PERIODIC REVIEW REPORT 2018

SOLVENT CHEMICAL SITE
NIAGARA FALLS, NEW YORK
SITE # 9-32-096

Prepared for:

Solvent Chemical Site
3163 Buffalo Avenue
Niagara Falls, New York

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TABLE OF CONTENTS

TABLES

FIGURES

1.0 INTRODUCTION

This Periodic Review Report (PRR) documents activities conducted during the year 2018 at the Solvent Chemical Site (Site), located at 3163 Buffalo Avenue, Niagara Falls, New York (refer to Figure 1).

1.1 Site Summary

Remedial activities for the Site have addressed contamination associated with three areas: 1) the Solvent Chemical Property; 2) the Olin Hot Spot; and 3) the 18-inch Storm Sewer. The operation and maintenance phase of the remediation of the Site commenced on July 1, 2004. The primary Contaminants of Concern (CoCs) are benzene, chlorobenzene, 1,2,4-tricholorbenzene, 1,2-dicholorbenzene, 1,3-dicholorbenzene and 1,4-dichlorobenzene and are present in on-site soils and ground water.

The Solvent Chemical Property is a former chemical manufacturing facility, which included numerous buildings as well as above and underground tanks. All structures associated with the chemical manufacturing facility have been razed. The Olin Hot Spot is situated west of the Solvent Chemical Property and east of Gill Creek. CoCs have been found in overburden (A-zone) and upper bedrock (B-zone) ground water. The former 18-inch diameter concrete storm drain originated from the Solvent Property and extended west across DuPont Drive, an electrical substation and an Olin parking lot and eventually discharged to Gill Creek. As part of the remediation of the Site, this storm drain was addressed by removal/abandonment in place. This portion of the remediation requires no further Operation and Maintenance (O&M) activities.

1.2 Effectiveness of Remedial Program

The Site's cover system continues to provide containment of the contaminated soils onsite and was inspected during 2018. The overburden collection system provides an inward gradient on the Solvent Property as demonstrated over the current review period. The operating flow rates continue to achieve capture of the B-zone consistent with the baseline hydraulic conditions included as Appendix A of the Performance Monitoring Plan (PMP) and approved by the New York State Department of Environmental Conservation (NYSDEC). The Pre-Treatment system effluent data obtained over 2018 shows that permit-required contaminant loading limits continue to be achieved.

1.3 Compliance

There were no occurrences of non-compliance during this review period. NYSDEC was notified during periods of prolonged system downtime.

1.4 Recommendations

The components of the Solvent Chemical Site remediation continue to operate as designed. Given the consistent hydraulic capture of contaminants, Solvent does not propose to modify pumping rates at this time. Routine maintenance requirements will be continually reassessed and modified as necessary.

2.0 SITE OVERVIEW

A Site location map is provided as Figure 1.

2.1 Nature and Extent of Contamination Prior to Site Remediation

Remedial activities for the Solvent Chemical Site have addressed contamination associated with three areas: 1) the Solvent Chemical Property; 2) the Olin Hot Spot; and 3) the 18-inch Storm Sewer.

The Solvent Site is a former chemical manufacturing facility which included numerous buildings as well as above and below ground tanks. All structures associated with the chemical manufacturing facility have since been razed. The facility was constructed in the early 1940s for manufacturing of an aniline/urea-based chemical known as "Impregnite" during World War II and the Korean War. The Solvent Chemical Corporation manufactured chlorinated benzenes and zinc chlorides at the Site during the 1970s. Later in the Site's history, drummed chemicals and wastes were stored onsite. The ground water remedial system onsite consists of a ground water interception trench in the overburden (A-zone) and recovery wells in the uppermost bedrock (B-zone).

The Hot Spot is situated west of the Solvent Site and east of Gill Creek. Contaminants of concern have been found in overburden (A-zone) and upper bedrock (B-zone) ground water in the vicinity of monitoring wells OBA-15A and OBA-3A. The ground water remedial system consists of a ground water interception trench in the overburden (A-zone) and recovery wells in the uppermost bedrock (B-zone).

The former 18-inch diameter concrete storm drain originated from the Solvent site property and extended west across DuPont Drive, an electrical substation and an Olin parking lot and eventually discharged to Gill Creek. As part of the remediation of the Solvent Site, this storm drain was addressed by removal/abandonment in place. This portion of the remediation requires no further O&M activities.

2.2 Chronology of Remedial Program

The Remedial Action selected by the NYSDEC, and subsequently implemented at the Solvent Site and Hot Spot is presented in the ROD, dated December 1996. Construction of the remedy was substantially completed in 2001 and documented in the Final Engineering Report submitted to the NYSDEC in April 2003. The monitoring of the remedy conforms to the requirements set forth in the approved PMP submitted to NYSDEC in June 2004 and the approved O&M Plan submitted to NYSDEC in April 2003. The requirements outlined in the PMP fulfill Solvent Chemical's obligations as defined by the "Consent Decree between the State of New York and Solvent Chemical Company, Inc., 83 CIV 1401 (C), (Administrative Consent Order)", Site Number 9-32-096. The operation and maintenance phase of the remediation of the Solvent Chemical Site commenced on July 1, 2004.

2.3 Site Components

The Site remediation components being addressed under the Site Management phase of the Remedial Program include: (1) a series of ground water extraction wells which provide hydraulic control of overburden and shallow bedrock ground water; (2) a pre-treatment system which

removes most of the contaminant loading prior to discharge of extracted ground water to the Niagara Falls POTW; and (3) a site cover which prevents direct exposure to contaminated soils which remain in place.

Ground water is extracted from five overburden (A-zone) and seven shallow bedrock (B-zone) recovery wells. A site plan identifying well locations is provided as Figure 2. All recovery wells are located on the Solvent Chemical Property except for two wells (PW-3B and PW-4B), which extract groundwater from both the A-zone and B-zone and are located on the "Olin Hot Spot" portion of the Site. Ground water extracted from the recovery wells is pumped to an on-site building for pre-treatment. Pre-treatment operations include oil/water separation (PW-5B through PW-8B) and air stripping. Prior to October 2005, water from the A-zone wells was also routed through the oil/water separator. This was discontinued upon approval from NYSDEC in a letter dated October 18, 2005. Pre-treated effluent is discharged to the Niagara Falls municipal sewer system. Solvent laden air from the air stripper is treated by carbon adsorption. Once treated by adsorption, the air is recycled to the air stripper in a closed loop. Consequently, there is no atmospheric discharge. Carbon beds are regenerated by steam at selected time intervals (currently twice per week). During the steam regeneration process, steam combined with vapor phase solvent is purged from the carbon beds, condensed into liquid and separated into water and waste solvent. Waste solvent accumulates in a tank on-site and is periodically removed for disposal as a hazardous waste. The water is recirculated back to the air stripper.

3.0 EVALUATION OF REMEDY PERFORMANCE, EFFECTIVENESS AND PROTECTIVENESS

3.1 Performance

Figures 3 and 4 present overburden water levels for the Solvent Chemical Property and document that the piezometric elevations of all the observation wells in the central portions of the Site are higher than the piezometric elevations encountered in the trench observation wells, indicating an overburden flow path towards the ground water extraction trench. Figures 5 through 8 present ground water contours for B-zone wells on the Solvent Chemical Site and Olin Hot Spot properties. The contours show that ground water extraction system pumping rates are achieving hydraulic capture. Figures 9 through 12 present graphical depictions of CoC concentrations versus time for the wells currently sampled. Additional discussions regarding these figures, where appropriate, are provided in the applicable sections of this report.

3.2 Effectiveness

Based on the figures presented, the extraction system is effectively maintaining hydraulic control in accordance with Appendix A of the PMP.

The Site's cover system is intact, based on inspections, effectively preventing direct exposure.

3.3 Protectiveness

The extraction system is preventing further migration. The Site's cover system continues to provide containment and protection from exposure.

4.0 IC/EC COMPLIANCE

4.1 Institutional Controls (ICs)

The Site has land use restrictions in place. A certification acknowledging that the controls are current is provided in the Institutional and Engineering Controls Certification Form.

4.2 Engineering Controls (ECs)

The following Engineering Controls (ECs) are in place and actively maintained: a cover system, access control (perimeter fence) and ground water containment.

Performance of the cover system and perimeter fencing is monitored quarterly through visual inspections. The ground water containment system is actively monitored and maintained as described in Section 6 of this report. All engineering controls are functioning as designed, are effective and are protective. No changes are recommended at this time.

5.0 MONITORING PLAN COMPLIANCE REPORT

The components of the Performance Monitoring Plan are presented in Table 5.1 below.

Table 5.1: Components of Performance Monitoring Plan
Solvent Chemical Site
Niagara Falls, NY

Remedy Component	Performance Standard	Required Performance Monitoring Activity
Soil – Clean Soil Cover	Contain contaminated soils.	Inspect clean soil cover and pavement for erosion and/or other damage.
Overburden Ground Water – Control and Collection System	Control contaminated overburden groundwater.	Measure overburden ground water levels within and outside of ground water extraction trench to document inward hydraulic gradient.
Shallow Bedrock Ground Water – Control System	Control contaminated bedrock groundwater at the Solvent Site property and the Hot Spot.	Measure ground water levels within the B-zone with subsequent development of plots of the potentiometric surface to document hydraulic containment of contaminated ground water associated with the Solvent Site.
Ground Water – Quality Monitoring Program	Monitor and document offsite contaminant loadings within bedrock zones of concern.	Collection and analysis of B-zone and deeper ground water samples.
Treatment and Disposal of Extracted Ground Water	Comply with permit requirements.	Conduct effluent monitoring as required in discharge permit.

5.1 Site Cover Performance

Ground cover at the Site varies and includes a grassed area in the northern portion of the Site, a heavily vegetated area in the southern portion of the Site, a paved area along with a gravel access road, and an on-site treatment building.

5.1.1 Grassed and Vegetated Areas

Grass is still well established along the site's northern side, adjacent to Buffalo Avenue to just south of the treatment building. The vegetative growth covering the rest of the site is also still well established and there were no areas where growth was absent. Mowing is performed as described in the approved O&M plan.

On March 8 and September 13, 2018 visual inspections of the cover soil for areas of potential significant erosion were conducted. No evidence of areas experiencing significant erosion of the grassy and vegetated areas was noted during these inspections.

5.1.2 Paved Area and Gravel Roadway

Overall the paved area and gravel roadway are still intact without any major cracks or areas of erosion. The gravel roadway is intact although noted as becoming overgrown with vegetation.

5.2 Overburden Ground Water Control and Collection System

Water level measurements were collected both within and outside of the ground water extraction trench. Figures 3 and 4 provide ground water piezometric surface elevations for the overburden observation wells on the Solvent site. As shown on these figures, the piezometric elevations of all the observation wells in the central portions of the Site are higher than the piezometric elevations encountered in the trench observation wells indicating an overburden flow path towards the ground water extraction trench.

5.3 Bedrock Ground Water Control System

Figures 5 through 8 present quarterly water level contours for both the Solvent Site and Hotspot for 2017. The figures indicate that the B-zone pumping wells are achieving capture consistent with the baseline hydraulic conditions approved by NYSDEC, included as Appendix A of the PMP, with the exception of the occasions listed in Section 6.2 below.

5.4 Summary of Ground Water Quality Monitoring Program

Bi-annual ground water sampling events occurred during March and September of 2018. A brief summary of each event is described in Sections 5.4.1 and 5.4.2 below. A more detailed description of each sampling event can be found in the 1st Semi-Annual (submitted as 1st Quarter 2018) and the 2nd Semi-Annual Report for 2018 Operation, Maintenance and Monitoring (OM&M) reports, respectively. Ground water sampling is conducted using passive diffusion bags (PDBs) as described in revised PMP, dated June 2004, and accepted by NYSDEC in a letter dated July 1, 2004.

5.4.1 1st Semi-Annual 2018

The 1st Semi-Annual sampling event included 39 samples (including three duplicate samples) collected from PDBs that had been deployed in thirty-three monitoring/observation wells (nine A-zone wells, nineteen B-zone wells, three C-zone, and two CD-zone) during September 2017. Three PDBs were installed in the F-zone wells on February 20, 2018, more than two weeks prior to sample collection on March 7, 2018. A sample was not collected at OW-18B or MW-6C; OW-18B was obstructed and no PDB was present in MW-6C.

The PDBs were retrieved on March 6 through 8, 2018 and samples for volatile organic compound analysis were collected and transported under chain of custody documentation to Test America and analyzed by Method 8260B.

5.4.2 2nd Semi-Annual 2018

The 2nd Semi-Annual 2018 sampling event included 39 samples (including three duplicate samples) collected from PDBs that had been deployed in thirty-three monitoring/observation wells (nine A-zone wells, nineteen B-zone wells, three C-zone, and two CD-zone) during March 2018. PDBs were installed in three F-zone wells (MW-1F, MW-5F and MW-6F) on August 23, 2018, at least two weeks prior to sample collection on September 11 through 13, 2018. OW-18B was not sampled because of an obstruction in the well riser, and MW-6C was not sampled because it is bailed regularly for DNAPL. Samples collected for volatile organic compound analysis were transported under chain of custody documentation to Test America and analyzed by Method 8260B.

Ground water sampling is conducted semi-annually as described in the SMP and the next round of ground water quality monitoring is scheduled for March 2019 as part of 1st Semi-Annual 2019 OM&M activities.

5.4.3 Sample Results

Tables 5.2 and 5.3 present the analytical results for the March and September 2018 ground water sampling events, respectively. Figures presenting ground water contaminant results for each monitoring/observation well were presented in the 1st Semi-Annual (submitted as 1st Quarter 2018) and the 2nd Semi-Annual Report for 2018 OM&M reports. Figures 9 through 12 present graphical depictions of total CoC concentrations versus time for the observation/monitoring wells currently sampled at the Solvent and Hot Spot Sites.

5.4.4 Monitoring for NAPL

During the March and September 2018 ground water sampling events, after the PDB was removed and sampled, an oil/water interface probe was used to check for the presence of Non-Aqueous Phase Liquid (NAPL) at each of the wells. The presence or absence of NAPL was also evaluated at the wells that were not sampled.

During the March 2018 ground water sampling event, well OW-11A had a measurable quantity of product (product thickness 0.25 feet) and MW-6C had a measurable quantity of product (product thickness 0.03 feet). The following wells had trace evidence of NAPL present on the interface probe or on the PDB tether: OW-11B and OW-13B.

During the September 2018 ground water sampling event, measurable NAPL was detected in OW-11A (0.63 feet) and OW-13B (<0.01 feet). No additional groundwater monitoring wells had evidence of NAPL on the tip of the interface probe.

5.5 Pre-treatment System Discharge

The Site's pre-treatment system discharge concentrations during 2018 were below the limits required by the City of Niagara Falls, Significant Industrial User Discharge Permit Number 55.

6.0 OPERATION, MAINTENANCE & MONITORING (O, M & M) PLAN COMPLIANCE REPORT

6.1 Components of O, M & M Plan

O, M & M Reports are submitted to NYSDEC quarterly. The reports include the results of all-environmental monitoring, findings of all site inspections, and details of the system maintenance activities performed at the Site during each quarter. The maintenance schedule for the Site's pre-treatment system is presented in Table 9 of the OM&M Plan. NYSDEC is notified of any unscheduled maintenance that requires the system to be shut down for a period of more than three consecutive days or when down five or more total days within a 30 day period. The notification includes a plan and schedule for restoring system operations. A system shutdown occurs annually for approximately one to two weeks to deal with standard maintenance. The activities performed during the intermittent shutdown for this performance review occurred over the period of September 26, 2018 through October 9, 2018. NYSDEC was notified prior to system shutdown.

Waste containing site related chemicals are properly stored on site prior to transport to an off-site facility for disposal in accordance with all applicable Federal and State of New York regulations. Disposal waste manifest documentation has been provided in previous reports, as applicable. No other transport or disposal of remedial waste was conducted during 2018.

Previous product removal and disposal was conducted as follows:

- On June 27, 2018, approximately 240 gallons of product was removed from the onsite above ground storage tank (AST) and transported to Chemtron Corporation of Avon, Ohio.

- March 9, 2016, six super sacks containing spent carbon from the regenerable carbon unit were transported by Nortru LLC to the Petro-Chem Processing Group facility in Detroit, Michigan

- November 9, 2016, approximately 350 gallons of product was removed from the onsite above ground storage tank (AST) and transported to Chemtron Corporation of Avon, Ohio.

- On January 9, 2015, approximately 272 gallons of product was removed from the onsite above ground storage tank (AST) and transported to Chemtron Corporation of Avon, Ohio. Disposal documentation is provided in Appendix C of the 1st Quarter 2015 OM&M Report.

- On July 9, 2013, approximately 300 gallons of product was removed from the onsite AST for transport and disposal at an approved facility. Disposal documentation was provided in Appendix C of the 3rd Quarter 2013 OM&M Report.

- On September 4, 2012, 107 gallons of product was removed from the onsite AST for transport to an approved disposal facility. Documentation of the transport and disposal was included in Appendix C of the 3rd Quarter, 2012 OM&M Report.

- On August 2, 2011 approximately 150 gallons of product was transported by the Environmental Service Group, Inc. to Chemtron Corporation in Avon, Ohio.

Documentation of this transport and disposal was included in Appendix C of the 3rd Quarter 2011 OM&M Report.

