75
Chloroform	67-66-3	10	0.88	J	0.34	0.82	J	0.34	0.75	J	0.34	0.65	J	0.34	0.58	J	0.34	13		0.34
Methylene chloride	75-09-2	10	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44	4.7		0.44
Tetrachloroethene	127-18-4	10	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36
Toluene	108-88-3	10	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51
Trichloroethene	79-01-6	10	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46
Total Concentration	–	–	1.1			1.0			1.2			0.94			0.81			30		

Notes:
* - CBT and Effluent samples were miss labeled on the sample bottle ware

Q : Data Qualifier

MDL : Method Detection Limit
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U : Indicates the analyte was analyzed for but not detected.

D : Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.

B : Compound was found in blank and sample.

U $^{t-}$ Analyte not detected, LCS or LCSD is outside acceptance limits

Appendix A-3
Pump and Treat System Monthly Effluent Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			LOCATION	EFFLUENT			EFFLUENT			EFFLUENT			EFFLUENT			EFFLUENT			EFFLUENT			EFFLUENT		
			SAMPLE ID	WG-6488-010218-EFF			EFF			EFF_140318			EFF_110418			EFF-05092018			EFF-05312018					
			LAB SAMPLE ID	R1800037-001			480-131483-3			480-132695-3			480-134193-3			480-135695-3			480-136765-1					
			SAMPLING DATE	1/2/2018 12:30			02/15/2018 16:50:00			03/14/2018 13:15:00			4/11/2018 12:20			05/09/2018 08:00:00			05/31/2018 12:30:00					
			SAMPLE TYPE	Water			Water			Water			Water			Water			Water					
Analyte	**CasNum**	**Discharge Limit (Daily Maximum)**		**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**			
Volatile Organic Compounds (µg/L)																								
Benzene	71-43-2	10		1.0	U	1.0	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41			
Carbon disulfide	75-15-0	Monitor		10	U	10	0.3	J	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19			
Carbon tetrachloride	56-23-5	10		1.0	U	1.0	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27			
Chlorobenzene	108-90-7	10		1.0	U	1.0	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75			
Chloroform	67-66-3	10		1.0	U	1.0	0.34	U	0.34	0.34	U	0.34	0.34	U	0.34	0.34	U	0.34	0.43	J	0.34			
Methylene chloride	75-09-2	10		1.0	U	1.0	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44			
Tetrachloroethene	127-18-4	10		1.0	U	1.0	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36			
Toluene	108-88-3	10		1.0	U	1.0	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51			
Trichloroethene	79-01-6	10		1.0	U	1.0	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46			
Total Concentration	--	--		0			0.3			0.0			0.0			0.0			0.43					

NOTES:

* - CBT and Effluent samples were miss labeled on the sample bottle ware

Q : Data Qualifier

MDL : Method Detection Limit

J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

U : Indicates the analyte was analyzed for but not detected.

Appendix A-3
Pump and Treat System Monthly Effluent Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

			LOCATION	EFFLUENT			EFFLUENT			EFFLUENT			EFFLUENT			EFFLUENT			EFFLUENT		
			SAMPLE ID	EFF-06222018			EFF_07272018*			EFF-08082018*			EFF 08312018*			EFF-09122018*			EFF-10102018		
			LAB SAMPLE ID	480-138178-3			480-139703-2			480-140160-2			480-141309-2			480-141619-2			480-143322-3		
			SAMPLING DATE	06/22/2018 11:00:00			7/27/2018 16:00			8/8/2018 14:10			08/31/2018 16:10:00			9/12/2018 11:10			10/10/2018 8:40		
			SAMPLE TYPE	Water			Water			Water			Water			Water			Water		
Analyte	**CasNum**	**Discharge Limit (Daily Maximum)**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**
Volatile Organic Compounds (µg/L)																				
Benzene	71-43-2	10	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41	0.41	U	0.41
Carbon disulfide	75-15-0	Monitor	0.23	J	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19	0.19	U	0.19	0.42	J	0.19
Carbon tetrachloride	56-23-5	10	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27	0.27	U	0.27
Chlorobenzene	108-90-7	10	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75	0.75	U	0.75
Chloroform	67-66-3	10	0.49	J	0.34	0.38	J	0.34	0.59	J	0.34	0.34	U	0.34	0.36	J	0.34	2.9		0.34
Methylene chloride	75-09-2	10	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44	0.44	U	0.44
Tetrachloroethene	127-18-4	10	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36	0.36	U	0.36
Toluene	108-88-3	10	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51	0.51	U	0.51
Trichloroethene	79-01-6	10	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46	0.46	U	0.46
Total Concentration	--	--	0.72			0.4			0.59			0.0			0.36			3.32		NA

NOTES:
* - CBT and Effluent samples were miss labeled on the sample bottle ware
Q : Data Qualifier
MDL : Method Detection Limit
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U : Indicates the analyte was analyzed for but not detected.

Appendix A-3
Pump and Treat System Monthly Effluent Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
3/26/2019

		LOCATION	EFFLUENT			EFFLUENT		
		SAMPLE ID	EFF_11142018			EFF-12122018		
		LAB SAMPLE ID	480-145327-3			480-146744-3		
		SAMPLING DATE	11/14/2018 12:14			12/12/2018 15:20		
		SAMPLE TYPE	Water			Water		
Analyte	**CasNum**	**Discharge Limit (Daily Maximum)**	**Result**	**Q**	**MDL**	**Result**	**Q**	**MDL**
Volatile Organic Compounds (µg/L)								
Benzene	71-43-2	10	0.41	U	0.41	0.41	U	0.41
Carbon disulfide	75-15-0	Monitor	0.19	U	0.19	0.19	U	0.19
Carbon tetrachloride	56-23-5	10	0.27	U	0.27	0.27	U	0.27
Chlorobenzene	108-90-7	10	0.75	U	0.75	0.75	U	0.75
Chloroform	67-66-3	10	0.34	U	0.34	0.34	U	0.34
Methylene chloride	75-09-2	10	0.44	U	0.44	0.44	U	0.44
Tetrachloroethene	127-18-4	10	0.36	U	0.36	0.36	U	0.36
Toluene	108-88-3	10	0.51	U	0.51	0.51	U	0.51
Trichloroethene	79-01-6	10	0.46	U	0.46	0.46	U	0.46
Total Concentration	--	--	0.0		NA	0.0		NA

NOTES:
* - CBT and Effluent samples were miss labeled on the sample bottle ware
Q : Data Qualifier
MDL : Method Detection Limit
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U : Indicates the analyte was analyzed for but not detected.

APPENDIX B
GROUNDWATER TREATMENT SYSTEM 2018 SPDES DATA

Appendix B
Pump and Treat System Quarterly Effluent (SPDES) Analytical Results
Former Stauffer Management Company
Lewiston, New York
Langan Project No.: 130117301
4/2/2019

		SAMPLE ID	EFFLUENT				EFFLUENT				EFFLUENT				EFFLUENT				EFFLUENT			
		SAMPLE ID	EFF				EFF_140318				EFF-05092018				EFF-09122018				EFF_11142018			
		LAB SAMPLE ID	480-131483-3				480-132695-3				480-135695-3				480-141619-3				480-145327-3			
		SAMPLING DATE	02/15/2018 16:50:00				03/14/2018 13:15:00				05/09/2018 08:00:00				9/12/18 11:10				11/14/2018 12:14			
		SAMPLE TYPE	Water				Water				Water				Water				Water			
Analyte	**CasNum**	**Discharge Limit (Daily Maximum)**	**Result**	**Q**	**MDL**	**Discharge Rate lbs/day**	**Result**	**Q**	**MDL**	**Discharge Rate lbs/day**	**Result**	**Q**	**MDL**	**Discharge Rate lbs/day**	**Result**	**Q**	**MDL**	**Discharge Rate lbs/day**	**Result**	**Q**	**MDL**	**Discharge Rate lbs/day**
Semi-Volatile Organic Compounds (µg/L)																						
2,4-Dichlorophenol	120-83-2	10	0.51	U	0.51	NA	0.51	U	0.51	NA	0.51	U	0.51	NA	0.51	U	0.51	NA	0.51	U	0.51	NA
Hexachloroethane	67-72-1	10	0.59	U	0.59	NA	0.59	U	0.59	NA	0.59	U	0.59	NA	0.59	U	0.59	NA	0.59	U	0.59	NA
Naphthalene	91-20-3	10	0.76	U	0.76	NA	0.76	U	0.76	NA	0.76	U	0.76	NA	0.76	U	0.76	NA	0.76	U	0.76	NA
Metals (mg/L)																						
Arsenic	7440-38-2	0.036*	0.0056	U	0.0056	0.0013	0.0056	U	0.0056	0.0013	0.0056	U	0.0056	0.0013	0.0056	U	0.0056	0.0013	0.0056	U	0.0056	0.0013
Chromium	7440-47-3	0.072*	0.001	U	0.001	0.0002	0.001	U	0.001	0.0002	0.001	U	0.001	0.0002	0.0015	J	0.001	0.0004	0.001	U	0.001	0.0002
Copper	7440-50-8	0.1*	0.0016	U	0.0016	0.0004	0.0016	U	0.0016	0.0004	0.0016	U	0.0016	0.0004	0.0016	U	0.0016	0.0004	0.0016	U	0.0016	0.0004
Lead	7439-92-1	0.16*	0.015	U	0.015	0.0036	0.015	U	0.015	0.0036	0.015	U	0.015	0.0036	0.015	U	0.015	0.0036	0.003	U	0.003	0.0007
Nickel	7440-02-0	0.072*	0.0013	J	0.0013	0.0003	0.0016	J	0.0013	0.0004	0.0013	U	0.0013	0.0003	0.0039	J	0.0013	0.0009	0.0024	J	0.0013	0.0006
Selenium	7782-49-2	0.48*	0.0087	U	0.0087	0.0021	0.0087	U	0.0087	0.0021	0.0087	U	0.0087	0.0021	0.0087	U	0.0087	0.0021	0.0087	U	0.0087	0.0021
Zinc	7440-66-6	0.86*	0.011		0.0015	0.0026	0.019		0.0015	0.0046	0.0046	J	0.0015	0.0011	0.05	B	0.0015	0.0120	0.0034	J	0.0015	0.0008
Total Recoverable Phenolics (mg/L)																						
Phenolics, Total Recoverable (mg/l)	STL00166	10	0.018		0.005	NA	0.012		0.005	NA	0.02		0.005	NA	0.0059	J	0.005	NA	0.011	B	0.005	NA