- During the 1st Quarter 2010, 488 gallons of recovered product was removed from the onsite AST for transport to an approved disposal facility on January 13, 2010. Documentation of the transport and disposal was included in Appendix C of the 1st Quarter, 2010 OM&M Report.

- On December 17, 2009, eleven drums of contaminated debris (pump parts, PPE) were transported to the Michigan Disposal Waste Treatment Plant in Belleville, MI. Documentation of the transport and disposal was included in Appendix C of the 4th Quarter 2009 OM&M Report.

- On September 26, 2007, eleven drums of carbon from the regenerable carbon unit were transported to Wayne Disposal, Inc. Site 2 Landfill located in Belleville, MI.

- On January 20, 2006 approximately 500 gallons of liquid waste were removed from the onsite AST and transported to Chemtron Corporation. Documentation of this transport and disposal activity was included in the 1st Quarter 2006 OM&M Report dated July 10, 2006.

- In July 2004, 90 gallons of product were transported by Frank's Vacuum Truck Service of Niagara Falls, New York to Chemtron Corporation of Avon, Ohio. Documentation of this transport and disposal activity was included in the 3rd Quarter 2004 OM&M Report dated November 17, 2004.

6.2 Summary of O&M Completed During Reporting Period

Routine operation and maintenance activities include regular site visits by Camtech Plumbing and Mechanical of Niagara Falls, New York (Camtech). Non-scheduled equipment repairs are made as soon as practicable as they occur. Major scheduled maintenance activities require a system shutdown and is scheduled annually. Non-scheduled maintenance (repairs) performed during 2018 are summarized as follows:

Date	Maintenance Action Taken
1/23/2018	Replaced PW-3B pump.
1/24/2018	Performed repairs to electrical panel.
2/5/2018	Working on Sarco pump and steam cycle problems.
2/6/2018	Removed, cleaned and reinstalled PW-2B pump.
2/8/2018	Removed, cleaned and reinstalled PW-4B pump.
2/13/2018	Cleaned and repaired PW-5B pump.
4/10/2018	Installed new pump inside PW-3B.
4/16/2018	Performed the yearly backflow testing for the Niagara Falls Water Department.
4/25/2018	Replaced the pump in PW-2B and cleaned well.
5/2/2018	Repaired MW-6C well.
5/24/2018	Repaired and cleaned PW-5B and PW-7B pumps and cleaned the steam pump. Repaired pump 401 and 2" connection piping.
6/1/2018	Started repairs on steam piping, tanks, 2" schedule 80 PVC Pipe check

Date	Maintenance Action Taken
	valves and meters.
6/6/2018	Repaired PW-2B meter.
6/7/2018	Performed acid treatment in PW-2B well.
6/8/2018	Installed new PW-2B level switch.
6/11/2018	Repaired PW-2B pump and cleaned well. Cleaned separator tank and level switch.
6/21/2018	Repaired and installed a new pump in PW-6B and repaired 1" piping attached to the pump.
7/13/2018	Worked on TW-1A/2A/3A pumps and level switches. Cleaned the stripper air piping and tank valves.
7/16/2018	Performed maintenance on TW-4A
7/18/2018	Measured A-Zone water levels and checked electrical.
7/19/2018	System shut down, cleaned the level switches on the tank and checked electrical.
7/23/2018	System shut down and measured water levels in PW-2B/3B/8B.
7/25/2018	Repaired and maintained PW-2B pump, meters, and tank valves.
7/27/2018	Repaired and maintained PW-2B electrical.
8/3/2018	Worked on PW-2B electrical issues.
8/7/2018	Worked on PW-5B pump and motor. PW-2B level switch.
8/8/2018	Worked on PW-2B connections
8/9/2018	Replace PW-2B pump, motor, and level indicator on TW-1A.
8/23/2018	Installed PDBs in F-Zone wells.
9/26/2018	Start two week shutdown for repairs.

6.3 Pretreatment System

During 2018, the system treated approximately 23.09 million gallons of ground water. Tables of daily ground water pumping volumes and average flow rates for January through December 2018 are provided in the semi-annual reports. Solvent Chemical's Self-Monitoring Reports, which are submitted to the Niagara Falls' POTW on a semi-annual. The system is performing as designed and no violations were noted.

Ground water levels were measured on March 6 and September 11, 2018. Ground water depths and the corresponding ground water elevations (referenced to Benchmark J20, Niagara Falls City Datum) for 1st Semi-Annual and the 2nd Semi-Annual Report for 2018 are provided in Tables 6.1 and 6.2 respectively. As hydraulic control in accordance with the SMP is shown, the ground water extraction system is performing as designed.

6.4 Site Cover

The ground cover at the Site is inspected, areas of significant erosion, if any, are reported and repaired immediately. To date, the vegetation on-site is well established and erosion is minimal. Vegetated areas are mowed to prevent the establishment of any deep rooting plants. Paved areas are also inspected and any cracks or holes are patched as needed.

7.0 OVERALL PRR CONCLUSIONS AND RECOMMENDATIONS

7.1 Compliance with Site Management Plans

The requirements outlined in the SMP were met over this performance review period.

7.2 Performance and Effectiveness of the Remedy

The components of the Solvent Chemical Site remediation continue to operate as designed. Based on the consistent hydraulic capture of contaminants, this EC continues to perform properly and remains effective. Therefore, Solvent does not propose to modify recovery well pumping rates at this time. Pre-treatment system effluent data shows that permit-required contaminant loading limits continue to be achieved. The cover system and site access control remains intact with minor maintenance and continue to prevent exposure to contaminated soil. These ECs also are continuing to perform properly and remain effective.

ICs remain in effect for the Solvent Chemical property.

Based on a review of the information generated from the operation, maintenance and monitoring performed for the Solvent Chemical Site, the remedy continues to be protective of public health and the environment and is compliant with the applicable decision document.

7.3 Future PRR and other Submittals

PRRs for this Site will be submitted annually.

TABLES

TABLE 5.2 - SOLVENT CHEMICAL SITE ANALYTICAL RESULTS
FIRST SEMI-ANNUAL 2018
SOLVENT CHEMICAL, 3163 BUFFALO AVENUE, NIAGARA FALLS, NY

Location	Date Sampled	Contaminants of Concern						Remaining Detected Analytes																
		Benzene	Chlorobenzene	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichloropropane	2,2-Dichloropropane	2-Butanone (MEK)	2-Chloroethyl vinyl ether
	Criteria*	1	5	5	3	3	3	5	5	5	1	5	5	5	5	0.04	5	0.04	0.0006	0.6	1	5	5	5	50	N/A
A Zone																										
MW-02A	03/07/2018	**14**	**110**	**94**	**580**	**180**	**290**	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	**68**	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 100 U	< 50 U
MW-05A	03/06/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UT	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 5.0 U
OW-09A	03/06/2018	< 80 U	< 80 U	< 80 U	**580**	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 800 U	< 400 U
OW-12A	03/06/2018	**93 J**	**1700**	< 200 U	**5900**	**1200**	**4300**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 UT	< 200 U	< 200 U	< 200 U	< 2000 U	< 1000 U
OW-15A	03/06/2018	< 20 U	**18 J**	**58**	**460**	**280**	**230**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 UT	< 20 U	< 20 U	< 20 U	< 200 U	< 100 U
OW-16A	03/06/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UT	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 5.0 U
OW-18A	03/07/2018	**470**	**7000**	**290**	**8900**	**1500**	**13000 T**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	**120 J**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 2000 U	< 1000 U
OW-22A	03/08/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 5.0 U
OW-29A	03/07/2018	< 400 U	**9400**	**1600**	**19000**	**3600**	**10000**	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	**710**	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 4000 U	< 2000 U
B Zone																										
MW-01B	03/06/2018	**48 J**	**6400**	< 100 U	**490**	**490**	**2400**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 1000 U	< 500 U
MW-04B	03/06/2018	**79 J**	**460**	**170**	**1300**	**520**	**1100**	< 100 U	< 100 U	**310**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 UT	< 100 U	< 100 U	< 100 U	< 1000 U	< 500 U
MW-06B	03/07/2018	**69**	**900**	< 20 U	**160**	**270**	**440**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 200 U	< 100 U
OW-05B	03/08/2018	**41**	**180**	**50**	**110**	**110**	**150**	< 40 U	< 40 U	**300**	< 40 U	< 40 U	**15 J**	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 400 U	< 200 U
OW-06B	03/08/2018	**91**	**580**	**1300**	**800**	**400**	**750**	< 20 U	< 20 U	**44**	< 20 U	< 20 U	**14 J**	< 20 U	**22**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 200 U	< 100 U
OW-07B	03/08/2018	< 1.0 U	< 1.0 U	**0.43 J**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**5.0**	< 1.0 U	**0.71 J**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 5.0 U
OW-08B	03/08/2018	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	**2.0**	**1.6 J**	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 20 U	< 10 U
OW-10B	03/07/2018	**580**	**12000**	**1100**	**11000**	**1900**	**7200**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	**310**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 2000 U	< 1000 U
OW-11B	03/07/2018	**9000**	**11000**	**2800**	**26000**	**5600**	**17000**	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	**1000**	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 5000 U	< 2500 U
DUP OW-11B	03/07/2018	**9300**	**11000**	**2800**	**26000**	**5700**	**17000**	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	**970**	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 5000 U	< 2500 U
OW-12B	03/06/2018	< 1.0 U	**3.1**	**1.1**	**4.7**	**17**	**14**	< 1.0 U	< 1.0 U	**1.2**	< 1.0 U	**2.3**	< 1.0 U	< 1.0 U	**0.82 J**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 5.0 U
OW-13B	03/06/2018	**1100**	**5800**	**6900**	**7400**	**1500**	**5400**	< 200 U	< 200 U	**270**	< 200 U	< 200 U	< 200 U	< 200 U	**450**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 2000 U	< 1000 U
DUP OW-13B	03/06/2018	**1100**	**6000**	**7200**	**7600**	**1600**	**5600**	< 400 U	< 400 U	**250 J**	< 400 U	< 400 U	< 400 U	< 400 U	**480**	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 4000 U	< 2000 U
OW-14B	03/08/2018	< 100 U	**2300**	**460**	**5100**	**2000**	**6100**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**110**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 1000 U	< 500 U
OW-15B	03/08/2018	< 50 U	**130**	**75**	**120**	**140**	**140**	< 50 U	< 50 U	**250**	< 50 U	< 50 U	< 50 U	< 50 U	**27 J**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 500 U	< 250 U
DUP OW-15B	03/08/2018	**44**	**180**	**48**	**110**	**110**	**150**	< 20 U	< 20 U	**320**	**9.6 J**	< 20 U	**13 J**	< 20 U	**14 J**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 200 U	< 100 U
OW-18B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
OW-22B	03/08/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 UT	< 20 U	**92**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 200 U	< 100 U
OW-26B	03/06/2018	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 UT	< 10 U	< 10 U	< 10 U	< 100 U	< 50 U
OW-27B	03/06/2018	**310**	**1300**	**160**	**1500**	**630**	**1700**	< 100 U	< 100 U	**42 J**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 UT	< 100 U	< 100 U	< 100 U	< 1000 U	< 500 U
OW-28B	03/06/2018	< 40 U	**140**	**37 J**	**85**	**85**	**140**	< 40 U	< 40 U	**280**	**11 J**	< 40 U	**12 J**	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 UT	< 40 U	< 40 U	< 40 U	< 400 U	< 200 U
OW-29B	03/06/2018	**800**	**3900**	**1100**	**3300**	**880**	**2600**	< 200 U	< 200 U	**240**	< 200 U	< 200 U	< 200 U	< 200 U	**96 J**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 UT	< 200 U	< 200 U	< 200 U	< 2000 U	< 1000 U
OW-30B	03/06/2018	**0.91 J**	**1.4**	**0.50 J**	< 1.0 U	**17**	**18**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**6.1**	< 1.0 U	< 1.0 U	**0.59 J**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 5.0 U
C Zone																										
MW-01C	03/06/2018	**46 J**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 UT	< 50 U	< 50 U	< 50 U	< 500 U	< 250 U
MW-04C	03/06/2018	**5000**	**5600**	< 400 U	**690**	< 400 U	**420**	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 4000 U	< 2000 U
MW-05C	03/06/2018	**360**	**5700**	< 20 U	**310**	**870**	**1800**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 UT	< 20 U	< 20 U	< 20 U	< 200 U	< 100 U
MW-06C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CD Zone																										
MW-01CD	03/06/2018	**6200**	**54000**	< 2000 U	**15000**	**1700 J**	**9300**	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 UT	< 2000 U	< 2000 U	< 2000 U	< 20000 U	< 10000 U
MW-05CD	03/06/2018	**34 J**	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 UT	< 40 U	< 40 U	< 40 U	< 400 U	< 200 U
F Zone																										
MW-01F	03/07/2018	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 500 U	< 250 U
MW-05F	03/07/2018	**110**	**510**	< 50 U	**670**	**60**	**270**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 500 U	< 250 U
MW-06F	03/07/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 200 U	< 100 U

Note:
All units in ug/l.
QUALIFIERS
GC/MS VOA
B: Indicates compound was detected in associated blank.
J: Indicates an estimated value.
NS: Not Sampled
T: MS and/or MSD Recovery is outside acceptance limits.
U: Analyzed for but not detected.
* - NYSDEC Groundwater effluent limitations for discharges to Class GA waters, 2017.
N/A - No criteria available.
Values in **bold** indicate the analyte was detected.
Values shown in bold and shaded type exceed the listed criteria.

TABLE 5.2 - SOLVENT CHEMICAL SITE ANALYTICAL RESULTS
FIRST SEMI-ANNUAL 2018
SOLVENT CHEMICAL, 3163 BUFFALO AVENUE, NIAGARA FALLS, NY