Notes:
Q : Data Qualifier
MDL : Method Detection Limit
* Discharge limits for metals are in lbs/day
J : Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U : Indicates the analyte was analyzed for but not detected.
B : Compound was found in the blank and sample.
Discharge Rate for metals assumes a 40 gpm system flow rate

APPENDIX C
LOW FLOW SAMPLING PURGE SHEETS

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 22203
Field Personnel: Adrian S.
Signature:

Well ID: W-18L **Well Depth:** 79 **ft below TOC** **Screened/Open Interval:** 42 **to** 71 **ft BGS**
Well Permit #: **Well Diameter:** 4 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 60 **ft below TOC**
Depth to Water Before Pump Installation: 57.3 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
9:55	X		7.28	-	2.58	-	-153	-	3.48	-	0	-	15.16	-	2 Liters	56.0
10:00	X		7.27	0.01	2.53	0.05	-160	7	0.64	2.84	0	0	15.13	0.03	3 Liters	56.1
10:05	X		7.30	0.03	2.59	0.06	-166	6	0.30	0.34	0	0	15.24	0.11	4 Liters	56.1
10:10	X		7.30	0	2.59	0	-173	7	0.25	0.05	0	0	15.32	0.08	5 Liters	56.0
10:15	X		7.30	0	2.57	0.02	-176	3	0.17	0.08	0	0	15.45	0.13	6 Liters	55.8
10:20	X		7.30	0	2.56	0.01	-178	2	0.12	0.05	0	0	15.50	0.05	7 Liters	55.3
10:25	X		7.29	0.01	2.55	0.01	-179	1	0.10	0.02	0	0	15.90	0.4	8 Liters	55.1
10:30	X	X	7.28	0.01	2.54	0.01	-179	0	0.09	0.01	0	0	15.78	0.12	9 Liters	55.1

COMMENTS:

No cation/anion sampling

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: 80° partly cloudy

Water Quality Meter Make/Model: Horiba U-5000
Water Quality Meter Serial #: XASW76H9
Field Personnel: Angelo F.
Signature:

Well ID: W-66 **Well Depth:** 46 **ft below TOC** **Screened/Open Interval:** 19 **to** 46 **ft BGS**
Well Permit #: **Well Diameter:** 4 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 35 **ft below TOC**
Depth to Water Before Pump Installation: 26.05 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
10:20	X		7.19	-	1.24	-	179	-	6.53	-	18.4	-	16.91	-		25.63
10:25	X		7.21	0.02	1.26	0.02	178	1	6.03	0.5	12.9	5.5	14.91	2		26.6
10:30	X		7.18	0.03	1.26	0	166	12	5.16	0.87	13.3	0.4	14.55	0.36	~2.5 Liters	27.1
10:35	X		7.17	0.01	1.26	0	163	3	4.93	0.23	10.5	2.8	14.44	0.11		27.3
10:40	X		7.18	0.01	1.26	0	160	3	4.31	0.62	12.1	1.6	17.16	2.72		27.4
10:45	X		7.22	0.04	1.30	0.04	158	2	4.26	0.05	8.3	3.8	19.52	2.36		28.0
10:50	X		7.20	0.02	1.27	0.03	156	2	3.65	0.61	9.9	1.6	19.47	0.05		28.0
10:55	X		7.18	0.02	1.24	0.03	155	1	3.19	0.46	7.5	2.4	17.09	2.38		28.2
11:00	X		7.18	0	1.26	0.02	154	1	2.98	0.21	5.4	2.1	15.65	1.44	~3.5 Liters	28.5
11:05	X		7.20	0.02	1.27	0.01	154	0	2.69	0.29	7.8	2.4	15.11	0.54		28.7
11:10	X		7.18	0.02	1.27	0	153	1	2.57	0.12	4.6	3.2	15.04	0.07	~4.75 Liters	29.0
11:15	X		7.20	0.02	1.27	0	154	1	2.36	0.21	3.5	1.1	15.16	0.12	~5.25 Liters	29.2
11:20	X		7.20	0	1.27	0	155	1	2.43	0.07	2.2	1.3	15.30	0.14	~6.0 Liters	29.4
11:25	X		7.19	0.01	1.26	0.01	155	0	2.03	0.4	1.1	1.1	15.40	0.1	~6.5 Liters	29.7

COMMENTS:

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: 80° partly cloudy

Water Quality Meter Make/Model: Horiba U-5000
Water Quality Meter Serial #: XASW76H9
Field Personnel: Angelo F.
Signature:

Well ID: W-66 **Well Depth:** 46 **ft below TOC** **Screened/Open Interval:** 19 **to** 46 **ft BGS**
Well Permit #: **Well Diameter:** 4 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 35 **ft below TOC**
Depth to Water Before Pump Installation: 26.05 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
11:30	X		7.20	-	1.26	-	158	-	1.81	-	0.2	-	15.66	-	~7.25 Liters	29.95
11:35	X		7.21	0.01	1.26	0	160	2	1.72	0.09	0.0	0.2	15.83	0.17	~7.75 Liters	30.1
11:40	X		7.22	0.01	1.26	0	161	1	1.57	0.15	0.2	0.2	15.96	0.13	~8.25 Liters	30.3
11:45	X	X	7.21	0.01	1.26	0	159	2	1.48	0.09	0.0	0.2	16.23	0.27	~9.0 Liters	30.5

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny 83°

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 21160
Field Personnel: Adrian S.
Signature:

Well ID: W-66L **Well Depth:** 67.9 **ft below TOC** **Screened/Open Interval:** 55 **to** 65 **ft BGS**
Well Permit #: **Well Diameter:** 2 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 60 **ft below TOC**
Depth to Water Before Pump Installation: 49.7 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
15:25	X		7.53	-	3.22	-	-6	-	3.03	-	70.2	-	18.27	-	-	48.85
15:30	X		7.49	0.04	3.79	0.57	-33	27	1.22	1.81	65.1	5.1	16.24	2.03	-	48.83
15:35	X		7.43	0.06	3.8	0.01	-30	3	0.57	0.65	48.5	16.6	15.79	0.45	-	48.52
15:40	X		7.36	0.07	3.41	0.39	-14	16	0.44	0.13	27.1	21.4	15.46	0.33	2 Liters	48.82
15:45	X		7.34	0.02	3.13	0.28	-95	81	0.38	0.06	13.4	13.7	15.15	0.31	3 Liters	48.82
15:50	X		7.32	0.02	2.98	0.15	-67	28	0.26	0.12	7.2	6.2	15.12	0.03	4 Liters	48.80
15:55	X		7.30	0.02	2.85	0.13	-38	29	0.21	0.05	1.3	5.9	14.9	0.22	4.5 Liters	48.80
16:00	X		7.30	0	2.8	0.05	-22	16	0.17	0.04	0	1.3	14.78	0.12	5 Liters	47.50
16:05	X		7.31	0.01	2.73	0.07	-13	9	0.07	0.10	0	0	14.68	0.1	6 Liters	47.50
16:10	X	X	7.30	0.01	2.71	0.02	-4	9	0.01	0.06	0	0	14.54	0.14	7 Liters	