Location	Date Sampled	Remaining Detected Analytes																								
		2-Hexanone	4-Methyl-2-pentanone	Acetone	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Hexachlorobutadiene	Isopropylbenzene	m,p-Xylene	Methyl tert-butyl ether	Methylene chloride	n-Butylbenzene	n-Propylbenzene
Criteria*		50	N/A	50	5	5	50	50	5	60	5	5	7	5	5	0.4	50	5	5	0.5	5	5	10	5	5	5
A Zone																										
MW-02A	03/07/2018	< 50 U	< 50 U	< 100 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 20 U	< 10 U	< 10 U	< 10 U	< 10 U
MW-05A	03/06/2018	< 5.0 U	< 5.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UT	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
OW-09A	03/06/2018	< 400 U	< 400 U	< 800 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	**390**	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 160 U	< 80 U	< 80 U	< 80 U	< 80 U
OW-12A	03/06/2018	< 1000 U	< 1000 U	< 2000 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 UT	< 200 U	< 200 U	< 200 U	< 400 U	< 200 U	< 200 U	< 200 U	< 200 U
OW-15A	03/06/2018	< 100 U	< 100 U	< 200 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 UT	< 20 U	< 20 U	< 20 U	< 40 U	< 20 U	< 20 U	< 20 U	< 20 U
OW-16A	03/06/2018	< 5.0 U	< 5.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 UT	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
OW-18A	03/07/2018	< 1000 U	< 1000 U	< 2000 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 UT	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 400 U	< 200 U	< 200 U	< 200 U	< 200 U
OW-22A	03/08/2018	< 5.0 U	< 5.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**0.41 J**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
OW-29A	03/07/2018	< 2000 U	< 2000 U	< 4000 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 800 U	< 400 U	< 400 U	< 400 U	< 400 U
B Zone																										
MW-01B	03/06/2018	< 500 U	< 500 U	< 1000 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 200 U	< 100 U	< 100 U	< 100 U	< 100 U
MW-04B	03/06/2018	< 500 U	< 500 U	< 1000 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**110**	< 100 U	**4000**	< 100 U	< 100 U	< 100 UT	< 100 U	< 100 U	< 100 U	< 200 U	< 100 U	< 100 U	< 100 U	< 100 U
MW-06B	03/07/2018	< 100 U	< 100 U	< 200 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**55**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 40 U	< 20 U	< 20 U	< 20 U	< 20 U
OW-05B	03/08/2018	< 200 U	< 200 U	< 400 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	**1800**	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 80 U	< 40 U	**21 BJ**	< 40 U	< 40 U
OW-06B	03/08/2018	< 100 U	< 100 U	< 200 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**4100**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 40 U	< 20 U	**11 BJ**	< 20 U	< 20 U
OW-07B	03/08/2018	< 5.0 U	< 5.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**0.58 J**	< 1.0 U	**7.0**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
OW-08B	03/08/2018	< 10 U	< 10 U	< 20 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	**45**	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 4.0 U	< 2.0 U	**1.1 BJ**	< 2.0 U	< 2.0 U
OW-10B	03/07/2018	< 1000 U	< 1000 U	< 2000 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 400 U	< 200 U	< 200 U	< 200 U	< 200 U
OW-11B	03/07/2018	< 2500 U	< 2500 U	< 5000 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 1000 U	< 500 U	< 500 U	< 500 U	< 500 U
DUP OW-11B	03/07/2018	< 2500 U	< 2500 U	< 5000 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 1000 U	< 500 U	< 500 U	< 500 U	< 500 U
OW-12B	03/06/2018	< 5.0 U	< 5.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**40**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
OW-13B	03/06/2018	< 1000 U	< 1000 U	< 2000 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	**12000**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 400 U	< 200 U	< 200 U	< 200 U	< 200 U
DUP OW-13B	03/06/2018	< 2000 U	< 2000 U	< 4000 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	**12000**	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 800 U	< 400 U	< 400 U	< 400 U	< 400 U
OW-14B	03/08/2018	< 500 U	< 500 U	< 1000 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 UT	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 200 U	< 100 U	**63 BJ**	< 100 U	< 100 U
OW-15B	03/08/2018	< 250 U	< 250 U	< 500 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**74**	< 50 U	**1300**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 100 U	< 50 U	**35 BJ**	< 50 U	< 50 U
DUP OW-15B	03/08/2018	< 100 U	< 100 U	< 200 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**2000**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 40 U	< 20 U	**13 BJ**	< 20 U	< 20 U
OW-18B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
OW-22B	03/08/2018	< 100 U	< 100 U	< 200 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**13 J**	< 20 U	**560 T**	< 20 U	< 20 U	< 20 UT	< 20 U	< 20 U	< 20 U	< 40 U	< 20 U	**12 BJ**	< 20 U	< 20 U
OW-26B	03/06/2018	< 50 U	< 50 U	< 100 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	**20**	< 10 U	< 10 U	< 10 UT	< 10 U	< 10 U	< 10 U	< 20 U	< 10 U	< 10 U	< 10 U	< 10 U
OW-27B	03/06/2018	< 500 U	< 500 U	< 1000 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**4500**	< 100 U	< 100 U	< 100 UT	< 100 U	< 100 U	< 100 U	< 200 U	< 100 U	< 100 U	< 100 U	< 100 U
OW-28B	03/06/2018	< 200 U	< 200 U	< 400 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	**3400**	< 40 U	< 40 U	< 40 UT	< 40 U	< 40 U	< 40 U	< 80 U	< 40 U	< 40 U	< 40 U	< 40 U
OW-29B	03/06/2018	< 1000 U	< 1000 U	< 2000 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	**11000**	< 200 U	< 200 U	< 200 UT	< 200 U	< 200 U	< 200 U	< 400 U	< 200 U	< 200 U	< 200 U	< 200 U
OW-30B	03/06/2018	< 5.0 U	< 5.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**25**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
C Zone																										
MW-01C	03/06/2018	< 250 U	< 250 U	< 500 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**4000**	< 50 U	< 50 U	< 50 UT	< 50 U	< 50 U	< 50 U	< 100 U	< 50 U	< 50 U	< 50 U	< 50 U
MW-04C	03/06/2018	< 2000 U	< 2000 U	< 4000 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	**28000 T**	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 800 U	< 400 U	< 400 U	< 400 U	< 400 U
MW-05C	03/06/2018	< 100 U	< 100 U	< 200 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 UT	< 20 U	< 20 U	< 20 U	< 40 U	< 20 U	< 20 U	< 20 U	< 20 U
MW-06C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CD Zone																										
MW-01CD	03/06/2018	< 10000 U	< 10000 U	< 20000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	**10000**	< 2000 U	< 2000 U	< 2000 UT	< 2000 U	< 2000 U	< 2000 U	< 4000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U
MW-05CD	03/06/2018	< 200 U	< 200 U	< 400 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	**1500**	< 40 U	< 40 U	< 40 UT	< 40 U	< 40 U	< 40 U	< 80 U	< 40 U	< 40 U	< 40 U	< 40 U
F Zone																										
MW-01F	03/07/2018	< 250 U	< 250 U	< 500 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**59**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 100 U	< 50 U	< 50 U	< 50 U	< 50 U
MW-05F	03/07/2018	< 250 U	< 250 U	< 500 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**300**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 100 U	< 50 U	< 50 U	< 50 U	< 50 U
MW-06F	03/07/2018	< 100 U	< 100 U	< 200 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**1400**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 40 U	< 20 U	< 20 U	< 20 U	< 20 U

Note:
All units in ug/l.
QUALIFIERS
GC/MS VOA
B: Indicates compound was detected in as
J: Indicates an estimated value.
NS: Not Sampled
T: MS and/or MSD Recovery is outside acc
U: Analyzed for but not detected.
* - NYSDEC Groundwater effluent limitations
N/A - No criteria available.
Values in **bold** indicate the analyte was detecte
Values shown in bold and shaded type exceed

TABLE 5.2 - SOLVENT CHEMICAL SITE ANALYTICAL RESULTS
FIRST SEMI-ANNUAL 2018
SOLVENT CHEMICAL, 3163 BUFFALO AVENUE, NIAGARA FALLS, NY

Location	Date Sampled	Remaining Detected Analytes															
		Naphthalene	2-Chlorotoluene	o-Xylene	4-Chlorotoluene	4-Isopropyltoluene	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
	Criteria*	10	5	5	5	5	5	5	5	5	5	5	0.4	5	5	N/A	2
A Zone																	
MW-02A	03/07/2018	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	**3.6 J**	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 50 U	< 10 U
MW-05A	03/06/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**14**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 1.0 U
OW-09A	03/06/2018	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	**3800**	< 80 U	< 80 U	< 80 U	**310**	< 80 U	< 400 U	< 80 U
OW-12A	03/06/2018	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 1000 U	< 200 U
OW-15A	03/06/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 100 U	< 20 U
OW-16A	03/06/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 1.0 U
OW-18A	03/07/2018	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 1000 U	< 200 U
OW-22A	03/08/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 1.0 U
OW-29A	03/07/2018	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 2000 U	< 400 U
B Zone																	
MW-01B	03/06/2018	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 500 U	< 100 U
MW-04B	03/06/2018	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**1100**	< 100 U	< 100 U	< 100 U	**2900**	< 100 U	< 500 U	**320**
MW-06B	03/07/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**780**	< 20 U	< 20 U	< 20 U	**57**	< 20 U	< 100 U	< 20 U
OW-05B	03/08/2018	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	**1300**	< 40 U	**50**	< 40 U	**4400**	< 40 U	< 200 U	**110**
OW-06B	03/08/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**120**	< 20 U	**75**	< 20 U	**290**	< 20 U	< 100 U	**630**
OW-07B	03/08/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**3.8**	< 1.0 U	**2.4**	< 1.0 U	**16**	< 1.0 U	< 5.0 U	< 1.0 U
OW-08B	03/08/2018	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	**96**	< 2.0 U	< 10 U	< 2.0 U
OW-10B	03/07/2018	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 1000 U	< 200 U
OW-11B	03/07/2018	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 2500 U	< 500 U
DUP OW-11B	03/07/2018	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 2500 U	< 500 U
OW-12B	03/06/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**1.9**	< 1.0 U	**4.1**	< 1.0 U	**2.7**	< 1.0 U	< 5.0 U	**1.4**
OW-13B	03/06/2018	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	**770**	< 200 U	**240**	< 200 U	**1300**	< 200 U	< 1000 U	**2500**
DUP OW-13B	03/06/2018	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	**820**	< 400 U	< 400 U	< 400 U	**1300**	< 400 U	< 2000 U	**2600**
OW-14B	03/08/2018	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 500 U	< 100 U
OW-15B	03/08/2018	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**1600**	< 50 U	< 50 U	< 50 U	**2900**	< 50 U	< 250 U	**130**
DUP OW-15B	03/08/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**1400**	< 20 U	**58**	< 20 U	**4300**	< 20 U	< 100 U	**120**
OW-18B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
OW-22B	03/08/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**420 T**	< 20 U	< 20 U	< 20 U	**1000 T**	< 20 U	< 100 U	< 20 U
OW-26B	03/06/2018	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	**370**	< 10 U	< 10 U	< 10 U	**25**	< 10 U	< 50 U	< 10 U
OW-27B	03/06/2018	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**130**	< 100 U	**130**	< 100 U	**400**	< 100 U	< 500 U	**620**
OW-28B	03/06/2018	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	**1100**	< 40 U	**59**	< 40 U	**2800**	< 40 U	< 200 U	**310**
OW-29B	03/06/2018	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	**1600**	< 200 U	**300**	< 200 U	**1300**	< 200 U	< 1000 U	**2600**
OW-30B	03/06/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**22**	< 1.0 U	**5.5**	< 1.0 U	**26**	< 1.0 U	< 5.0 U	**7.2**
C Zone																	
MW-01C	03/06/2018	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**180**	< 50 U	< 50 U	< 50 U	< 250 U	**1200**
MW-04C	03/06/2018	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	**480**	< 400 U	**390 J**	< 400 U	< 2000 U	**2600**
MW-05C	03/06/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 100 U	< 20 U
MW-06C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CD Zone																	
MW-01CD	03/06/2018	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 2000 U	< 10000 U	**1900 J**
MW-05CD	03/06/2018	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	**69**	< 40 U	< 40 U	< 40 U	< 200 U	**880**
F Zone																	
MW-01F	03/07/2018	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**53**	< 50 U	< 50 U	< 50 U	< 250 U	**4000**
MW-05F	03/07/2018	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 250 U	**2800**
MW-06F	03/07/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**67**	< 20 U	< 20 U	< 20 U	< 100 U	**1900**

Note:
All units in ug/l.
QUALIFIERS
GC/MS VOA
B: Indicates compound was detected in as
J: Indicates an estimated value.
NS: Not Sampled
T: MS and/or MSD Recovery is outside acc
U: Analyzed for but not detected.
* - NYSDEC Groundwater effluent limitations
N/A - No criteria available.
Values in **bold** indicate the analyte was detecte
Values shown in bold and shaded type excee

TABLE 5.3 - SOLVENT CHEMICAL SITE ANALYTICAL RESULTS
SECOND SEMI-ANNUAL 2018
SOLVENT CHEMICAL, 3163 BUFFALO AVENUE, NIAGARA FALLS, NY

Location	Date Sampled	Contaminants of Concern																								
		Benzene	Chlorobenzene	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichloropropane	2,2-Dichloropropane	2-BUanone (MEK)	2-Chloroethyl vinyl ether
	CAS #	71-43-2	108-90-7	120-82-1	95-50-1	541-73-1	106-46-7	630-20-6	71-55-6	79-34-5	79-00-5	75-34-3	75-35-4	563-58-6	87-61-6	96-18-4	95-63-6	96-12-8	106-93-4	107-06-2	78-87-5	108-67-8	142-28-9	594-20-7	78-93-3	110-75-8
	Analyte order	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	Effluent Limit*	1	5	5	3	3	3	5	5	5	1	5	5	N/A	5	0.04	5	0.04	0.0006	0.6	1	5	5	5	N/A	N/A
A Zone																										
MW-02A	09/13/2018	**120**	**2200**	**130**	**1800**	**1000**	**3000**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**61**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 500 U	< 250 U
MW-05A	09/11/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 5.0 U
OW-09A	09/11/2018	< 50 U	< 50 U	< 50 U	**450**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 500 U	< 250 U
OW-12A	09/11/2018	**200**	**6100**	< 200 U	**3700**	**560**	**2300**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 2000 U	< 1000 U
OW-15A	09/11/2018	< 20 U	**140**	**290**	**1100**	**190**	**180**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 200 U	< 100 U
OW-16A	09/11/2018	< 1.0 U	< 1.0 U	< 1.0 U	**31**	< 1.0 U	**5.0**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 5.0 U
OW-18A	09/13/2018	**620**	**10000**	**170 J**	**11000 T**	**1900**	**16000 T**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 2000 U	< 1000 U
OW-22A	09/12/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 5.0 U
OW-29A	09/13/2018	< 200 U	**11000**	**810**	**12000**	**2800**	**7500**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	**240**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 2000 U	< 1000 U
B Zone																										
MW-01B	09/11/2018	**1200**	**55000**	**930**	**4300**	**2900**	**14000**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	**330**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 2000 U	< 1000 U
MW-04B	09/11/2018	**45 J**	**88 J**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**610**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 1000 U	< 500 U
MW-06B	09/13/2018	**480**	**3900**	**370**	**7300**	**2200**	**4800**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**67 J**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 1000 U	< 500 U
OW-05B	09/12/2018	**81 J**	**220**	**65 J**	**140**	**130**	**190**	< 80 U	< 80 U	**520**	< 80 U	< 80 U	**42 J**	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 800 U	< 400 U
OW-06B	09/12/2018	**110**	**690**	**1100**	**800**	**430**	**840**	< 50 U	< 50 U	**180**	< 50 U	< 50 U	**38 J**	< 50 U	**28 J**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 500 U	< 250 U
OW-07B	09/12/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**6.1**	**0.47 J**	**1.1**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 5.0 U
OW-08B	09/12/2018	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	**2.7**	**2.0**	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 20 U	< 10 U
OW-10B	09/13/2018	**2500**	**30000**	**350 J**	**10000**	**3200**	**13000**	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 5000 U	< 2500 U
OW-11B	09/13/2018	**7800**	**11000**	**3000**	**25000**	**6900**	**20000**	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	**980**	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 4000 U	< 2000 U
DUP OW-11B	09/13/2018	**7900**	**12000**	**2800**	**24000**	**6600**	**19000**	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	**910**	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 5000 U	< 2500 U
OW-12B	09/11/2018	**4.7**	**42**	< 1.0 U	**11**	**6.8**	**14**	< 1.0 U	< 1.0 U	**0.99 J**	< 1.0 U	**1.5**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 10 U	< 5.0 U
OW-13B	09/11/2018	**870**	**5600**	**6700**	**6200**	**1300**	**4300**	< 80 U	< 80 U	**450**	< 80 U	< 80 U	< 80 U	< 80 U	**380**	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 800 U	< 400 U
DUP OW-13B	09/11/2018	**850**	**5600**	**6600**	**6000**	**1300**	**4400**	< 80 U	< 80 U	**530**	< 80 U	< 80 U	< 80 U	< 80 U	**370**	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 800 U	< 400 U
OW-14B	09/12/2018	< 100 U	**2100**	**260**	**3400**	**1800**	**6100**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**58 J**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 1000 U	< 500 U
OW-15B	09/12/2018	**71**	**320**	**89**	**230**	**180**	**250**	< 50 U	< 50 U	**580**	**17 J**	< 50 U	**25 J**	< 50 U	**31 J**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 500 U	< 250 U
DUP OW-15B	09/12/2018	**64 J**	**190**	**69 J**	**130**	**150**	**170**	< 80 U	< 80 U	**460**	< 80 U	< 80 U	**23 J**	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 800 U	< 400 U
OW-18B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
OW-22B	09/12/2018	< 20 U	**23**	**22**	< 20 U	**34**	**33**	< 20 U	< 20 U	**120**	< 20 U	< 20 U	< 20 U	< 20 U	**8.4 J**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 200 U	< 100 U
OW-26B	09/11/2018	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 100 U	< 50 U
OW-27B	09/11/2018	**190**	**1000**	**180**	**1500**	**770**	**1800**	< 100 U	< 100 U	**100**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 1000 U	< 500 U
OW-28B	09/11/2018	**57**	**190**	**60**	**100**	**120**	**150**	< 40 U	< 40 U	**360**	**17 J**	< 40 U	**23 J**	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 400 U	< 200 U
OW-29B	09/11/2018	**510**	**3300**	**1200**	**2900**	**840**	**2400**	< 200 U	< 200 U	**470**	< 200 U	< 200 U	< 200 U	< 200 U	**120 J**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 2000 U	< 1000 U
OW-30B	09/11/2018	**4.6**	**100**	< 4.0 U	**24**	**65**	**41**	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	**4.0**	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 40 U	< 20 U
C Zone																										
MW-01C	09/11/2018	**1100**	**43 J**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 500 U	< 250 U
MW-04C	09/11/2018	**4700 T**	**4500 T**	< 400 U	**850 T**	< 400 U	**430 T**	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 4000 U	< 2000 U
MW-05C	09/11/2018	**150**	**1900**	< 20 U	**130**	**240**	**480**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 200 U	< 100 U
MW-06C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CD Zone																										
MW-01CD	09/11/2018	**5300**	**51000**	< 800 U	**14000**	**1900**	**10000**	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 8000 U	< 4000 U
MW-05CD	09/11/2018	**33 J**	< 40 U	< 40 U	**58**	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 400 U	< 200 U
F Zone																										
MW-01F	09/13/2018	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 500 U	< 250 U
MW-05F	09/13/2018	**140**	**690**	< 100 U	**700**	< 100 U	**290**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 1000 U	< 500 U
MW-06F	09/13/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 200 U	< 100 U

Note:

All units in ug/l.

QUALIFIERS

GC/MS VOA

J: Indicates an estimated value.

NS: Not Sampled

T: MS and/or MSD Recovery is outside acceptance limits.

U: Analyzed for but not detected.

waters, 2017.

N/A - No criteria available.

Values in b**old** indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed criteria.