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny 83°

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 2160
Field Personnel: Adrian S.
Signature:

Well ID: LR-20 **Well Depth:** 85 **ft below TOC** **Screened/Open Interval:** 75 **to** 85 **ft BGS**
Well Permit #: **Well Diameter:** 2 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 80 **ft below TOC**
Depth to Water Before Pump Installation: 42.4 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
17:30	X		7.61	-	1.53	-	735	-	2.94	-	520	-	26.01	-	-	41.40
17:35	X		7.48	0.13	2.65	1.12	492	243	1.32	1.62	487	33	21.34	4.67	0.5	41.35
17:40	X		7.75	0.27	2.58	0.07	355	137	1.7	0.38	277	210	20.14	1.2	-	41.35
17:45	X		7.42	0.33	2.2	0.38	291	64	0.82	0.88	150	127	19.72	0.42	2	41.35
17:50	X		7.37	0.05	1.93	0.27	269	22	0.65	0.17	107	43	18.97	0.75	3	41.35
17:55	X		7.37	0	1.83	0.1	247	22	0.5	0.15	91.6	15.4	19.08	0.11	4	41.40
18:00	X		7.33	0.04	1.78	0.05	226	21	0.43	0.07	72	19.6	19.76	0.68	4.5	41.40
18:05	X		7.29	0.04	1.77	0.01	207	19	0.42	0.01	73.5	1.5	18.79	0.97	5	41.40
18:10	X		7.27	0.02	1.76	0.01	191	16	0.37	0.05	61.7	11.8	18.48	0.31	5.5	41.40
18:15	X		7.29	0.02	1.77	0.01	197	6	0.67	0.3	54.1	7.6	18.41	0.07	6	41.40
18:20	X		7.25	0.04	1.71	0.06	192	5	0.33	0.34	49.5	4.6	18.44	0.03	6.5	41.40
18:25	X	X	7.21	0.04	1.71	0	186	6	0.28	0.05	47.8	1.7	18.48	0.04	7	41.40

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: 80° Sunny

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: PCHDF6F2
Field Personnel: Angelo F.
Signature:

Well ID: R-50 **Well Depth:** 146 **ft below** **Screened/Open Interval:** 90 **to** 141 **ft BGS**
Well Permit #: **Well Diameter:** 4 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 2.6

Pump Intake Depth: 110 **ft below TOC**
Depth to Water Before Pump Installation: 74.35 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
20:05	X		6.69	-	100	-	-14	-	1.72	-	34.6	-	17.54	-		74.80
20:10	X		6.47	0.22	100	0	2.0	16	1.31	0.41	28.9	5.7	14.48	3.06		74.80
20:15	X		6.44	0.03	100	0	-10.0	12	0.89	0.42	25.3	3.6	14.01	0.47	~2 Liters	
20:20	X		6.43	0.01	100	0	-18.0	8	0.69	0.2	24.9	0.4	13.59	0.42	2.75 Liters	
20:25	X		6.41	0.02	100	0	-27.0	9	0.58	0.11	26.2	1.3	13.39	0.2	3.5 Liters	
20:30	X		6.38	0.03	100	0	-36.0	9	0.59	0.01	33.6	7.4	12.7	0.69	4.75 Liters	
20:35	X		6.22	0.16	100	0	-40.0	4	0.35	0.24	28	5.6	12.39	0.31	5.75 Liters	
20:40	X		5.98	0.24	100	0	-64.0	24	0.36	0.01	24.8	3.2	12.38	0.01	6.75 Liters	
20:45	X		5.94	0.04	100	0	-94.0	30	0.33	0.03	24.5	0.3	12.14	0.24	7.75 Liters	
20:50	X		5.93	0.01	100	0	-113	19	0.35	0.02	16.5	8	12.2	0.06	9 Liters	
20:55	X		5.94	0.01	100	0	-108	5	0.23	0.12	1.2	15.3	14.25	2.05	9.5 Liters	
21:00	X		5.94	0	100	0	-105	3	0.19	0.04	24.3	23.1	14.23	0.02	10 Liters	
21:05	X		5.94	0	100	0	-103	2	0.18	0.01	22.2	2.1	13.54	0.69	10.5 Liters	
21:10		X	6.01	0.07	100	0	-104	1	0.21	0.03	23.3	1.1	13.34	0.2	11 Liters	

COMMENTS:
No cation/anion sampling
duplicate taken (dup1)
water level meter not working due to groundwater conductivity

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny 83F

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: PCHDF6F2
Field Personnel: Angelo F.
Signature:

Well ID: LR-50 **Well Depth:** 77.1 **ft below TOC** **Screened/Open Interval:** 63.7 **to** 73.7 **ft BGS**
Well Permit #: **Well Diameter:** 2 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 70.1 **ft below TOC**
Depth to Water Before Pump Installation: 35.8 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
17:10	X		7.41	-	3.04	-	-203	-	2.39	-	22.9	-	18.07	-		34.10
17:15	X		7.18	0.23	3.43	0.39	-191	12	0.82	1.57	9.6	13.3	13.59	4.48		34.90
17:20	X		7.15	0.03	3.48	0.05	-197	6	0.36	0.46	4.7	4.9	13.12	0.47	~2.5 Liters	35.15
17:25	X		7.17	0.02	3.48	0	-202	5	0.21	0.15	3.2	1.5	12.86	0.26	4 Liters	35.30
17:30	X		7.13	0.04	3.53	0.05	-209	7	0.19	0.02	1.4	1.8	12.59	0.27	5 Liters	35.40
17:35	X		7.13	0	3.58	0.05	-214	5	0.18	0.01	1.7	0.3	12.51	0.08	6 Liters	35.45
17:40	X		7.14	0.01	3.62	0.04	-215	1	0.18	0	0.7	1	12.4	0.11	7.5 Liters	35.45
17:45		X	7.12	0.02	3.63	0.01	-214	1	0.16	0.02	0.4	0.3	12.34	0.06	9 Liters	35.50

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny 83F

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 25212
Field Personnel: Adrian S.
Signature:

Well ID: LR-62 **Well Depth:** 106.5 **ft below TOC** **Screened/Open Interval:** 83 **to** 103 **ft BGS**
Well Permit #: **Well Diameter:** 4 inches

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: **ft below TOC**
Depth to Water Before Pump Installation: 62.5 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
19:50	X		7.76	-	5.3	-	-35	-	2.47	-	53	-	21.09	-		61.3
19:55	X		8.09	0.33	7.14	1.84	-54	19	1.13	1.34	44	9	15.47	5.62	1 Liter	61.6
20:00	X		8.12	0.03	7.58	0.44	-159	105	0.49	0.64	47.5	3.5	14.21	1.26	2 Liters	61.6
20:05	X		8.12	0	7.57	0.01	-145	14	0.26	0.23	38	9.5	13.9	0.31	3 Liters	63.1
20:10	X		8.15	0.03	7.52	0.05	-143	2	0.22	0.04	34	4	13.72	0.18	4 Liters	63.1
20:15	X		8.09	0.06	7.46	0.06	-149	6	0.15	0.07	26.2	7.8	13.46	0.26	5 Liters	63.7
20:20	X		8.13	0.04	7.43	0.03	-159	10	0.02	0.13	23.3	2.9	13.4	0.06	6 Liters	64.1
20:25	X	X	8.08	0.05	7.4	0.03	-164	5	0.05	0.03	24	0.7	13.41	0.01	6.5 Liters	61.4

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny 83

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 24741
Field Personnel: Adrian S.
Signature:

Well ID: R-62 **Well Depth:** 163 **ft below TOC** **Screened/Open Interval:** 104 **to** 159.9 **ft BGS**
Well Permit #: **Well Diameter:** 4 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0.3

Pump Intake Depth: **ft below TOC**
Depth to Water Before Pump Installation: 70 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
18:05	X		6.88	-	100	-	-42	-	2.14	-	0	-	18.91	-		67.4
18:10	X		6.70	0.18	100	0	-38.0	4	1.53	0.61	0	0	17.48	1.43	1 Liter	69.0
18:15	X		6.30	0.4	100	0	-49.0	11	0.58	0.95	0	0	15.45	2.03	2 Liters	69.1
18:20	X		6.30	0	100	0	-59.0	10	0.59	0.01	0	0	15.33	0.12	2.5 Liters	69.1
18:25	X		6.27	0.03	100	0	-48.0	11	0.55	0.04	0	0	15.41	0.08	3 Liters	69.1
18:30	X	X	6.30	0.03	100	0	-49.0	1	0.55	0	0	0	15.51	0.1	3 Liters	69.1

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny 85F

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: illegible
Field Personnel: Angelo F.
Signature:

Well ID: R-19 **Well Depth:** 141 **ft below TOC** **Screened/Open Interval:** 95 **to** 151 **ft BGS**
Well Permit #: **Well Diameter:** 4 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 115 **ft below TOC**
Depth to Water Before Pump Installation: 60.9 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
10:20	X		7.33	-	11.6	-	-142	-	1.54	-	39.8	-	15.73	-		60.1
10:25	X		7.31	0.02	16.1	4.5	-196	54	0.79	0.75	33.4	6.4	14.83	0.9	2	60.8
10:30	X		7.31	0	16.5	0.4	-212	16	0.63	0.16	36.4	3	14.23	0.6	3	21.2
10:35	X		7.3	0.01	16.5	0	-218	6	0.32	0.31	42.3	5.9	14.10	0.13	4	21.5
10:40	X		7.24	0.06	16.4	0.1	-223	5	0.20	0.12	25.3	17	14.03	0.07	5	21.9
10:45	X		7.27	0.03	16.4	0	-228	5	0.18	0.02	25.1	0.2	13.97	0.06	6	62.2
10:50	X		7.24	0.03	16.4	0	-228	0	0.22	0.04	27.9	2.8	13.98	0.01	7	62.5
10:55	X		7.23	0.01	16.2	0.2	-227	1	0.19	0.03	30.3	2.4	13.79	0.19	8	62.7
11:00	X		7.27	0.04	15.9	0.3	-234	7	0.2	0.01	32.8	2.5	16.50	2.71	8.5	62.8
11:05	X		7.25	0.02	16	0.1	-225	9	0.18	0.02	34.3	1.5	15.12	1.38	9.25	62.9
11:10		X	7.18	0.07	16	0	-225	0	0.17	0.01	38.3	4	14.35	0.77	10	63.1

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny 80F

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: XASW76H9
Field Personnel: Angelo F.
Signature:

Well ID: LR-51
Well Permit #:
Well Depth: 66.65 **ft below TOC**
Well Diameter: 2 **inches**
Screened/Open Interval: 54 **to** 64 **ft BGS**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 61 **ft below TOC**
Depth to Water Before Pump Installation: 31.1 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
16:45	X		7.26	-	2.13	-	-67	-	1.98	-	17.1	-	16.17	-		28.40
16:50	X		7.21	0.05	2.27	0.14	-82	15	0.66	1.32	5.2	11.9	14.62	1.55	2	28.90
16:55	X		7.14	0.07	2.3	0.03	-86	4	0.35	0.31	0.4	4.8	14.15	0.47	2.75	28.95
17:00	X		7.13	0.01	2.32	0.02	-81	5	0.15	0.2	0.0	0.4	13.74	0.41	3.75	
17:05	X		7.20	0.07	2.34	0.02	-76	5	0.30	0.15	0.0	0	13.60	0.14	4.75	
17:10	X		7.18	0.02	2.34	0	-79	3	0.09	0.21	0.0	0	13.53	0.07	5.75	29.30
17:15	X		7.16	0.02	2.35	0.01	-77	2	0.02	0.07	0.0	0	13.57	0.04	6.5	29.40
17:20	X		7.12	0.04	2.36	0.01	-74	3	0.00	0.02	0.0	0	13.36	0.21	7.5	29.45
17:25		X	7.12	0	2.37	0.01	-70	4	0.00	0	0.0	0	13.27	0.09	8.5	29.60

COMMENTS:
no cation/anion sample
DUP-2 taken

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny 85F

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: XASW76H9
Field Personnel: Angelo F.
Signature:

Well ID: W-20 **Well Depth:** 29.3 **ft below TOC** **Screened/Open Interval:** 15 **to** 24.9 **ft BGS**
Well Permit #: **Well Diameter:** 2 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 26.5 **ft below TOC**
Depth to Water Before Pump Installation: 20.5 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
13:00	X		7.57	-	3.11	-	60	-	0.96	-	2.9	-	13.65	-		22.1
13:05	X		7.59	0.02	2.81	0.3	-69	129	0.67	0.29	1	1.9	14.92	1.27	2.0	22.6
13:10	X		7.58	0.01	2.82	0.01	-48	21	0.95	0.28	0.7	0.3	13.50	1.42	3.0	23.3
13:15	X		7.61	0.03	2.69	0.13	48	96	1.68	0.73	0.0	0.7	17.0	3.5	4.0	24.3
13:20	X		7.61	0	2.72	0.03	35	13	1.08	0.6	0.0	0	16.40	0.6	4.5	24.4
13:25	X		7.58	0.03	2.73	0.01	33	2	0.75	0.33	0.0	0	15.24	1.16	5.0	24.7
13:30	X		7.6	0.02	2.70	0.03	30	3	0.54	0.21	0.0	0	15.37	0.13	5.5	25.0
13:35	X		7.59	0.01	2.70	0	31	1	0.49	0.05	0.0	0	15.38	0.01	6.0	25.5
13:40	X		7.59	0	2.69	0.01	33	2	0.42	0.07	0.0	0	15.53	0.15	6.5	25.7
13:45		X	7.59	0	2.73	0.04	31	2	0.4	0.02	0.0	0	15.49	0.04	7.0	26.2

COMMENTS:
well ran dry after VOC samples were taken, lowered pump 1 ft deeper to sample for cations/anions

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny 80F

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: RBE9TX83
Field Personnel: Angelo F.
Signature:

Well ID: W-50L **Well Depth:** 39.5 **ft below TOC** **Screened/Open Interval:** _____ **to** _____ **ft BGS**
Well Permit #: _____ **Well Diameter:** 6 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 36 **ft below TOC**
Depth to Water Before Pump Installation: 33.95 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
9:55	X		7.1	-	3.33	-	-36	-	1.09	-	5.4	-	20.90	-		34.1
10:00	X		7.05	0.05	3.35	0.02	-31	5	0.65	0.44	5.6	0.2	20.15	0.75		34.4
10:05	X		7.05	0	3.39	0.04	-10	21	0.56	0.09	6.4	0.8	19.92	0.23	3	34.55
10:10	X		7.07	0.02	3.37	0.02	1	11	0.46	0.1	5.7	0.7	19.88	0.04	4	34.7
10:15	X		7.08	0.01	3.41	0.04	8	7	0.50	0.04	5.8	0.1	20.09	0.21	4.75	34.75
10:20	X		7.07	0.01	3.36	0.05	14	6	0.63	0.13	4.4	1.4	20.43	0.34	5.5	34.9
10:25	X		7.09	0.02	3.33	0.03	19	5	0.64	0.01	4.4	0	20.77	0.34	6	35.0
10:30	X		7.11	0.02	3.29	0.04	23	4	0.6	0.04	4.3	0.1	21.10	0.33	7	35.15
10:35	X		7.11	0	3.22	0.07	14	9	0.44	0.16	4.1	0.2	21.60	0.5	8.25	35.4
10:40	X		7.09	0.02	3.23	0.01	16	2	0.45	0.01	3.9	0.2	21.80	0.2	9	35.6
10:45	X		7.08	0.01	3.22	0.01	18	2	0.43	0.02	4.2	0.3	22.08	0.28	10	35.7
10:50		X	7.11	0.03	3.19	0.03	18	0	0.41	0.02	3.3	0.9	22.58	0.5	11	35.8

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 25212
Field Personnel: Adrian S.
Signature:

Well ID: W-16L **Well Depth:** 68.4 **ft below TOC** **Screened/Open Interval:** 55 **to** 65 **ft BGS**
Well Permit #: **Well Diameter:** **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: **ft below TOC**
Depth to Water Before Pump Installation: 58.8 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
9:45	X		7.14	-	4.06	-	-236	-	1.81	-	17.1	-	17.27	-	-	56.6
9:50	X		7.13	0.01	4.04	0.02	-264	28	0.67	1.14	17.6	0.5	15.31	1.96	2	56.7
9:55	X		1.09	6.04	4.05	0.01	-270	6	0.21	0.46	131	113.4	14.75	0.56	3	56.4
10:00	X		7.12	6.03	4.13	0.08	-278	8	0.05	0.16	104	27	14.58	0.17	4.5	56.4
10:05	X		7.13	0.01	4.12	0.01	-280	2	0.01	0.04	62	42	14.50	0.08	6	56
10:10	X		7.19	0.06	4.16	0.04	-282	2	0.11	0.1	34	28	14.41	0.09	7	56
10:15	X		7.11	0.08	4.15	0.01	-288	6	0	0.11	20.9	13.1	14.38	0.03	8	55.6
10:20	X		7.09	0.02	4.14	0.01	-283	5	0	0	16.2	4.7	14.50	0.12	9.5	56.2
10:25	X		7.11	0.02	4.13	0.01	-284	1	0	0	24.9	8.7	14.67	0.17	11	56.4
10:30	X		7.07	0.04	4.14	0.01	-290	6	0	0	22.6	2.3	14.56	0.11	12	56.4
10:35	X		7.12	0.05	4.14	0	-287	3	0	0	12.2	10.4	14.77	0.21	14	56
10:40	X		7.11	0.01	4.15	0.01	-287	0	0	0	7.2	5	14.77	0	15	56
10:45	X	X	7.11	0	4.15	0	-280	7	0	0	3.9	3.3	14.56	0.21	16	56