TABLE 5.3 - SOLVENT CHEMICAL SITE ANALYTICAL RESULTS
SECOND SEMI-ANNUAL 2018
SOLVENT CHEMICAL, 3163 BUFFALO AVENUE, NIAGARA FALLS, NY

Location	Date Sampled	Remaining Detected Analytes																				
		2-Hexanone	4-Methyl-2-pentanone	Acetone	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dichlorodifluoromethane	Ethylbenzene	Hexachlorobutadiene	Isopropylbenzene	m,p-Xylene
	CAS #	591-78-6	108-10-1	67-64-1	108-86-1	74-97-5	75-27-4	75-25-2	74-83-9	75-15-0	56-23-5	75-00-3	67-66-3	74-87-3	156-59-2	10061-01-5	124-48-1	75-71-8	100-41-4	87-68-3	98-82-8	179601-23-1
	Analyte order	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
	Effluent Limit*	N/A	N/A	50	5	5	N/A	N/A	5	120	5	5	7	5	5	N/A	5	5	5	0.5	5	5
A Zone																						
MW-02A	09/13/2018	< 250 U	< 250 U	< 500 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 100 U
MW-05A	09/11/2018	< 5.0 U	< 5.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U
OW-09A	09/11/2018	< 250 U	< 250 U	< 500 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**480**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 100 U
OW-12A	09/11/2018	< 1000 U	< 1000 U	< 2000 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 400 U
OW-15A	09/11/2018	< 100 U	< 100 U	< 200 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 40 U
OW-16A	09/11/2018	< 5.0 U	< 5.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U
OW-18A	09/13/2018	< 1000 U	< 1000 U	< 2000 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 400 U
OW-22A	09/12/2018	< 5.0 U	< 5.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**0.42 J**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U
OW-29A	09/13/2018	< 1000 U	< 1000 U	< 2000 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 400 U
B Zone																						
MW-01B	09/11/2018	< 1000 U	< 1000 U	< 2000 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 400 U
MW-04B	09/11/2018	< 500 U	< 500 U	< 1000 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**170**	< 100 U	**3300**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 200 U
MW-06B	09/13/2018	< 500 U	< 500 U	< 1000 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**81 J**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 200 U
OW-05B	09/12/2018	< 400 U	< 400 U	< 800 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	**2700**	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 160 U
OW-06B	09/12/2018	< 250 U	< 250 U	< 500 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**5400**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 100 U
OW-07B	09/12/2018	< 5.0 U	< 5.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**1.0**	< 1.0 U	**41**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U
OW-08B	09/12/2018	< 10 U	< 10 U	< 20 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	**38**	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 4.0 U
OW-10B	09/13/2018	< 2500 U	< 2500 U	< 5000 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 1000 U
OW-11B	09/13/2018	< 2000 U	< 2000 U	< 4000 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	**290 J**
DUP OW-11B	09/13/2018	< 2500 U	< 2500 U	< 5000 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 1000 U
OW-12B	09/11/2018	< 5.0 U	< 5.0 U	< 10 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**43**	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 2.0 U
OW-13B	09/11/2018	< 400 U	< 400 U	< 800 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	**11000**	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 160 U
DUP OW-13B	09/11/2018	< 400 U	< 400 U	< 800 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	**11000**	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 160 U
OW-14B	09/12/2018	< 500 U	< 500 U	< 1000 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 200 U
OW-15B	09/12/2018	< 250 U	< 250 U	< 500 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**200**	< 50 U	**3100**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 100 U
DUP OW-15B	09/12/2018	< 400 U	< 400 U	< 800 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	**2400**	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 160 U
OW-18B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
OW-22B	09/12/2018	< 100 U	< 100 U	< 200 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**16 J**	< 20 U	**840**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 40 U
OW-26B	09/11/2018	< 50 U	< 50 U	< 100 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 20 U
OW-27B	09/11/2018	< 500 U	< 500 U	< 1000 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**5800**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 200 U
OW-28B	09/11/2018	< 200 U	< 200 U	< 400 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	**4900**	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 80 U
OW-29B	09/11/2018	< 1000 U	< 1000 U	< 2000 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	**13000**	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 400 U
OW-30B	09/11/2018	< 20 U	< 20 U	< 40 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	**7.3**	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 8.0 U
C Zone																						
MW-01C	09/11/2018	< 250 U	< 250 U	< 500 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**4000**	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 100 U
MW-04C	09/11/2018	< 2000 U	< 2000 U	< 4000 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	**26000 T**	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 800 U
MW-05C	09/11/2018	< 100 U	< 100 U	< 200 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 40 U
MW-06C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CD Zone																						
MW-01CD	09/11/2018	< 4000 U	< 4000 U	< 8000 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	**8500**	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 1600 U
MW-05CD	09/11/2018	< 200 U	< 200 U	< 400 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	**1500**	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 80 U
F Zone																						
MW-01F	09/13/2018	< 250 U	< 250 U	< 500 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 100 U
MW-05F	09/13/2018	< 500 U	< 500 U	< 1000 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**210**	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 200 U
MW-06F	09/13/2018	< 100 U	< 100 U	**62 J**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**1300**	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 40 U

Note:

All units in ug/l.

QUALIFIERS

GC/MS VOA

J: Indicates an estimated value.

NS: Not Sampled

T: MS and/or MSD Recovery is outside acceptance limits.

U: Analyzed for but not detected.

waters, 2017.

N/A - No criteria available.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed criteria.

TABLE 5.3 - SOLVENT CHEMICAL SITE ANALYTICAL RESULTS
SECOND SEMI-ANNUAL 2018
SOLVENT CHEMICAL, 3163 BUFFALO AVENUE, NIAGARA FALLS, NY

Location	Date Sampled	Methyl tert-bUyl ether	Methylene chloride	n-BUylbenzene	n-Propylbenzene	Naphthalene	2-Chlorotoluene	o-Xylene	4-Chlorotoluene	4-Isopropyltoluene	sec-BUylbenzene	Styrene	tert-BUylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
	CAS #	1634-04-4	75-09-2	104-51-8	103-65-1	91-20-3	95-49-8	95-47-6	106-43-4	99-87-6	135-98-8	100-42-5	98-06-6	127-18-4	108-88-3	156-60-5	10061-02-6	79-01-6	75-69-4	108-05-4	75-01-4
	Analyte order	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
	Effluent Limit*	N/A	5	5	5	10	5	5	5	5	5	5	5	5	5	5	N/A	5	5	N/A	2
A Zone																					
MW-02A	09/13/2018	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 250 U	< 50 U
MW-05A	09/11/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**31**	< 1.0 U	< 1.0 U	< 1.0 U	**1.1**	< 1.0 U	< 5.0 U	< 1.0 U
OW-09A	09/11/2018	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**4700**	< 50 U	< 50 U	< 50 U	**340**	< 50 U	< 250 U	< 50 U
OW-12A	09/11/2018	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 1000 U	< 200 U
OW-15A	09/11/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 100 U	< 20 U
OW-16A	09/11/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 1.0 U
OW-18A	09/13/2018	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 1000 U	< 200 U
OW-22A	09/12/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 5.0 U	< 1.0 U
OW-29A	09/13/2018	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 1000 U	< 200 U
B Zone																					
MW-01B	09/11/2018	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 1000 U	< 200 U
MW-04B	09/11/2018	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**3100**	< 100 U	< 100 U	< 100 U	**8000**	< 100 U	< 500 U	< 100 U
MW-06B	09/13/2018	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 500 U	< 100 U
OW-05B	09/12/2018	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	**3700**	< 80 U	**96**	< 80 U	**8900**	< 80 U	< 400 U	**230**
OW-06B	09/12/2018	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**700**	< 50 U	**120**	< 50 U	**1900**	< 50 U	< 250 U	**790**
OW-07B	09/12/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**7.4**	< 1.0 U	**3.6**	< 1.0 U	**23**	< 1.0 U	< 5.0 U	< 1.0 U
OW-08B	09/12/2018	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	< 2.0 U	**2.0**	< 2.0 U	**91**	< 2.0 U	< 10 U	< 2.0 U
OW-10B	09/13/2018	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 2500 U	< 500 U
OW-11B	09/13/2018	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 2000 U	< 400 U
DUP OW-11B	09/13/2018	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 500 U	< 2500 U	< 500 U
OW-12B	09/11/2018	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	**2.4**	< 1.0 U	**3.6**	< 1.0 U	**3.9**	< 1.0 U	< 5.0 U	**2.2**
OW-13B	09/11/2018	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	**1200**	< 80 U	**240**	< 80 U	**3100**	< 80 U	< 400 U	**1200**
DUP OW-13B	09/11/2018	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	**1100**	< 80 U	**240**	< 80 U	**3200**	< 80 U	< 400 U	**1200**
OW-14B	09/12/2018	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 500 U	< 100 U
OW-15B	09/12/2018	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**2300**	< 50 U	**52**	< 50 U	**7500**	< 50 U	< 250 U	**320**
DUP OW-15B	09/12/2018	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	< 80 U	**3100**	< 80 U	**89**	< 80 U	**7400**	< 80 U	< 400 U	**160**
OW-18B	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
OW-22B	09/12/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**600**	< 20 U	**20**	< 20 U	**1600 T**	< 20 U	< 100 U	< 20 U
OW-26B	09/11/2018	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	< 10 U	**300**	< 10 U	< 10 U	< 10 U	**15**	< 10 U	< 50 U	< 10 U
OW-27B	09/11/2018	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	**120**	< 100 U	**160**	< 100 U	**690**	< 100 U	< 500 U	**460**
OW-28B	09/11/2018	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	**1600**	< 40 U	**110**	< 40 U	**4400**	< 40 U	< 200 U	**510**
OW-29B	09/11/2018	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	< 200 U	**2600**	< 200 U	**280**	< 200 U	**3200**	< 200 U	< 1000 U	**1500**
OW-30B	09/11/2018	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	< 4.0 U	**15**	< 4.0 U	< 4.0 U	< 4.0 U	**16**	< 4.0 U	< 20 U	**7.4**
C Zone																					
MW-01C	09/11/2018	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	**200**	< 50 U	< 50 U	< 50 U	< 250 U	**1500**
MW-04C	09/11/2018	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	< 400 U	**430**	< 400 U	< 400 U	< 400 U	< 2000 U	**2100 T**
MW-05C	09/11/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 100 U	**27**
MW-06C	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
CD Zone																					
MW-01CD	09/11/2018	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 800 U	< 4000 U	**1900**
MW-05CD	09/11/2018	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	< 40 U	**61**	< 40 U	< 40 U	< 40 U	< 200 U	**870**
F Zone																					
MW-01F	09/13/2018	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U	< 250 U	**3100**
MW-05F	09/13/2018	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U	< 500 U	**2700**
MW-06F	09/13/2018	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	**52**	< 20 U	< 20 U	< 20 U	< 100 U	**1900**

Note:

All units in ug/l.

QUALIFIERS

GC/MS VOA

J: Indicates an estimated value.

NS: Not Sampled

T: MS and/or MSD Recovery is outside acceptance limits.

U: Analyzed for but not detected.

waters, 2017.

N/A - No criteria available.

Values in **bold** indicate the analyte was detected.

Values shown in bold and shaded type exceed the listed criteria.

TABLE 6.1 - GROUNDWATER ELEVATIONS
FIRST SEMI-ANNUAL 2018
SOLVENT CHEMICAL, 3163 BUFFALO AVENUE, NIAGARA FALLS, NEW YORK

Monitoring Well No.	Reference Elevation (ft.)	3/6/2018	
		DTW (ft)	Elevation (ft.)
A - Zone:			
MW-1A	572.45	7.77	564.68
MW-2A	572.16	6.62	565.54
MW-5A	570.56	8.66	561.90
MW-6A	573.28	7.31	565.97
OW-1A	570.46	5.34	565.12
OW-5A (1)	573.05	12.01	561.04
OW-6A (1)	572.10	9.67	562.43
OW-7A	574.00	9.57	564.43
OW-8A	572.82	10.24	562.58
OW-9A	574.13	11.88	562.25
OW-10A	568.29	DRY	DRY
OW-11A	575.26	10.64	564.62
OW-12A	575.41	10.80	564.61
OW-13A	574.95	9.41	565.54
OW-14A	575.21	9.68	565.53
OW-15A	569.19	5.72	563.47
OW-16A	572.05	7.10	564.95
OW-17A	567.85	7.58	560.27
OW-18A	575.87	9.53	566.34
OW-19A	572.89	7.26	565.63
OW-20A (1)	572.62	11.94	560.68
OW-21A (1)	569.33	5.44	563.89
OW-22A (1)	570.68	6.83	563.85
OW-26A	570.63	10.36	560.27
OW-27A	570.34	8.23	562.11
OW-29A	573.14	7.59	565.55
TW-1A	569.19	11.49	557.70
TW-2A	569.72	5.27	564.45
TW-3A	571.16	6.51	564.65
TW-4A	569.82	4.30	565.52
TW-5A	569.33	3.79	565.54
B-Zone:			
MW-1B	572.44	8.17	564.27
MW-2B	572.46	13.29	559.17
MW-4B	573.50	18.12	555.38
MW-5B	571.48	DRY	DRY
MW-6B	573.40	16.70	556.70
OW-1B	570.95	14.09	556.86
OW-2B	573.98	19.60	554.38
OW-3B	572.64	16.43	556.21
OW-4B (1)	570.55	13.69	556.86
OW-5B (1)	568.31	12.09	556.22
OW-6B	573.10	20.35	552.75
OW-7B	572.73	DRY	DRY
OW-8B	572.53	23.58	548.95
OW-10B	572.62	15.18	557.44
OW-11B	571.93	15.19	556.74
OW-12B	571.85	24.21	547.64
OW-13B	571.68	18.48	553.20
OW-14B (1)	570.87	14.21	556.66
OW-15B (1)	569.78	13.01	556.77
OW-18B (2)	576.05	NM	-
OW-22B (1)	570.90	14.39	556.51
OW-23B (1)	569.67	13.24	556.43
OW-24B (1)	570.36	13.72	556.64

TABLE 6.1 - GROUNDWATER ELEVATIONS
FIRST SEMI-ANNUAL 2018
SOLVENT CHEMICAL, 3163 BUFFALO AVENUE, NIAGARA FALLS, NEW YORK

Monitoring Well No.	Reference Elevation (ft.)	3/6/2018	
		DTW (ft)	Elevation (ft.)
OW-25B [1]	570.9	14.09	556.81
OW-26B	571.64	23.82	547.82
OW-27B	569.81	17.96	551.85
OW-28B	568.76	13.55	555.21
OW-29B	568.16	13.63	554.53
OW-30B	568.10	20.05	548.05
OW-31B [1]	570.14	15.34	554.80
OW-32B [1]	569.99	13.18	556.81
OW-33B [1]	569.55	12.96	556.59
PW-1B	572.34	14.52	557.82
PW-2B	571.60	18.46	553.14
PW-3B [1]	571.21	21.27	549.94
PW-4B [1]	569.72	14.54	555.18
PW-5B	572.74	20.89	551.85
PW-6B	573.95	26.17	547.78
PW-7B	571.15	17.58	553.57
PW-8B	572.36	25.59	546.77
C-Zone:			
MW-1C	572.53	16.94	555.59
MW-4C	571.42	28.14	543.28
MW-5C	572.75	25.93	546.82
MW-6C	573.60	26.78	546.82
CD-Zone:			
MW-1CD	572.78	17.24	555.54
MW-5CD	570.50	26.28	544.22
MW-6CD	573.45	NM	-
F-Zone:			
MW-1F	572.40	15.99	556.41
MW-5F	572.78	19.90	552.88
MW-6F [3]	573.52	20.61	552.91
Piezometers:			
PZ-01	572.46	6.90	565.56
PZ-02	572.14	6.52	565.62
PZ-03	571.95	6.49	565.46
PZ-04	572.03	6.46	565.57

Notes:
1) Monitoring wells within the Hot Spot were measured on 3/08/18.
2) OW-18B was not measured due to an obstruction in the well.
3) MW-6F was measured on 3/07/18.
4) MW-6CD is bailed monthly and bucket was stuck in the well.