COMMENTS:

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:
Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 25212
Field Personnel: Adrian S.
Signature:

Well ID: W-70L **Well Depth:** 76.45 **ft below TOC** **Screened/Open Interval:** 42 **to** 72 **ft BGS**
Well Permit #: **Well Diameter:** 6 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0
Pump Intake Depth: **ft below TOC**
Depth to Water Before Pump Installation: 48.1 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
15:40	X		6.89	-	10.4	-	-169	-	8.70	-	0	-	18.15	-	0.5	48.2
15:45	X		6.85	0.04	10.3	0.1	-183	14	1.18	7.52	0	0	15.99	2.16	1.5	48.35
15:50	X		6.83	0.02	10.3	0	-195	12	1.92	0.74	0	0	15.09	0.9	2	48.5
15:55	X		6.82	0.01	10.3	0	-203	8	1.23	0.69	0	0	14.74	0.35	3	48.7
16:00	X		6.83	0.01	10.2	0.1	-209	6	0.64	0.59	0	0	14.39	0.35	4	49.0
16:05	X		6.86	0.03	10.3	0.1	-206	3	0.53	0.11	0	0	15.61	1.22	5	49.0
16:10	X		6.85	0.01	10.4	0.1	-205	1	0.93	0.4	0	0	15.41	0.2	6	49.1

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 22203
Field Personnel: Adrian S.
Signature:

Well ID: W-65 **Well Depth:** 60.4 **ft below TOC** **Screened/Open Interval:** 23 **to** 55 **ft BGS**
Well Permit #: **Well Diameter:** 6 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: **ft below TOC**
Depth to Water Before Pump Installation: 40 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
17:35	X		7.24	-	2.54	-	-55	-		-	0	-	18.26	-	-	40.0
17:40	X		7.15	0.09	2.66	0.12	-57	2		0	0	0	14.62	3.64	2	40.35
17:45	X		7.11	0.04	2.64	0.02	-59	2		0	0	0	14.42	0.2	3.5	40.8
17:50	X		7.12	0.01	2.61	0.03	-60	1		0	0	0	14.12	0.3	5	41.0
17:55	X		7.12	0	2.58	0.03	-57	3	0.08	0.08	0	0	14.00	0.12	6.5	41.3
18:00	X		7.12	0	2.57	0.01	-56	1	0.07	0.01	0	0	14.00	0	8	41.6
18:05	X	X	7.12	0	2.58	0.01	-55	1	0.08	0.01	0	0	14.01	0.01	9.5	41.9

COMMENTS:
no cation/anion sampling

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny 81F

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 22203
Field Personnel: Adrian S.
Signature:

Well ID: W-67 **Well Depth:** 42.6 **ft below TOC** **Screened/Open Interval:** 15 **to** 40 **ft BGS**
Well Permit #: **Well Diameter:** **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: **ft below TOC**
Depth to Water Before Pump Installation: 17.6 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
14:20	X		6.77	-	1.92	-	-96	-	0.82	-	2.3	-	13.38	-	2	17.0
14:25	X		6.76	0.01	1.92	0	-103	7	0.29	0.53	2.4	0.1	12.94	0.44	3	18.0
14:30	X		6.75	0.01	1.92	0	-109	6	0.13	0.16	3	0.6	12.54	0.4	4	18.1
14:35	X		6.75	0	1.92	0	-111	2	0.07	0.06	3.5	0.5	12.35	0.19	5	18.2
14:40	X	X	6.78	0.03	1.92	0	-112	1	0.04	0.03	3.3	0.2	12.69	0.34	6	18.2

COMMENTS:
no cation/anion sampling
purge started at 14:10, started reading at 14:20

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 15139
Field Personnel: Adrian S.
Signature:

Well ID: W-67L **Well Depth:** 73 **ft below** **Screened/Open Interval:** 50 **to** 70 **ft BGS**
Well Permit #: **Well Diameter:** 2 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: **ft below TOC**
Depth to Water Before Pump Installation: 53.7 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
11:45	X		7.01	-	4.92	-	-51	-	12.85	-	14.5	-	16.12	-	2	54.9
11:50	X		6.95	0.06	4.82	0.1	-39	12	11.27	1.58	23.8	9.3	15.82	0.3	3	55.2
11:55	X		6.9	0.05	4.7	0.12	-24	15	10.94	0.33	36.1	12.3	15.96	0.14	3.5	55.8
12:00	X		6.89	0.01	4.65	0.05	-9	15	11.05	0.11	46.6	10.5	15.93	0.03	4	56.1
12:05	X		6.87	0.02	4.69	0.04	36	45	3.85	7.2	3.2	43.4	15.83	0.1	6	56.5
12:10	X		6.86	0.01	4.61	0.08	35	1	3.72	0.13	1.6	1.6	16.29	0.46	6	57.0
12:15	X		6.81	0.05	4.5	0.11	52	17	4.1	0.38	1.5	0.1	16.01	0.28	7	57.1
12:20	X		6.87	0.06	4.5	0	52	0	4.29	0.19	1.4	0.1	15.92	0.09	8	57.8
12:25	X		6.86	0.01	4.43	0.07	50	2	4.49	0.2	0.4	1	15.43	0.49	8.5	58.3
12:30	X		6.85	0.01	4.34	0.09	60	10	4.95	0.46	0	0.4	15.97	0.54	9	58.7
12:35	X	X	6.85	0	4.29	0.05	63	3	4.29	0.66	0	0	16	0.03	10	59.2

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Dark Calm 71F

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 22203
Field Personnel: Adrian S.
Signature:

Well ID: W-18R **Well Depth:** 31.9 **ft below TOC** **Screened/Open Interval:** _____ **to** _____ **ft BGS**
Well Permit #: _____ **Well Diameter:** 4 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: _____ **ft below TOC**
Depth to Water Before Pump Installation: 27.8 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0:20	X		10.50	-	5.57	-	-190	-	1.04	-	62.8	-	13.88	-	1	28.1
0:25	X		10.46	0.04	5.33	0.24	-191	1	1.03	0.01	32.9	29.9	13.01	0.87	2	28.5
0:30	X		10.16	0.3	3.88	1.45	-176	15	2.20	1.17	4.1	28.8	12.90	0.11	3	29.0
0:35	X		10.02	0.14	3.34	0.54	-188	12	3.26	1.06	4.2	0.1	14.45	1.55	4	29.4
0:40	X		10.14	0.12	3.74	0.4	-202	14	2.40	0.86	4.1	0.1	12.25	2.2	5	30.1
0:45	X	X	10.32	0.18	3.76	0.02	-198	4	2.20	0.2	3.9	0.2	12.45	0.2	6	30.5

COMMENTS:
dark rusty color

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 22203
Field Personnel: Adrian S.
Signature:

Well ID: R-60 **Well Depth:** 112.4 **ft below TOC** **Screened/Open Interval:** 89 **to** 139 **ft BGS**
Well Permit #: **Well Diameter:** 4 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: **ft below TOC**
Depth to Water Before Pump Installation: 73.8 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
23:00	X		7.50	-	14.7	-	-94	-	4.49	-	3.5	-	15.33	-	1	63.5
23:05	X		6.82	0.68	50.0	35.3	-51	43	2.75	1.74	7.6	4.1	13.26	2.07	2	63.9
23:10	X		6.8	0.02	53.7	3.7	-75	24	1.00	1.75	7.1	0.5	13.34	0.08	3	64.2
23:15	X		6.71	0.09	54.8	1.1	-80	5	0.75	0.25	7.4	0.3	13.23	0.11	4	64.25
23:20	X		6.80	0.09	56.0	1.2	-88	8	0.58	0.17	7.8	0.4	13.26	0.03	5	65.3
23:25	X	X	6.79	0.01	56.0	0	-84	4	0.62	0.04	7.6	0.2	13.20	0.06	6	64.5

COMMENTS:
no cation/anion sampling

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny 81F

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 22203
Field Personnel: Adrian S.
Signature:

Well ID: R-68 **Well Depth:** 124.2 **ft below TOC** **Screened/Open Interval:** 100 **to** 120 **ft BGS**
Well Permit #: **Well Diameter:** **inches**

PID/FID Readings (ppm)
Background: 0.6
Beneath Inner Cap: 363.4 (due to wasp spray)

Pump Intake Depth: **ft below TOC**
Depth to Water Before Pump Installation: 77.9 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
19:20	X		6.23	-	55.4	-	-165	-	4.37	-	12.4	-	21.44	-	-	65.2
19:25	X		6.08	0.15	59.3	3.9	-195	30	1.01	3.36	11.7	0.7	14.97	6.47	1	66.8
19:30	X		6.03	0.05	59.7	0.4	-207	12	0.55	0.46	69.3	57.6	15.58	0.61	2	
19:35	X		6.02	0.01	60.1	0.4	-210	3	0.4	0.15	42.7	26.6	15.49	0.09	3	
19:40	X		6.00	0.02	60.4	0.3	-211	1	0.35	0.05	32.7	10	15.79	0.3	4	67.9
19:45	X		6.00	0	60.5	0.1	-213	2	0.26	0.09	22.5	10.2	15.71	0.08	5	69.0
19:50	X		6.00	0	60.7	0.2	-214	1	0.26	0	22.8	0.3	15.6	0.11	5.5	69.9
19:55	X	X	6.00	0	60.7	0	-213	1	0.24	0.02	22.2	0.6	15.47	0.13	6	70.5

COMMENTS:

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Hot Sunny 87F

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 15139
Field Personnel: Adrian S.
Signature:

Well ID: R-48 **Well Depth:** 99.1 **ft below TOC** **Screened/Open Interval:** 91 **to** 140 **ft BGS**
Well Permit #: **Well Diameter:** 4 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 48.2 **ft below TOC**
Depth to Water Before Pump Installation: 57.35 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
14:15	X		7.83	-	4.5	-	-97	-	7.39	-	4	-	19.13	-	0	48.2
14:20	X		7.62	0.21	4.56	0.06	-81	16	5.02	2.37	4.6	0.6	17.81	1.32	1	48.2
14:25	X		6.98	0.64	50.3	45.74	-94	13	3.93	1.09	4.7	0.1	18.38	0.57	2	48.2
14:30	X		6.9	0.08	50.4	0.1	-81	13	3.41	0.52	4.5	0.2	16.71	1.67	3	48.55
14:35	X		6.86	0.04	51	0.6	-79	2	2.65	0.76	4.2	0.3	17.03	0.32	4	48.8
14:40	X		6.84	0.02	51	0	-77	2	2.16	0.49	3.9	0.3	16.9	0.13	5	48.8
14:45	X	X	6.82	0.02	51.4	0.4	-75	2	1.93	0.23	4.6	0.7	16.86	0.04	6	48.8

COMMENTS:
changed out 10 lb bottle at 14:25

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:
Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 22203
Field Personnel: Adrian S.
Signature:

Well ID: EW-4 **Well Depth:** ft below TOC **Screened/Open Interval:** 16 to 71.6 ft BGS
Well Permit #: **Well Diameter:** 4 inches

PID/FID Readings (ppm)
Background:
Beneath Inner Cap:
Pump Intake Depth: ft below TOC
Depth to Water Before Pump Installation: ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
16:20			7.2	-	2.68	-	3.86	-	5.59	-	306	-	18.02	-	0	48.80
16:25			7.19	0.01	2.61	0.07	4.43	0.57	4.36	1.23	711	405	18.94	0.92	1	40.30
16:30			7.12	0.07	2.61	0	3.84	0.59	3.38	0.98	731	20	25.97	7.03	2	40.30
17:00			7.09	0.03	2.6	0.01	3.87	0.03	3.8	0.42	0	731	23.21	2.76	3	40.30
17:05			7.10	0.01	2.6	0	3.90	0.03	3.92	0.12	0	0	23.79	0.58	4	40.40
17:10			6.95	0.15	2.75	0.15	4.49	0.59	4.26	0.34	0	0	21.77	2.02	5	40.60
17:15			6.98	0.03	2.86	0.11	4.82	0.33	5.33	1.07	0	0	17.11	4.66	5.5	40.50
17:20			7.61	0.63	2.91	0.05	0.06	4.76	4.12	1.21	365	365	16.53	0.58	6	40.40
17:25			7.02	0.59	2.85	0.06	0.01	0.05	3.6	0.52	350	15	17.27	0.74	6.5	40.40
17:30			7.42	0.4	2.78	0.07	46.20	46.19	4.95	1.35	816	466	16.15	1.12	7	40.40
17:35			7.6	0.18	2.81	0.03	0.00	46.2	5.42	0.47	104	712	16.01	0.14	7.5	40.20
17:40			7	0.6	2.78	0.03	0.07	0.07	5.51	0.09	112	8	16.15	0.14	8	40.2
17:45	X	X	7.1	0.1	2.78	0	0.00	0.07	5.39	0.12	115	3	16.15	0	8.5	40.2

COMMENTS:
16:30 shut down T4 valve in building, restarted bulding purge at 17:00

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:
Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #:
Field Personnel:
Signature:

Well ID: W-16 **Well Depth:** 31.7 **ft below TOC** **Screened/Open Interval:** 17.9 **to** 27.8 **ft BGS**
Well Permit #: **Well Diameter:** 2 **inches**

PID/FID Readings (ppm)
Background: 0:00
Beneath Inner Cap: 0
Pump Intake Depth: **ft below TOC**
Depth to Water Before Pump Installation: 21.7 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
10:25	X		3.95	-	4.22	-	228	-	10.09	-	5.8	-	20.56	-	-	24.80
10:30			3.95	0	4.95	0.73	228.00	0	10.09	0	5.8	0	20.53	0.03	5	24.80
10:35			3.95	0	4.22	0.73	228.00	0	10.09	0	5.8	0	20.53	0	5.5	27.20
10:40	X		7.14	3.19	4.14	0.08	-234.00	462	0	10.09	9.7	3.9	14.27	6.26	6	NA
10:45	X		6.82	0.32	4.19	0.05	-290.00	56	0.00	0	21.7	12	16.92	2.65	6.5	NA
10:50	X		6.60	0.22	4.29	0.1	-228.00	62	0.04	0.04	21.9	0.2	15.96	0.96	7	NA
10:55	X	X	6.8	0.2	4.67	0.38	-297.00	69	0.03	0.01	4.25	17.65	14.75	1.21	7.5	NA

COMMENTS:
10:40 Pump dry - lower to bottom and reset @ 10:43

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny 86F

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 22203
Field Personnel: Adrian S.
Signature:

Well ID: R-67 **Well Depth:** 144.6 **ft below TOC** **Screened/Open Interval:** 120 **to** 140 **ft BGS**
Well Permit #: **Well Diameter:** 2 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 69.5 **ft below TOC**
Depth to Water Before Pump Installation: 73.85 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
17:40	X		6.43	-	100	-	-167	-	4.25	-	185	-	23.09	-	0.5	69.5
17:45	X		6.34	0.09	100	0	-182	15	3.3	0.95	30	155	22.92	0.17	1	69.5
17:50	X		6.31	0.03	100	0	-196	14	1.13	2.17	32.6	2.6	22.86	0.06	1.5	69.5
18:00	X		5.83	0.48	100	0	-175	21	0.76	0.37	3.4	29.2	22.55	0.31	2	70.0
18:05	X		5.71	0.12	100	0	-171	4	0.64	0.12	3.31	0.09	22.50	0.05	2.5	70.0
18:10	X		5.71	0	100	0	-176	5	0.59	0.05	3.29	0.02	22.5	0	3	70.1
18:20	X	X	5.67	0.04	100	0	-175	1	0.54	0.05	3.28	0.01	22.5	0	3.5	70.2

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny Hot

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 22203
Field Personnel: Adrian S.
Signature:

Well ID: LR-67 **Well Depth:** 104.3 **ft below TOC** **Screened/Open Interval:** 90 **to** 100 **ft BGS**
Well Permit #: **Well Diameter:** 2 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 58 **ft below TOC**
Depth to Water Before Pump Installation: 61.1 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
16:00	X		6.78	-	4.05	-	-236	-	2.81	-	57.7	-	16.76	-	1	58.20
16:05	X		6.73	0.05	4.01	0.04	-242	6	1.35	1.46	69.7	12	15.26	1.5	2	58.50
16:10	X		6.62	0.11	3.99	0.02	-250	8	0.47	0.88	45.2	24.5	14.4	0.86	3	59.00
16:15	X		6.56	0.06	3.94	0.05	-255	5	0.23	0.24	17.4	27.8	13.9	0.5	4	59.30
16:20	X		6.60	0.04	4	0.06	-255	0	0.14	0.09	15.1	2.3	13.80	0.1	5	59.35
16:25	X		6.59	0.01	4.12	0.12	-258	3	0.08	0.06	12.4	2.7	13.45	0.35	6	59.40
16:30	X		6.67	0.08	4.15	0.03	-269	11	0.06	0.02	12.5	0.1	13.78	0.33	7	59.60
16:35	X	X	6.67	0	4.07	0.08	-260	9	0.07	0.01	12.5	0	13.89	0.11	8	59.70