TABLE 6.2 - GROUND WATER ELEVATIONS
SECOND SEMI-ANNUAL 2018
SOLVENT CHEMICAL, 3163 BUFFALO AVENUE, NIAGARA FALLS, NEW YORK

Monitoring Well No.	Reference Elevation (ft.)	9/11/2018	
		DTW (ft)	Elevation (ft.)
A - Zone:			
MW-1A	572.45	9.80	562.65
MW-2A	572.16	12.72	559.44
MW-5A	570.56	10.76	559.80
MW-6A	573.28	10.75	562.53
OW-1A	570.46	7.98	562.48
OW-5A	573.05	DRY	DRY
OW-6A	572.10	10.46	561.64
OW-7A	574.00	11.71	562.29
OW-8A	572.82	10.84	561.98
OW-9A	574.13	13.01	561.12
OW-10A	568.29	DRY	DRY
OW-11A	575.26	12.58	562.68
OW-12A	575.41	12.20	563.21
OW-13A	574.95	14.69	560.26
OW-14A	575.21	13.53	561.68
OW-15A	569.19	9.01	560.18
OW-16A	572.05	8.60	563.45
OW-17A	567.85	DRY	DRY
OW-18A	575.87	12.08	563.79
OW-19A	572.89	9.73	563.16
OW-20A	572.62	DRY	DRY
OW-21A	569.33	DRY	DRY
OW-22A	570.68	12.52	558.16
OW-26A	570.63	DRY	DRY
OW-27A	570.34	9.49	560.85
OW-29A	573.14	10.25	562.89
TW-1A	569.19	8.76	560.43
TW-2A	569.72	8.33	561.39
TW-3A	571.16	14.42	556.74
TW-4A	569.82	12.89	556.93
TW-5A	569.33	7.00	562.33
B-Zone:			
MW-1B	572.44	9.80	562.64
MW-2B	572.46	14.50	557.96
MW-4B	573.50	17.40	556.10
MW-5B	571.48	DRY	DRY
MW-6B	573.40	17.46	555.94
OW-1B	570.95	13.94	557.01
OW-2B	573.98	19.87	554.11
OW-3B	572.64	16.45	556.19
OW-4B	570.55	13.63	556.92
OW-5B	568.31	12.04	556.27
OW-6B	573.10	12.34	560.76
OW-7B	572.73	26.76	545.97
OW-8B	572.53	23.64	548.89
OW-10B	572.62	15.54	557.08
OW-11B	571.93	15.15	556.78
OW-12B	571.85	24.08	547.77
OW-13B	571.68	18.46	553.22
OW-14B	570.87	14.19	556.68
OW-15B	569.78	12.96	556.82
OW-18B [1]	576.05	--	--
OW-22B	570.90	14.32	556.58
OW-23B	569.67	13.12	556.55
OW-24B	570.36	13.59	556.77

TABLE 6.2 - GROUND WATER ELEVATIONS
SECOND SEMI-ANNUAL 2018
SOLVENT CHEMICAL, 3163 BUFFALO AVENUE, NIAGARA FALLS, NEW YORK

Monitoring Well No.	Reference Elevation (ft.)	9/11/2018	
		DTW (ft)	Elevation (ft.)
OW-25B	570.9	14.08	556.82
OW-26B	571.64	23.78	547.86
OW-27B	569.81	18.73	551.08
OW-28B	568.76	13.69	555.07
OW-29B	568.16	13.86	554.30
OW-30B	568.10	20.36	547.74
OW-31B	570.14	13.21	556.93
OW-32B	569.99	13.31	556.68
OW-33B	569.55	12.87	556.68
PW-1B	572.34	15.05	557.29
PW-2B	571.60	18.58	553.02
PW-3B	571.21	19.16	552.05
PW-4B	569.72	14.33	555.39
PW-5B	572.74	25.32	547.42
PW-6B	573.95	26.16	547.79
PW-7B	571.15	17.49	553.66
PW-8B	572.36	24.76	547.60
C-Zone:			
MW-1C	572.53	9.80	562.73
MW-4C	571.42	28.07	543.35
MW-5C	572.75	25.97	546.78
MW-6C	573.60	25.89	547.71
CD-Zone:			
MW-1CD	572.78	16.06	556.72
MW-5CD	570.50	24.85	545.65
MW-6CD	573.45	19.54	553.91
F-Zone:			
MW-1F	572.40	13.98	558.42
MW-5F	572.78	14.92	557.86
MW-6F	573.52	15.98	557.54
Piezometers:			
PZ-01	572.46	DRY	DRY
PZ-02	572.14	DRY	DRY
PZ-03	571.95	11.04	560.91
PZ-04	572.03	DRY	DRY

Notes:
1) OW-18B was not measured due to an obstruction in the well at 18.61 ft.

FIGURES

QUADRANGLE LOCATION

0 2000 4000 Feet

Base Map: USGS National Map

PROJECT:

SOLVENT CHEMICAL
NIAGRA FALLS, NEW YORK

TITLE:

SITE LOCATION MAP

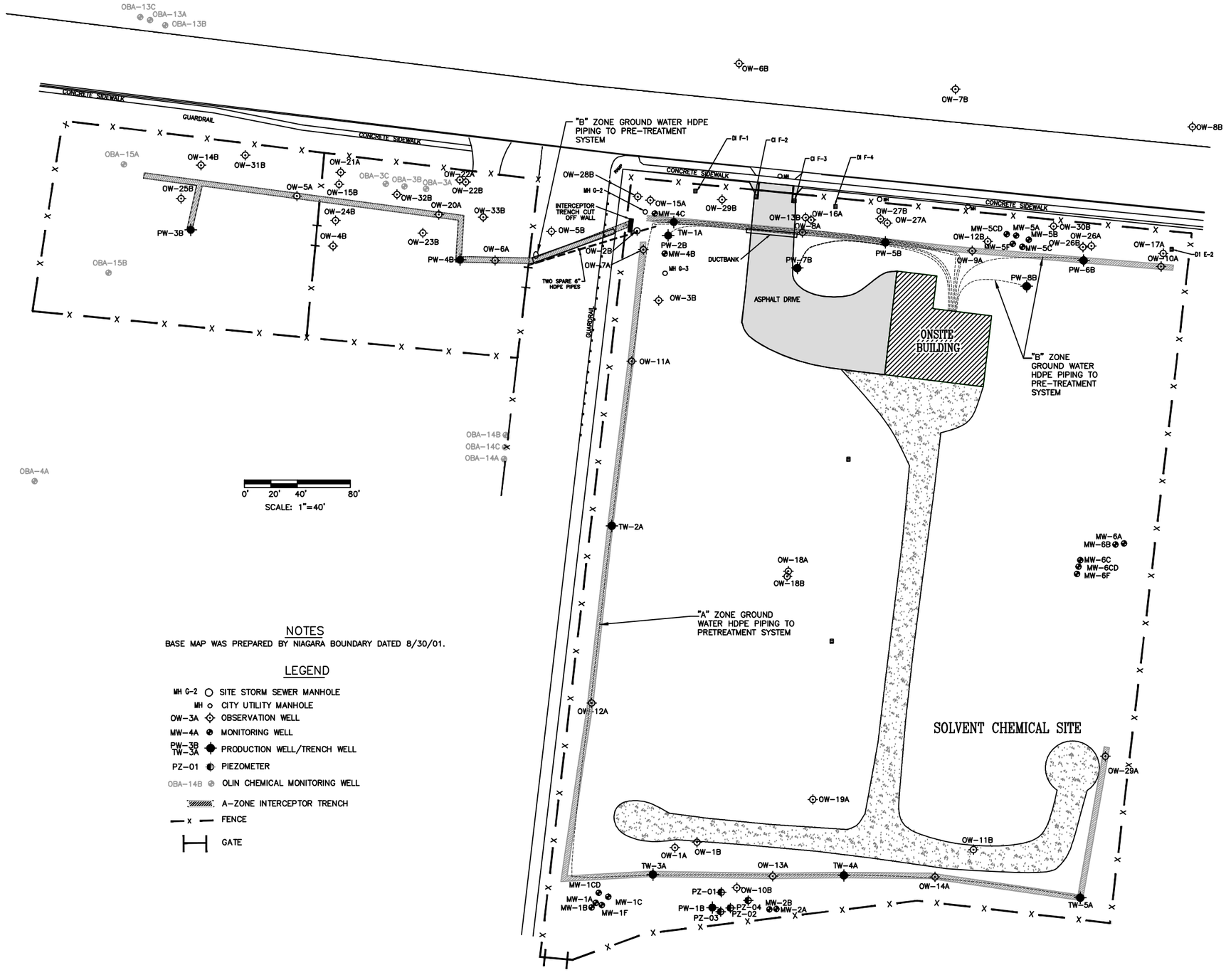
DRAWN BY:	MAN	PROJ NO.:	105146
CHECKED BY:	SB		
APPROVED BY:	MP		**FIGURE 1**
DATE:	MARCH 2019		

TRC
650 Suffolk Street
Suite 200
Lowell, MA 01854
Phone: 978.970.5600

FILE NO.: FIGURE 1

8.5x11 --- USER: MNardone --- ATTACHED XREFS: --- ATTACHED IMAGES: state of NY location:
DRAWING NAME: K:\Stephen Brown\CAD Solvent 2019\ Fig 1_Site Location Map.dwg --- PLOT DATE: March 28, 2019 - 1:22PM --- LAYOUT: FIG 2_SOLVENT_GW_CONTOURS

Version: 2017-10-21



NOTES

BASE MAP WAS PREPARED BY NIAGARA BOUNDARY DATED 8/30/01.

LEGEND

- MH G–2 — SITE STORM SEWER MANHOLE
- MH — CITY UTILITY MANHOLE
- OW–3A — OBSERVATION WELL
- MW–4A — MONITORING WELL
- PW–3B / TW–3A — PRODUCTION WELL/TRENCH WELL
- PZ–01 — PIEZOMETER
- OBA–14B — OLIN CHEMICAL MONITORING WELL
- A–ZONE INTERCEPTOR TRENCH
- FENCE
- GATE

PROJECT:	SOLVENT CHEMICAL NIAGRA FALLS, NEW YORK
TITLE:	GROUND WATER EXTRACTION SYSTEM LAYOUT
DRAWN BY: MAN/JL	PROJ. NO.: 105146
CHECKED BY: SB	
APPROVED BY: MP	FIGURE 2
DATE: MARCH 2019	

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Phone: 978.970.5600

FILE NO.: Fig2_GW_extraction.dwg

22x34 -- USER: SPBrown -- ATTACHED XREFS: BASE_SOLVENT2 -- ATTACHED IMAGES:
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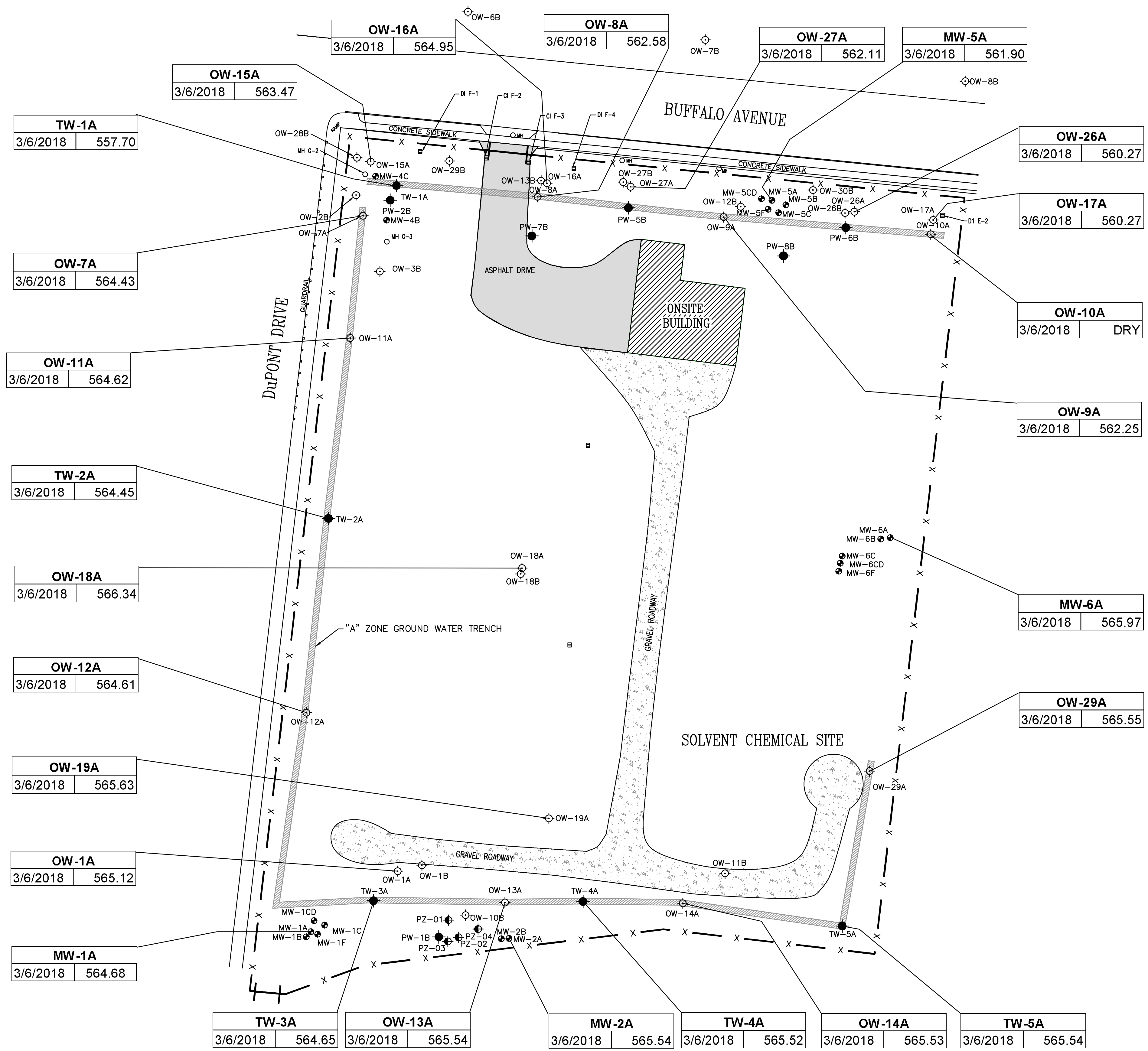
Version: 2017-10-21



LEGEND

OW-9A	
3/6/2018	562.25

DATE OF MEASUREMENT — WELL ID — PIEZOMETRIC SURFACE ELEVATIONS (FT.) (NM = NOT MEASURED)

NOTE
1. GROUNDWATER ELEVATIONS REFERENCED TO BENCHMARK J20, NIAGARA FALLS CITY DATA.

SCALE IN FEET
0 40' 80'

PROJECT:
SOLVENT CHEMICAL
NIAGARA FALLS, NEW YORK

TITLE:
OVERBURDEN WATER LEVELS
SOLVENT SITE
MARCH 6, 2018

DRAWN BY:	MAN	PROJ. NO.:	105146
CHECKED BY:	SB		
APPROVED BY:	MP	FIGURE 3	
DATE:	MARCH 2019		

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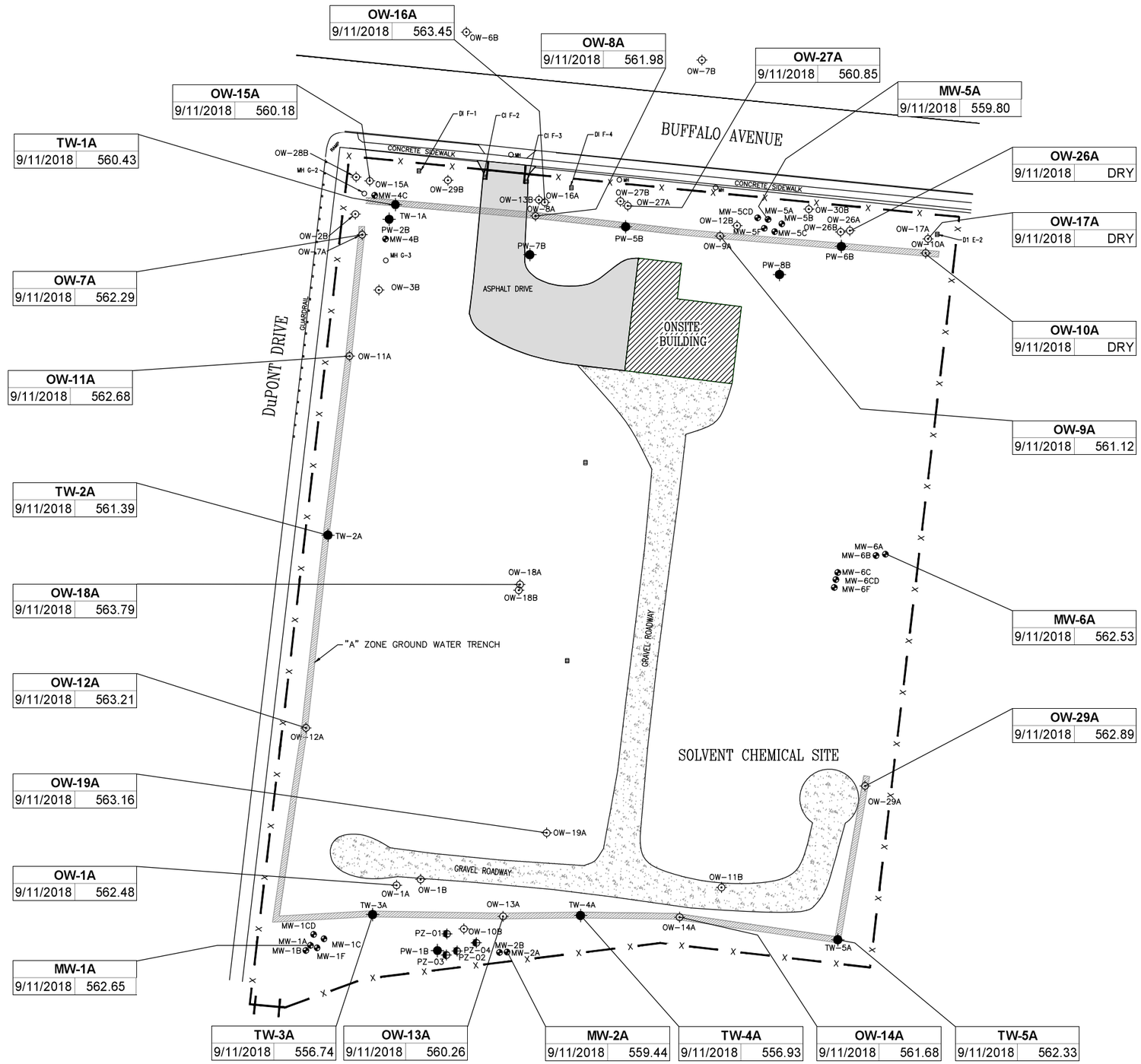
FILE NO.: Fig 3_AZONE_WATERLEVELS 1st QTR 2018.dwg

22x34 --- USER: MNardone --- ATTACHED XREFS: --- ATTACHED IMAGES:
DRAWING NAME: K:\Stephen Brown\CAD Solvent 2019\ Fig 3_AZONE_WATERLEVELS 1st QTR 2018.dwg --- PLOT DATE: March 28, 2019 - 1:08PM --- LAYOUT: FIG 1
Version: 2017-10-21



LEGEND

OW-9A		WELL ID
DATE OF MEASUREMENT	9/11/2018	561.12 — PIEZOMETRIC SURFACE ELEVATIONS (FT.) (NM = NOT MEASURED)

NOTE

1. GROUNDWATER ELEVATIONS REFERENCED TO BENCHMARK J20, NIAGARA FALLS CITY DATA.

SCALE IN FEET

0 40' 80'

PROJECT:
SOLVENT CHEMICAL
NIAGRA FALLS, NEW YORK

TITLE:
OVERBURDEN WATER LEVELS
SOLVENT SITE
SEPTEMBER 11, 2018

DRAWN BY:	MAN	PROJ. NO.:	105146
CHECKED BY:	SB		**FIGURE 4**
APPROVED BY:	MP		
DATE:	MARCH 2019		

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FILE NO.: Fig 4_AZONE_WATERLEVELS 3rd QTR 2018.dwg

20:24 -- USER: MNardone -- ATTACHED XREFS: -- ATTACHED IMAGES:
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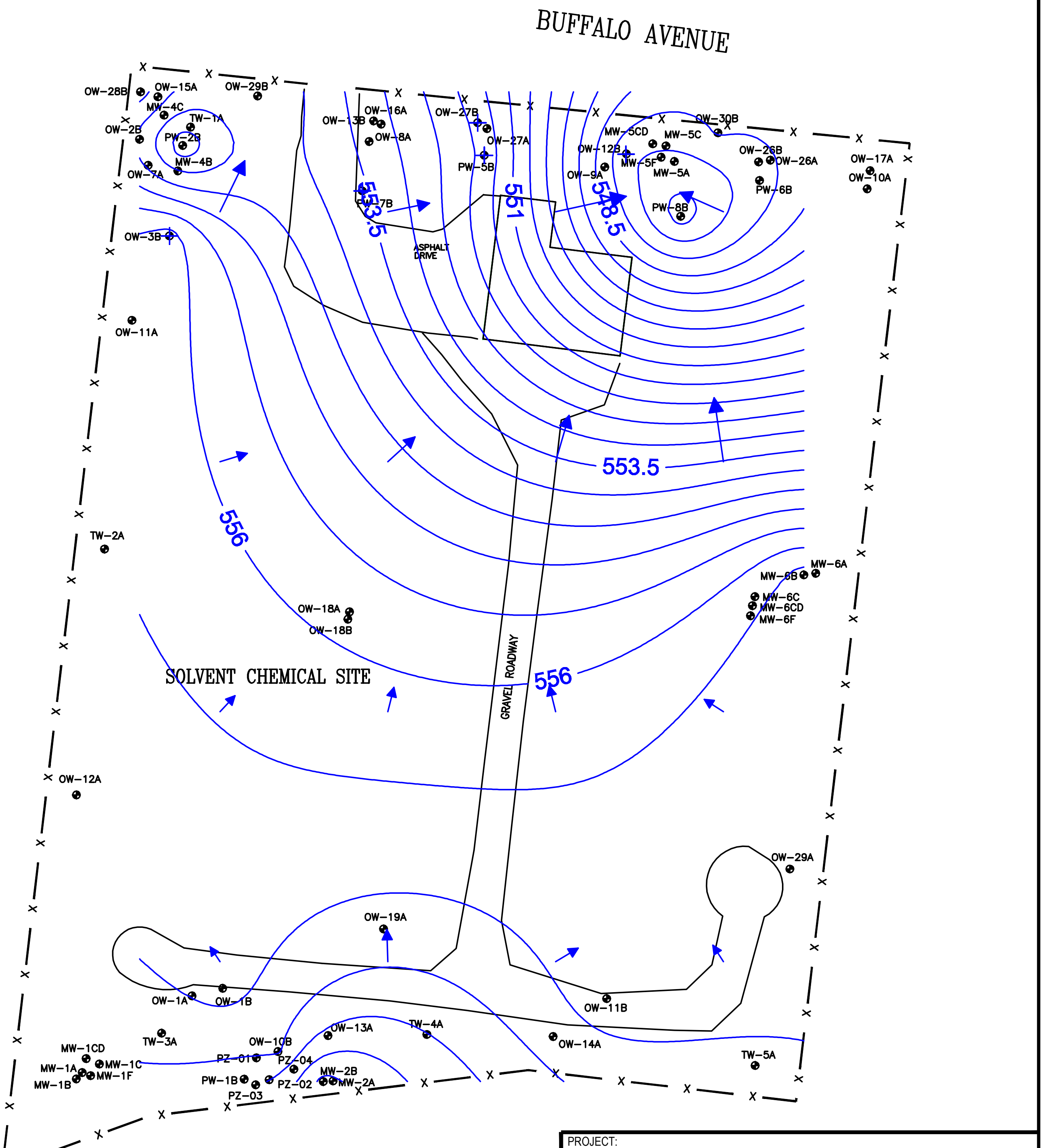
Version: 2017-10-21



LEGEND:

- 556 GROUNDWATER ELEVATION CONTOUR
- → GROUNDWATER FLOW DIRECTION
- —X— CHAIN LINK FENCE
- PW,OW,MW ⊕ SOLVENT PUMPING OR MONITORING WELL

SCALE IN FEET

0 80' 160'

PROJECT:

SOLVENT CHEMICAL
NIAGRA FALLS, NEW YORK

TITLE:

MARCH GROUNDWATER CONTOURS
SOLVENT SITE
MARCH 6, 2018

DRAWN BY:	MAN	PROJ NO.:	105146
CHECKED BY:	SB	**FIGURE 5**	
APPROVED BY:	MP		
DATE:	MARCH 2019		

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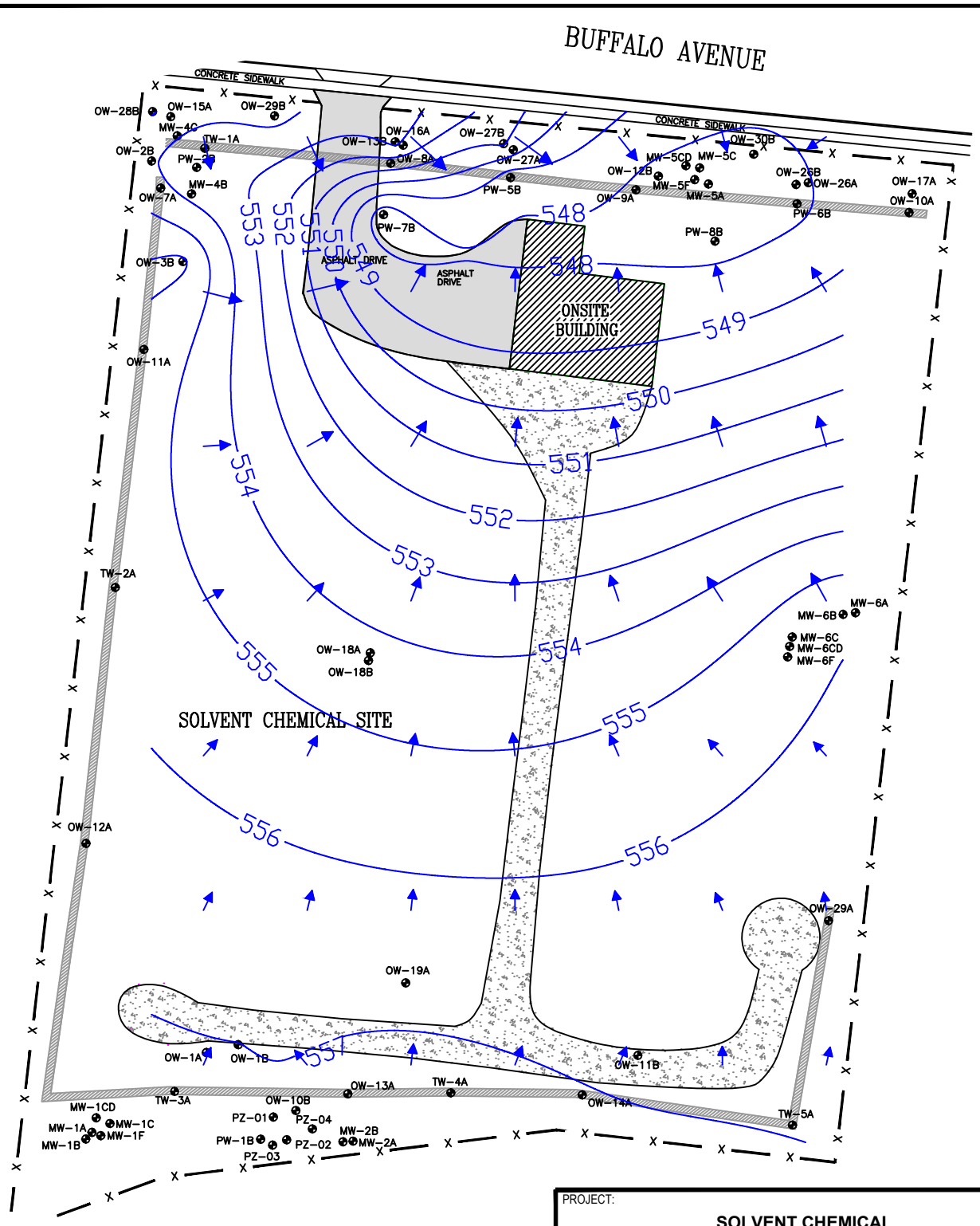
FILE NO.:

PLOT DATE: March 28, 2019 - 1:03PM --- LAYOUT: FIG 5_SOLVET_GW_CONTOURS
Version: 2017-10-21



LEGEND:

556 GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

—X— CHAIN LINK FENCE

PW,OW,MW SOLVENT PUMPING OR MONITORING WELL

SCALE IN FEET

0 80' 160'

PROJECT:

SOLVENT CHEMICAL
NIAGRA FALLS, NEW YORK

TITLE: **SEPTEMBER GROUNDWATER CONTOURS**
SOLVENT SITE
SEPTEMBER 11, 2018

DRAWN BY:	MAN	PROJ NO.:	105146
CHECKED BY:	SB		
APPROVED BY:	MP		**FIGURE 6**
DATE:	MARCH 2019		

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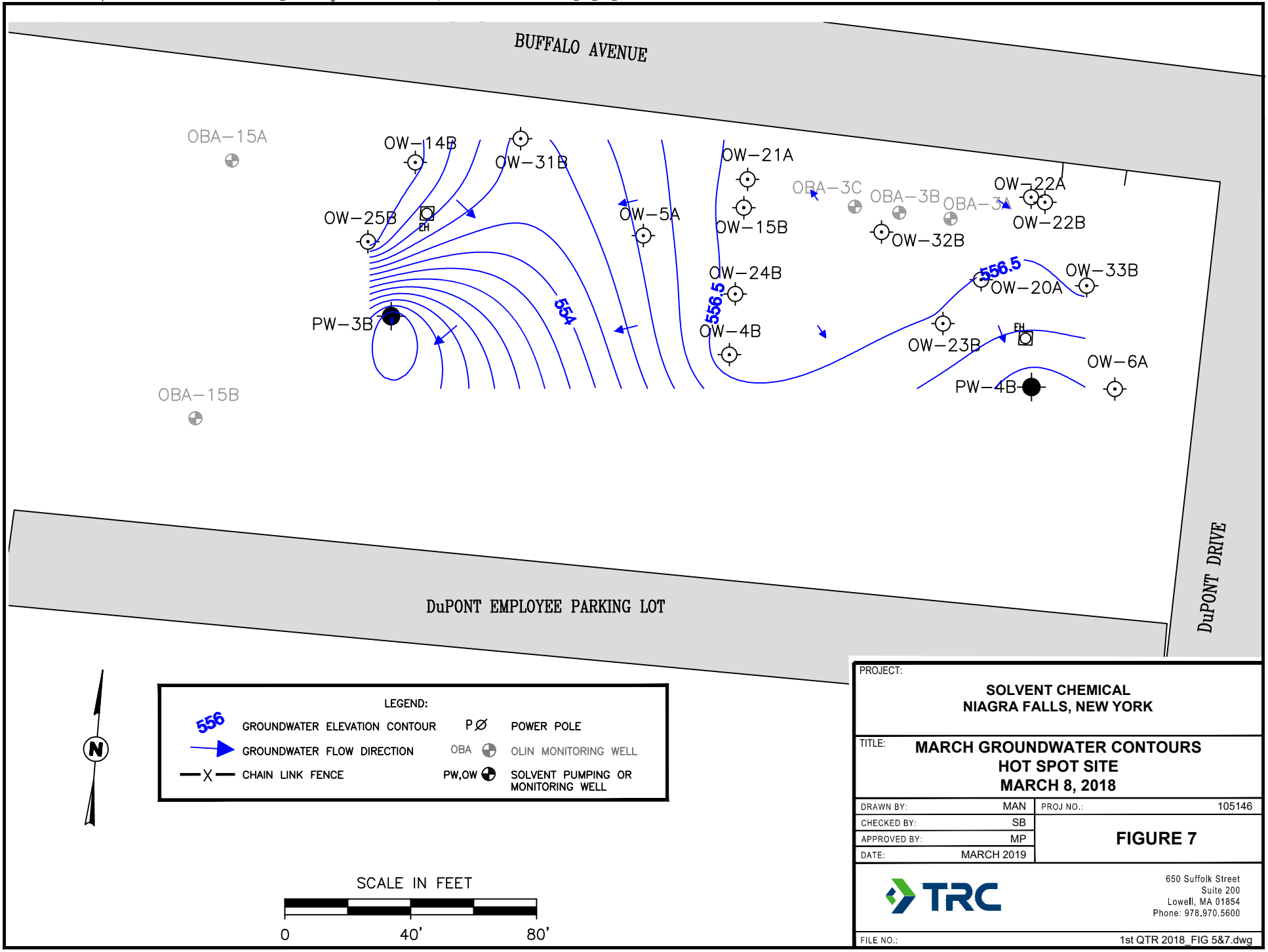
Phone: 978.970.5600

FILE NO.: Fig 6__ and 8_GW Contours Updated 11292018.dwg

8.5x11 --- USER: MNardone --- ATTACHED XREFS: --- ATTACHED IMAGES:
DRAWING NAME: K:\Stephen Brown\CAD Solvent 2019\ Fig 6__ and 8_GW Contours Updated 11292018.dwg --- PLOT DATE: March 28, 2019 - 1:13PM --- LAYOUT: FIG 6_SOLVENT_GW_CONTOURS

Version: 2017-10-21

8.5x11 --- USER: MNardone --- ATTACHED XREFS: --- ATTACHED IMAGES:
DRAWING NAME: K:\Stephen Brown\CAD Solvent 2019\ 1st QTR 2018_FIG 5&7.dwg --- PLOT DATE: March 28, 2019 - 1:04PM --- LAYOUT: FIG 7_Hot_GW_CONTOURS



PROJECT:
SOLVENT CHEMICAL
NIAGRA FALLS, NEW YORK

TITLE: **MARCH GROUNDWATER CONTOURS**
HOT SPOT SITE
MARCH 8, 2018

DRAWN BY:	MAN	PROJ NO.:	105146
CHECKED BY:	SB		
APPROVED BY:	MP		**FIGURE 7**
DATE:	MARCH 2019		

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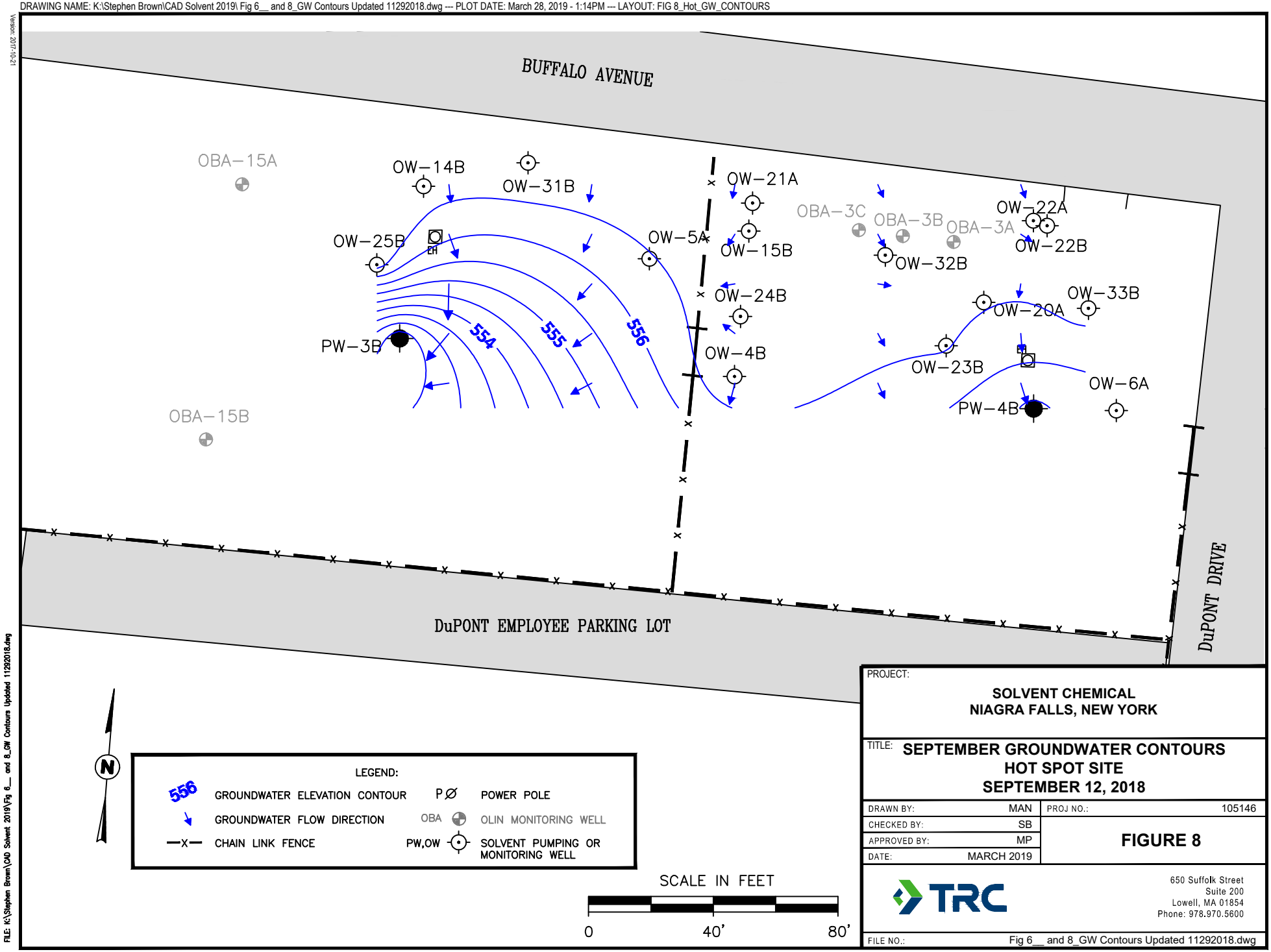
FILE NO.: 1st QTR 2018_FIG 5&7.dwg