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 22203
Field Personnel: Adrian S.
Signature:

Well ID: LR-48 **Well Depth:** 69.3 **ft below TOC** **Screened/Open Interval:** 54 **to** 64 **ft BGS**
Well Permit #: **Well Diameter:** 2 **inches**

PID/FID Readings (ppm)
Background:
Beneath Inner Cap:

Pump Intake Depth: 37.8 **ft below TOC**
Depth to Water Before Pump Installation: 38.8 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
12:50	X		7.29	-	2.76	-	-221	-	5.45	-	47.3	-	23.55	-	0	37.8
12:55	X		7.20	0.09	3.5	0.74	-262	41	0.82	4.63	51.6	4.3	19.47	4.08	1	37.6
13:00	X		7.12	0.08	3.15	0.35	-252	10	0.63	0.19	36	15.6	19.15	0.32	2	37.5
13:05	X		7.08	0.04	2.78	0.37	-237	15	0.55	0.08	17.7	18.3	19.01	0.14	3	37.2
13:10	X		7.06	0.02	2.6	0.18	-229	8	0.48	0.07	12.1	5.6	19.27	0.26	4	37.2
13:15	X		7.06	0	2.47	0.13	-224	5	0.42	0.06	7.6	4.5	19.18	0.09	4	37.2
13:20	X		7.06	0	2.4	0.07	-225	1	0.35	0.07	4.9	2.7	19.43	0.25	5	37.1
13:25	X	X	7.06	0	2.33	0.07	-216	9	0.26	0.09	5.8	0.9	19.97	0.54	6	37.0

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Sunny 85F

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 22203
Field Personnel: Adrian S. & Steve P.
Signature:

Well ID: W-19B **Well Depth:** 83.8 **ft below TOC** **Screened/Open Interval:** 65 to 80 **ft BGS**
Well Permit #: **Well Diameter:** 2 **inches**

PID/FID Readings (ppm)
Background:
Beneath Inner Cap:

Pump Intake Depth: **ft below TOC**
Depth to Water Before Pump Installation: 47.1 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
10:20			6.96	-	2.7	-	-138	-	2.1	-	242	-	14.09	-	-	
10:25	X		6.88	0.08	2.73	0.03	-146	8	0.67	1.43	84.9	157.1	13.29	0.8	2	
10:30	X		6.86	0.02	2.73	0	-148	2	0.28	0.39	32.3	52.6	12.94	0.35	2.5	
10:35	X		6.82	0.04	2.73	0	-154	6	0.13	0.15	19.8	12.5	12.71	0.23	3	
10:40	X		6.79	0.03	2.76	0.03	-159	5	0.06	0.07	13.8	6	12.55	0.16	4	
10:45	X		6.79	0	2.79	0.03	-163	4	0.01	0.05	11.7	2.1	12.52	0.03	5	
10:50	X		6.78	0.01	2.81	0.02	-165	2	0	0.01	9.7	2	12.39	0.13	6.5	
10:55	X		6.79	0.01	2.81	0	-167	2	0	0	8.1	1.6	12.35	0.04	7.5	
11:00	X		6.79	0	2.82	0.01	-167	0	0	0	7.9	0.2	12.33	0.02	8	
11:05	X		6.8	0.01	2.82	0	-168	1	0	0	7.7	0.2	12.36	0.03	9	
11:10	X	X	6.8	0	2.82	0	-138	30	0	0	7	0.7	12.36	0	10.5	

COMMENTS:

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: XASW76H9
Field Personnel: Angelo F.
Signature:

Well ID: OW-3 **Well Depth:** 113 **ft below TOC** **Screened/Open Interval:** 108 **to** 128 **ft BGS**
Well Permit #: **Well Diameter:** 2 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 0

Pump Intake Depth: 112 **ft below TOC**
Depth to Water Before Pump Installation: 61.1 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
20:00	X		6.61	-	42.8	-	-70	-	0.84	-	347	-	15.92	-		59.3
20:05	X		6.61	0	41.1	1.7	-84	14	0.36	0.48	341	6	14.84	1.08		59.9
20:10	X		6.6	0.01	40.5	0.6	-85	1	0.16	0.2	237	104	14.21	0.63	2.5	60.1
20:15	X		6.55	0.05	40.8	0.3	-87	2	0.39	0.23	205	32	13.93	0.28	3.5	60.3
20:20	X		6.45	0.1	40.7	0.1	-93	6	0.44	0.05	209	4	13.70	0.23	4.5	60.4
20:25	X		6.58	0.13	41	0.3	-94	1	0.26	0.18	215	6	13.6	0.1	5.5	60.5
20:30	X		6.55	0.03	40.8	0.2	-93	1	0.21	0.05	210	5	13.61	0.01	6	60.6
20:35	X		6.54	0.01	41.4	0.6	-94	1	0.16	0.05	150	60	13.54	0.07	7	60.7
20:40	X		6.56	0.02	41.4	0	-100	6	0.13	0.03	163	13	13.44	0.1	8	60.7
20:45	X		6.53	0.03	41.6	0.2	-110	10	0.09	0.04	170	7	13.37	0.07	9	60.8
20:50		X	6.55	0.02	41.9	0.3	-119	9	0.06	0.03	171	1	13.42	0.05	10	60.8

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: XASW76H9
Field Personnel: Adrian S.
Signature:

Well ID: R-16 **Well Depth:** 134.8 **ft below TOC** **Screened/Open Interval:** 110 **to** 130 **ft BGS**
Well Permit #: **Well Diameter:** 2 **inches**

PID/FID Readings (ppm)
Background: 0
Beneath Inner Cap: 1.7

Pump Intake Depth: **ft below TOC**
Depth to Water Before Pump Installation: 73.3 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
15:30	X		6.35	-	100	-	50	-	2.06	-	19.1	-	36.23	-	-	70
15:35	X		6.52	0.17	100	0	38	12	1.46	0.6	33	13.9	39.38	3.15	1	NA
15:40	X		6.54	0.02	100	0	37	1.3	1.25	0.21	38.1	5.1	31.94	7.44	2	NA
15:45	X		6.56	0.02	100	0	31	5.7	1.02	0.23	39.5	1.4	31.01	0.93	2	NA
15:50	X		6.56	0	100	0	14	17	1.03	0.01	45.5	6	28.09	2.92	3	NA
16:30	X		6.39	0.17	100	0	11	3	0.64	0.39	49.8	4.3	27.11	0.98	4	NA
16:35	X		6.25	0.14	100	0	22	11	1.34	0.7	53.7	3.9	24.2	2.91	4.5	NA
16:40	X		6.2	0.05	100	0	14	8	1.83	0.49	56.1	2.4	23.70	0.5	4.5	NA
16:45	X	X	6.2	0	100	0	16	2	1.17	0.66	58.1	2	22.4	1.3	5	NA

COMMENTS:
Made repairs at 15:50
Depth meter acting up, tried 3

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Hot Sunny 82°

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 21233
Field Personnel: Adrian S.
Signature:

Well ID: LR-16 **Well Depth:** 94.4 ft below TOC **Screened/Open Interval:** 80.5 to 90.5 ft BGS
Well Permit #: **Well Diameter:** 2 inches

PID/FID Readings (ppm)
Background: 0.0
Beneath Inner Cap: 3.5

Pump Intake Depth: ft below TOC
Depth to Water Before Pump Installation: 58.4 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PURGE VOLUME (Liters)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
13:10	X		5.74	-	33.8	-	-154	-	1	-	264	-	15.92	-	2	54.7
13:15	X		5.86	0.12	24.9	8.9	-207	53	0.11	0.89	35.8	228.2	14.67	1.25	3.5	
13:20	X		5.9	0.04	22.9	2	-217	10	0.03	0.08	9	26.8	11.37	3.3	5	54.4
13:25	X		5.88	0.02	22.9	0	-217	0	0	0.03	6.1	2.9	14.16	2.79	5.5	54.24
13:30	X		5.94	0.06	22.5	0.4	-229	12	0	0	4.4	1.7	13.83	0.33	6	54.8
13:35	X		5.96	0.02	22.5	0	-219	10	0	0	4.8	0.4	15.03	1.2	6.5	54.65
13:40	X	X	6.04	0.08	22.4	0.1	-226	7	0	0	4.9	0.1	15.81	0.78	6.8	54.7

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather: Hot Sunny 82F

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #: 21233
Field Personnel: Adrian S.
Signature:

Well ID: W-19A **Well Depth:** ft below TOC **Screened/Open Interval:** 33.5 to 38.5 ft BGS
Well Permit #: **Well Diameter:** inches

PID/FID Readings (ppm)
Background:
Beneath Inner Cap:

Pump Intake Depth: ft below TOC
Depth to Water Before Pump Installation: ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		

COMMENTS:
not enough water

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #:
Field Personnel:
Signature:

Well ID: W-19D **Well Depth:** ft below TOC **Screened/Open Interval:** 11 to 21 ft BGS
Well Permit #: **Well Diameter:** inches

PID/FID Readings (ppm)
Background:
Beneath Inner Cap:

Pump Intake Depth: ft below TOC
Depth to Water Before Pump Installation: ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		

COMMENTS:
not enough water

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston

Location: Lewiston, NY

Project No.: 130177301

Weather:

Water Quality Meter Make/Model: Horiba U-52

Water Quality Meter Serial #:

Field Personnel:

Signature:

Well ID: W-48E **Well Depth:** ft below TOC **Screened/Open Interval:** 27.4 to 37.2 ft BGS

Well Permit #: **Well Diameter:** inches

PID/FID Readings (ppm)

Background:

Beneath Inner Cap:

Pump Intake Depth: ft below TOC

Depth to Water Before Pump Installation: ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		

COMMENTS:
not enough water

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #:
Field Personnel:
Signature:

Well ID: R-51 **Well Depth:** ft below TOC **Screened/Open Interval:** 118.6 to 120.1 ft BGS
Well Permit #: **Well Diameter:** inches

PID/FID Readings (ppm)
Background:
Beneath Inner Cap:

Pump Intake Depth: ft below TOC
Depth to Water Before Pump Installation: ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		

COMMENTS:
1/2" PVC - can't sample

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #:
Field Personnel:
Signature:

Well ID: B-02 **Well Depth:** ft below TOC **Screened/Open Interval:** 102.6 to 104.3 ft BGS
Well Permit #: **Well Diameter:** inches

PID/FID Readings (ppm)
Background:
Beneath Inner Cap:

Pump Intake Depth: ft below TOC
Depth to Water Before Pump Installation: ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		

COMMENTS:
1/2" OVC - can't sample

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: SMC Lewiston
Location: Lewiston, NY
Project No.: 130177301
Weather:

Water Quality Meter Make/Model: Horiba U-52
Water Quality Meter Serial #:
Field Personnel:
Signature:

Well ID: OW-5 **Well Depth:** 104.6 **ft below TOC** **Screened/Open Interval:** 88.8 **to** 101.8 **ft BGS**
Well Permit #: **Well Diameter:** **inches**

PID/FID Readings (ppm)
Background: 0.6
Beneath Inner Cap: 22.4 (due to wasp spray)

Pump Intake Depth: **ft below TOC**
Depth to Water Before Pump Installation: 59.7 **ft below TOC**

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		

COMMENTS:
Probe stunk in hole at bottom 7/12/18
add additional note from field sheet

***INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity**

APPENDIX D
MONITORING WELL INVENTORY

SITE INSPECTION FORM
STAUFFER MANAGEMENT COMPANY LLC SITE (Site No. 935053)
LEWISTON, NEW YORK
NYSDEC SITE NO. 932053

INSPECTION DATE: 9/12/18

INSPECTED BY: M. Wenrick (LANGAN)

Overall Site

Has the Site use changed since the last inspection? ***Yes*** _____ ***No*** X

If yes, please describe the changes: _____

Have neighboring property uses changed? ***Yes*** _____ ***No*** X

If yes, please describe the changes: _____

Monitoring Wells

Potential Problems	***Concern***	***Corrective Action***
Missing locks	• Potential access by unauthorized persons	• Replace lock
Missing J-plugs	• Potential well contamination from surface water or rain water	• Replace J-plug
Concrete surface seal	• Damaged seal can allow water infiltration around casing and contamination of groundwater	• Contract drilling subcontractor to have surface seal replaced
Damaged flush-mount or stickup casing	• Damaged casing can result in damage to riser	• Contract drilling subcontractor to have casing replaced

Monitoring Well	***Well Condition (circle one)***			***Comments***
Upper Lockport				
OW-11	(Good)	Fair	Needs Repair	
W-16	(Good)	Fair	Needs Repair	
W-17	(Good)	Fair	Needs Repair	
W-18R	(Good)	Fair	Needs Repair	
W-19D	(Good)	Fair	Needs Repair	
W-20	(Good)	Fair	Needs Repair	
W-22A	(Good)	Fair	Needs Repair	
W-23C	(Good)	Fair	Needs Repair	

SITE INSPECTION FORM
STAUFFER MANAGEMENT COMPANY LLC SITE (Site No. 935053)
LEWISTON, NEW YORK
NYSDEC SITE NO. 932053

INSPECTION DATE: 9/12/18

INSPECTED BY: M. Wenrick (LANdAM)

W-66	Good	Fair	Needs Repair	
W-67	Good	Fair	Needs Repair	
Lower Lockport				
W-16L	Good	Fair	Needs Repair	
W-18L	Good	Fair	Needs Repair	
W-19A	Good	Fair	Needs Repair	
W-23B	Good	Fair	Needs Repair	
W-48E	Good	Fair	Needs Repair	
W-50	Good	Fair	Needs Repair	
W-60L	Good	Fair	Needs Repair	
W-65	Good	Fair	Needs Repair	
W-66L	Good	Fair	Needs Repair	
W-67L	Good	Fair	Needs Repair	
W-70L	Good	Fair	Needs Repair	
Lockport/Rochester				
LR-2	Good	Fair	Needs Repair	
LR-16	Good	Fair	Needs Repair	
LR-20	Good	Fair	Needs Repair	
LR-48	Good	Fair	Needs Repair	
LR-49	Good	Fair	Needs Repair	
LR-50	Good	Fair	Needs Repair	
LR-51	Good	Fair	Needs Repair	
LR-61	Good	Fair	Needs Repair	
LR-62	Good	Fair	Needs Repair	
LR-67	Good	Fair	Needs Repair	
LR-69	Good	Fair	Needs Repair	
OW-5	Good	Fair	Needs Repair	
W-19B	Good	Fair	Needs Repair	
Rochester				
B-02	Good	Fair	Needs Repair	

SITE INSPECTION FORM
STAUFFER MANAGEMENT COMPANY LLC SITE (Site No. 935053)
LEWISTON, NEW YORK
NYSDEC SITE NO. 932053

INSPECTION DATE: 9/12/18

INSPECTED BY: M. Wenrick (LANGAN)

R-16	Good	Fair	Needs Repair	
R-19	Good	Fair	Needs Repair	
R-48	Good	Fair	Needs Repair	
R-50	Good	Fair	Needs Repair	
R-51	Good	Fair	Needs Repair	
R-60	Good	Fair	Needs Repair	
R-61	Good	Fair	Needs Repair	
R-62	Good	Fair	Needs Repair	Casing in Poor Condition
R-66	Good	Fair	Needs Repair	
R-67	Good	Fair	Needs Repair	
R-68	Good	Fair	Needs Repair	

Extraction Wells

Potential Problems	***Concern***	***Corrective Action***
Missing locks	• Potential access by unauthorized persons	• Replace lock
Missing J-plugs	• Potential well contamination from surface water or rain water	• Replace J-plug
Concrete surface seal	• Damaged seal can allow water infiltration around casing and contamination of groundwater	• Contract drilling subcontractor to have surface seal replaced
Damaged flush-mount or stickup casing	• Damaged casing can result in damage to riser	• Contract drilling subcontractor to have casing replaced
Damaged Pumps	• not able to maintain hydraulic containemnt	• Repair or replace pump immediately

Extraction Well	***Well Condition (circle one)***			***Comments***
T-4	Good	Fair	Needs Repair	AKA DPT-261
DPA-201	Good	Fair	Needs Repair	
DPA-202	Good	Fair	Needs Repair	
DPA-203	Good	Fair	Needs Repair	

SITE INSPECTION FORM
STAUFFER MANAGEMENT COMPANY LLC SITE (Site No. 935053)
LEWISTON, NEW YORK
NYSDEC SITE NO. 932053

INSPECTION DATE: 9/12/18

INSPECTED BY: M. Wenrick (LANGAN)

EW-1	Good	Fair	Needs Repair	
EW-2	Good	Fair	Needs Repair	
EW-3	Good	Fair	Needs Repair	
EW-4	Good	Fair	Needs Repair	
EW-5	Good	Fair	Needs Repair	
EW-6	Good	Fair	Needs Repair	
LR-66	Good	Fair	Needs Repair	
OW-3	Good	Fair	Needs Repair	