FILE: K:\Stephen Brown\CAD Solvent 2019\1st QTR 2018_FIG 5&7.dwg

8.5x11 --- USER: MNardone --- ATTACHED XREF'S: --- ATTACHED IMAGES:
DRAWING NAME: K:\Stephen Brown\CAD Solvent 2019\ Fig 6__ and 8_GW Contours Updated 11292018.dwg --- PLOT DATE: March 28, 2019 - 1:14PM --- LAYOUT: FIG 8_Hot_GW_CONTOURS



PROJECT:
SOLVENT CHEMICAL
NIAGRA FALLS, NEW YORK

TITLE: **SEPTEMBER GROUNDWATER CONTOURS**
HOT SPOT SITE
SEPTEMBER 12, 2018

DRAWN BY:	MAN	PROJ NO.:	105146
CHECKED BY:	SB		
APPROVED BY:	MP		**FIGURE 8**
DATE:	MARCH 2019		

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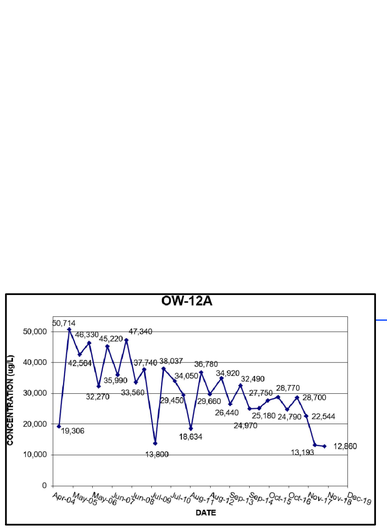
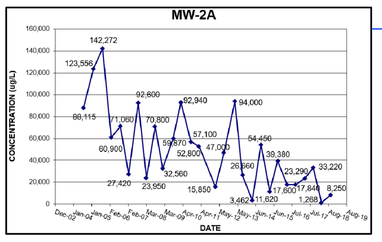
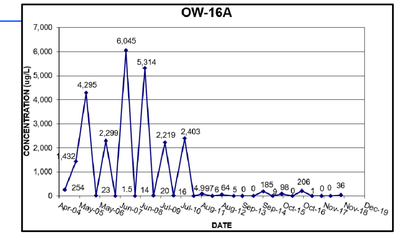
Phone: 978.970.5600

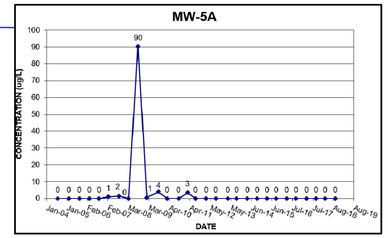
FILE NO.: Fig 6__ and 8_GW Contours Updated 11292018.dwg

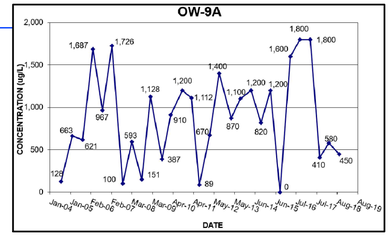
FILE: K:\Stephen Brown\CAD Solvent 2019\Fig 6__ and 8_GW Contours Updated 11292018.dwg
Version 2017-01-21

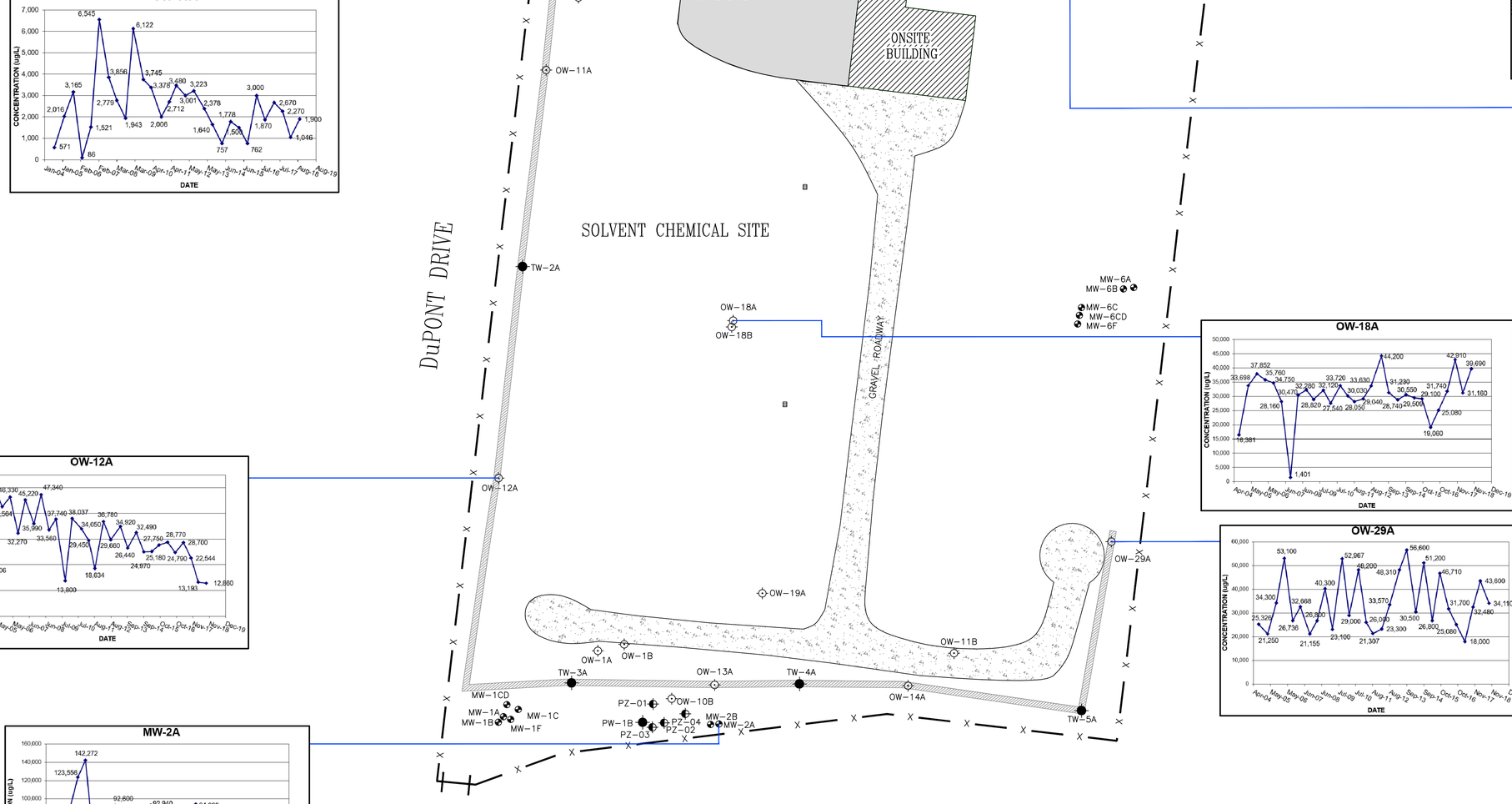












NOTES

1. CHARTS DEPICT THE TOTAL CONCENTRATION OF CONTAMINANTS OF CONCERN, PER THE DECEMBER 1996 ROD, AT EACH LOCATION VERSUS TIME.
2. BASE MAP WAS PREPARED BY NIAGARA BOUNDARY DATED 8/30/01.

LEGEND

MH G-2	SITE STORM SEWER MANHOLE
MH	CITY UTILITY MANHOLE
OW-3A	OBSERVATION WELL
MW-4A	MONITORING WELL
PW-3B / TW-3A	PRODUCTION WELL / TRENCH WELL
PZ-01	PIEZOMETER
	CATCH BASIN
	A-ZONE INTERCEPTOR TRENCH
x	FENCE
	GATE

0' 20' 40' 80'

SCALE: 1"=40'

PROJECT:
SOLVENT CHEMICAL
NIAGRA FALLS, NEW YORK

TITLE:
AUGUST 2004 - SEPTEMBER 2-018
A - ZONE TOTAL CONTAMINANTS
OF CONCERN-SOLVENT SITE

DRAWN BY:	MAN	PROJ. NO.:	105146
CHECKED BY:	SB		
APPROVED BY:	MP		**FIGURE 9**
DATE:	MARCH 2019		

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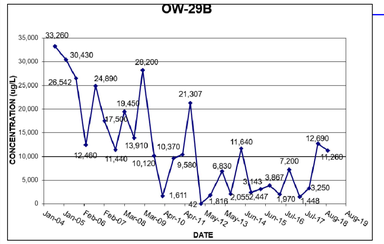
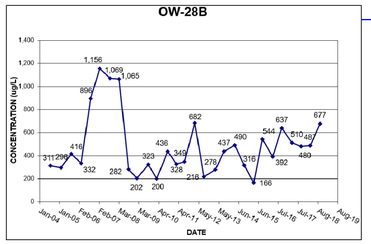
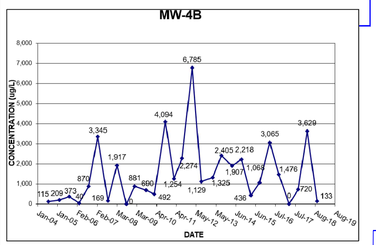
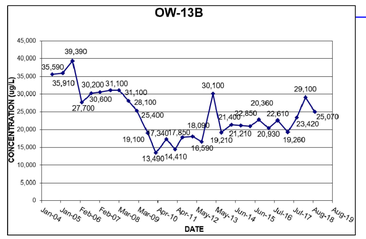
FILE NO.: FIG 9 -Solvent AZONE TRENDS 2018 data.dwg

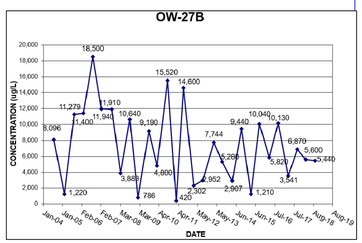
20:24 -- USER: SPBrem -- ATTACHED XREFS: BASE SOLVENT2 -- ATTACHED IMAGES:
DRAWING NAME: \\ntapp-lowell\Environmental\Projects\Projects\27397 - Solvent Chemical\Quarterly, Semi-Annual and Annual Reports\Periodic Review Report 2019\CAD Solvent 2019\ FIG 9 -Solvent AZONE TRENDS 2018 data.dwg -- PLOT DATE: April 25, 2019 - 9:07AM -- LAYOUT: Layout1
Version 2017-10-21

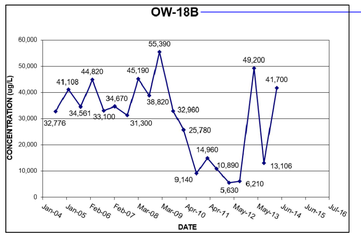


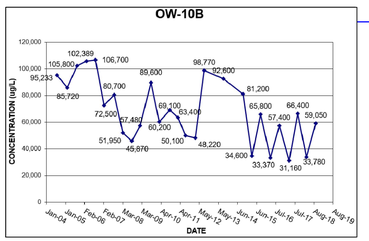


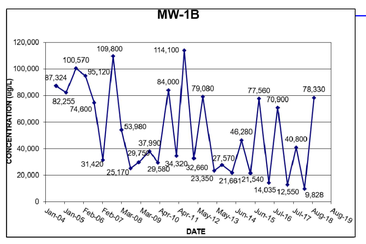


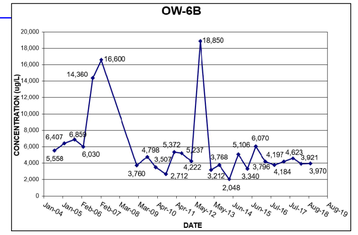


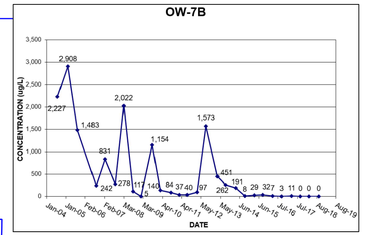


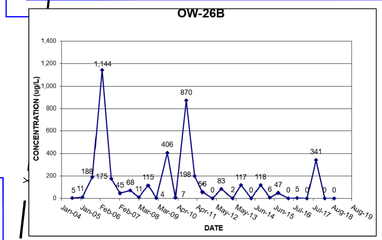


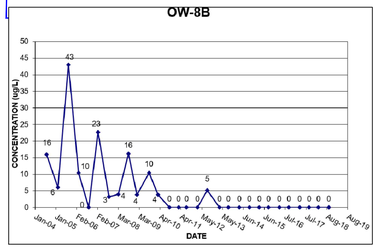


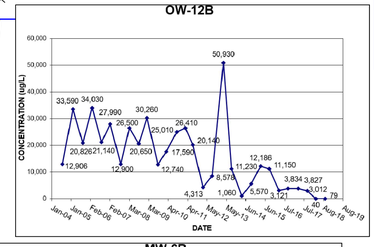


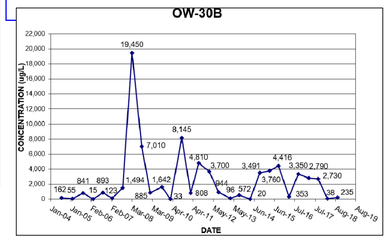


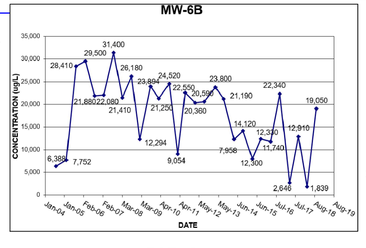


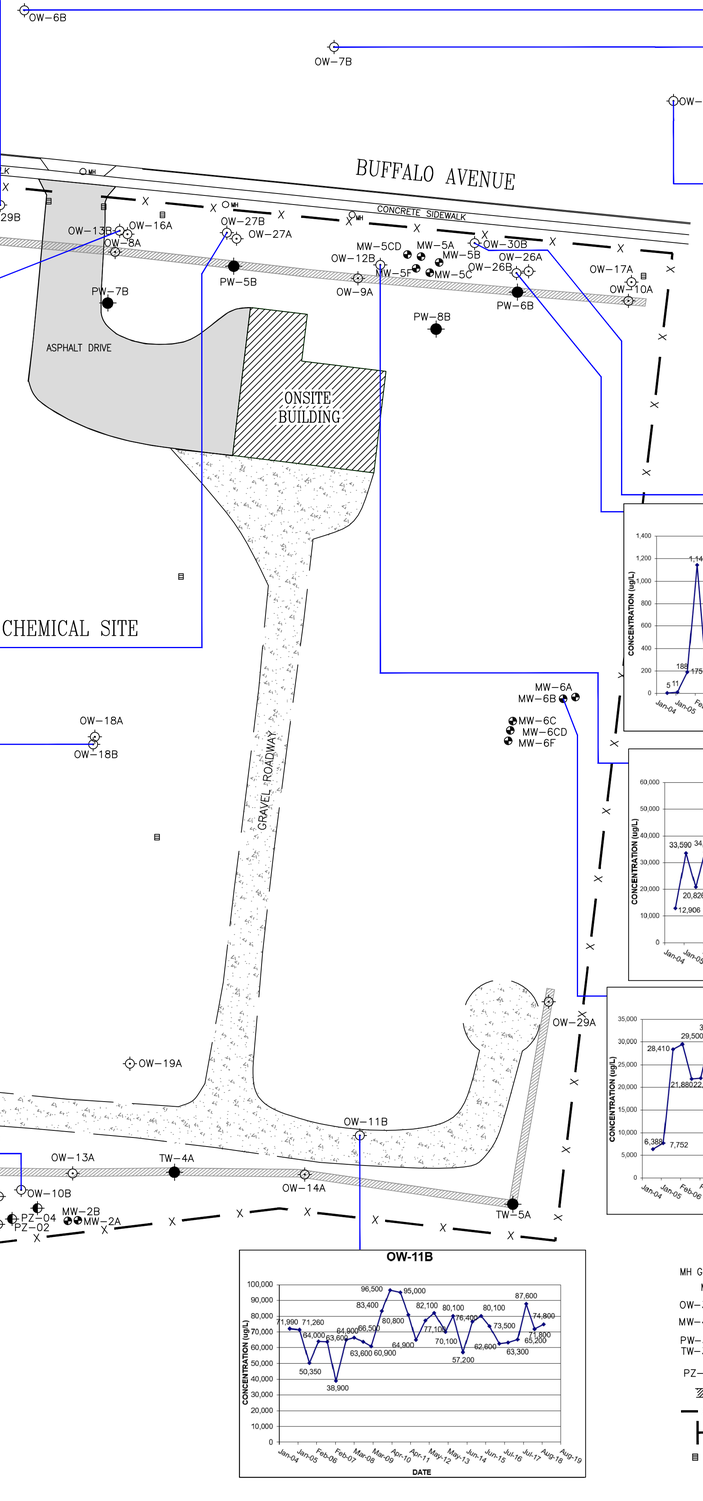












N

NOTES

1. CHARTS DEPICT THE TOTAL CONCENTRATION OF CONTAMINANTS OF CONCERN, PER THE DECEMBER 1996 ROD, AT EACH LOCATION VERSUS TIME.
2. BASE MAP WAS PREPARED BY NIAGARA BOUNDARY DATED 8/30/01.

0' 20' 40' 80'

SCALE: 1"=40'

LEGEND

- MH G-2 — SITE STORM SEWER MANHOLE
- MH — CITY UTILITY MANHOLE
- OW-3A — OBSERVATION WELL
- MW-4A — MONITORING WELL
- PW-3B / TW-3A — PRODUCTION WELL / TRENCH WELL
- PZ-01 — PIEZOMETER
- A-ZONE INTERCEPTOR TRENCH
- FENCE
- GATE
- CATCH BASIN

PROJECT:
SOLVENT CHEMICAL
NIAGRA FALLS, NEW YORK

TITLE:
AUGUST 2004 - SEPTEMBER 2018
B - ZONE TOTAL CONTAMINANTS OF CONCERN - SOLVENT SITE

DRAWN BY:	MAN	PROJ. NO.:	105146
CHECKED BY:	SB		
APPROVED BY:	MP		
DATE:	MARCH 2019		

FIGURE 10

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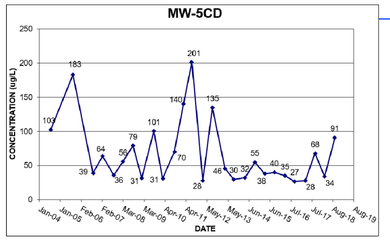
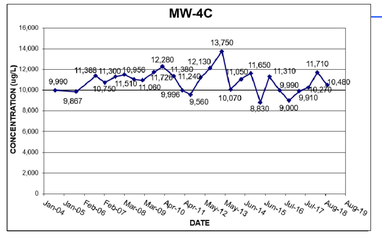
Phone: 978.970.5600

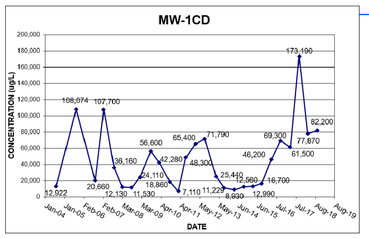
FILE NO.: FIG 10 - Solvent BZONE TRENDS 2018.dwg

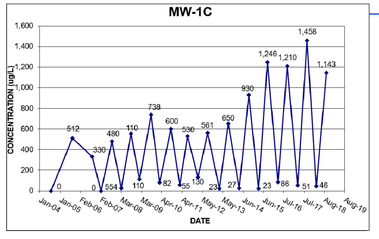
2/24/... USER: SBrown ... ATTACHED XREFS: BASE_SOLVENT2 -- ATTACHED IMAGES:
DRAWING NAME: \\ntgis-lowell\Environmental\Projects\27397 - Solvent Chemical\Quarterly, Semi-Annual and Annual Reports\Periodic Review Report 2019\CAD Solvent 2019\ FIG 10 - Solvent BZONE TRENDS 2018.dwg -- PLOT DATE: April 25, 2019 - 9:03AM -- LAYOUT: Layout1

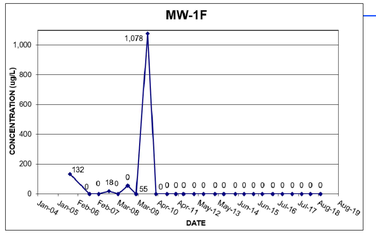
Version: 2017-10-21

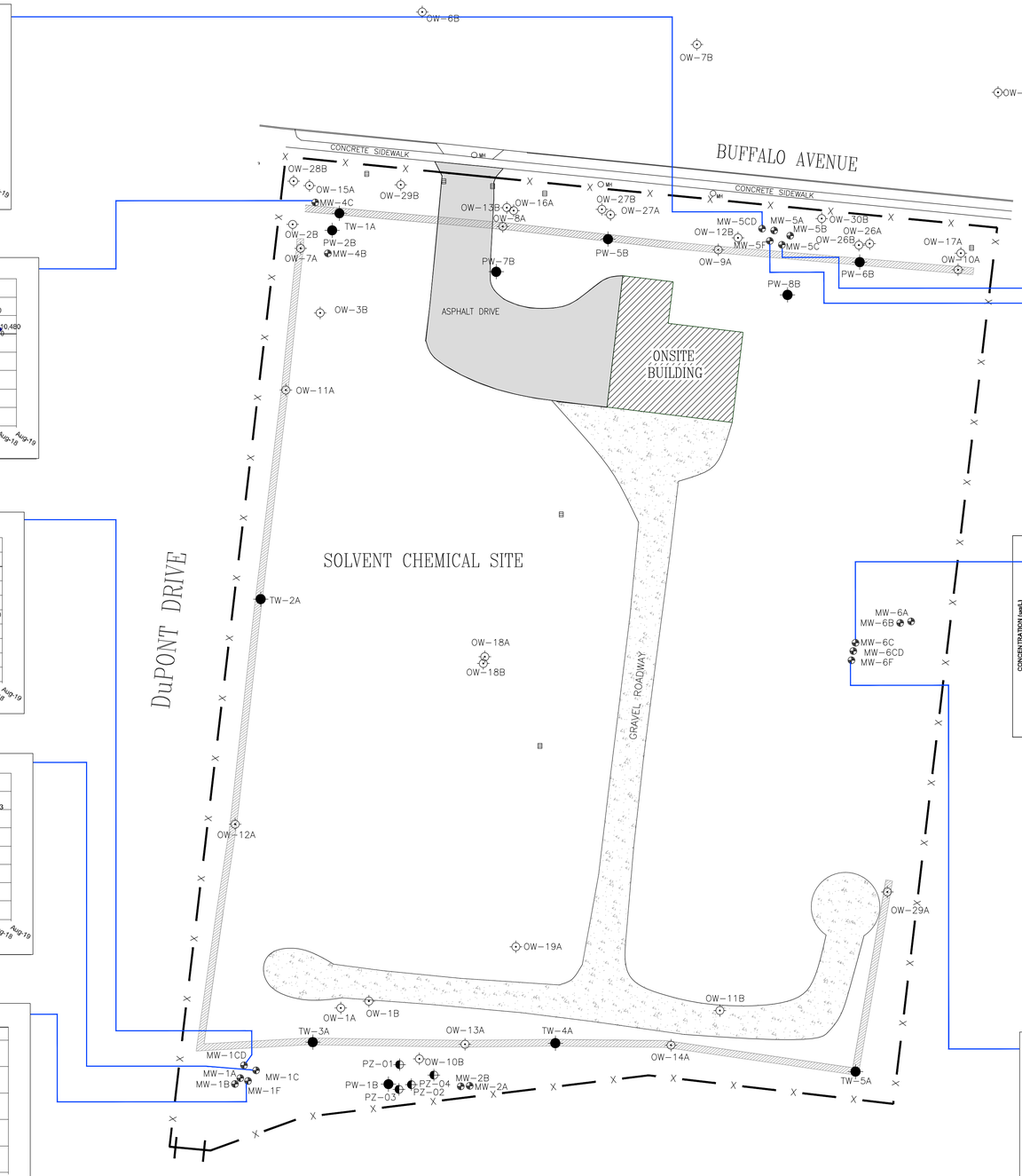


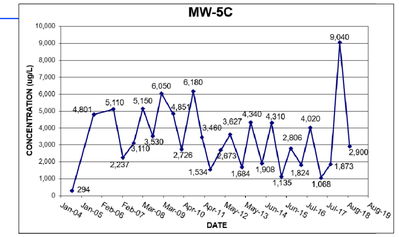


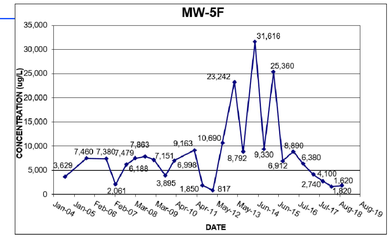


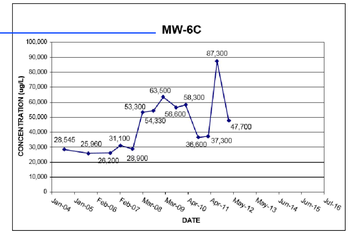


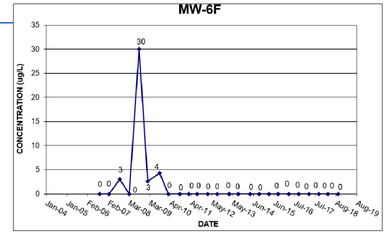












N

NOTES

1. CHARTS DEPICT THE TOTAL CONCENTRATION OF CONTAMINANTS OF CONCERN, PER THE DECEMBER 1996 ROD, AT EACH LOCATION VERSUS TIME.
2. BASE MAP WAS PREPARED BY NIAGARA BOUNDARY DATED 8/30/01.

LEGEND

MH G-2	SITE STORM SEWER MANHOLE
MH	CITY UTILITY MANHOLE
OW-3A	OBSERVATION WELL
MW-4A	MONITORING WELL
PW-3B TW-3A	PRODUCTION WELL/ TRENCH WELL
PZ-01	PIEZOMETER
	CATCH BASIN
	A-ZONE INTERCEPTOR TRENCH
	FENCE
	GATE

0' 20' 40' 80'

SCALE: 1"=40'

PROJECT:
SOLVENT CHEMICAL
NIAGRA FALLS, NEW YORK

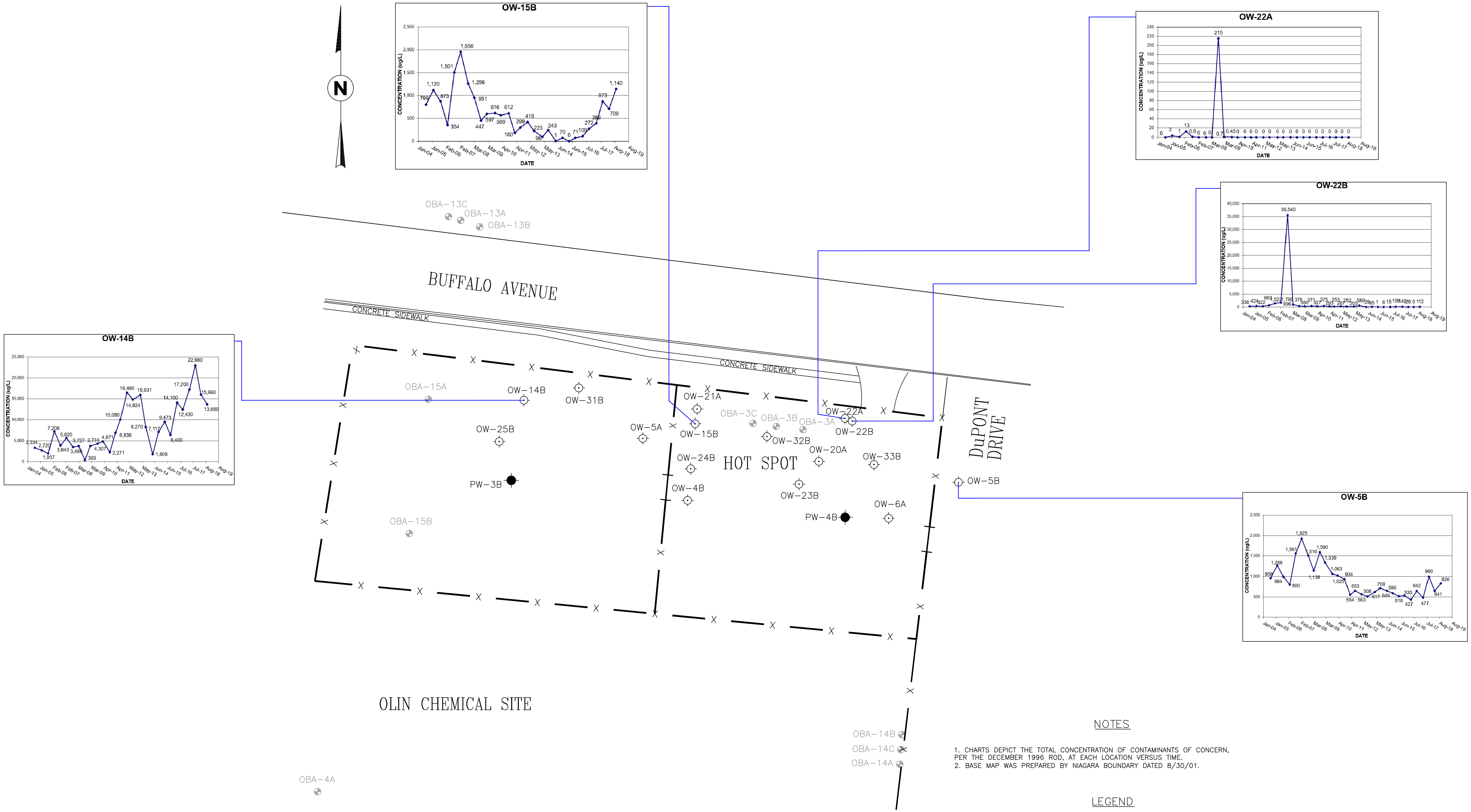
TITLE:
AUGUST 2004 - SEPTEMBER 2018
C, CD, AND F - ZONES TOTAL CONTAMINANTS OF CONCERN - SOLVENT SITE

DRAWN BY:	MAN	PROJ. NO.:	105146
CHECKED BY:	SB		
APPROVED BY:	MP		**FIGURE 11**
DATE:	MARCH 2019		

TRC
650 Suffolk Street
Suite 200
Lowell, MA 01854
Phone: 978.970.5600

FILE NO.: FIG 11 - Solvent C CD & F ZONES TRENDS 2018.dwg

22x34 --- USER: MNardone --- ATTACHED XREFS: BASE_SOLVENT2 --- ATTACHED IMAGES:
DRAWING NAME: K:\Stephen Brown\CAD Solvent 2019\ FIG 11 - Solvent C CD & F ZONES TRENDS 2018.dwg --- PLOT DATE: March 28, 2019 - 1:19PM --- LAYOUT: Layout1
Version: 2017-10-21



NOTES

1. CHARTS DEPICT THE TOTAL CONCENTRATION OF CONTAMINANTS OF CONCERN, PER THE DECEMBER 1996 ROD, AT EACH LOCATION VERSUS TIME.
2. BASE MAP WAS PREPARED BY NIAGARA BOUNDARY DATED 8/30/01.

LEGEND

OW-3A — OBSERVATION WELL
MW-4A — MONITORING WELL
PW-3B / TW-3A — PRODUCTION WELL/ TRENCH WELL
OBA-14B — OLIN CHEMICAL MONITORING WELL
—x— FENCE
GATE

0 30 60
SCALE : 1" = 30'

PROJECT:
SOLVENT CHEMICAL
NIAGARA FALLS, NEW YORK

TITLE:
AUGUST 2004 - SEPTEMBER 2018
A AND B - ZONES TOTAL CONTAMINANTS
OF CONCERN - HOT SPOT SITE

DRAWN BY:	MAN	PROJ. NO.:	105146
CHECKED BY:	SB	FIGURE 12	
APPROVED BY:	MP		
DATE:	MARCH 2019		

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Suite 200
Lowell, MA 01854
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FILE NO.: FIG 12 - Solvent HOTSPOT TRENDS 2018.dwg

DRAWING NAME: \\ntapa-lowell\Environmental\Projects\Projects\27397 - Solvent Chemical\Quarterly, Semi-Annual and Annual Reports\Periodic Review Report 2019\CAD Solvent 2019\ FIG 12 - Solvent HOTSPOT TRENDS 2018.dwg — PLOT DATE: April 25, 2019 - 9:04AM — LAYOUT: Layout1