



# Glenn Springs Holdings, Inc.

A subsidiary of Occidental Petroleum

Joe Branch  
Project Manager  
Direct Dial (231) 670-6809

7601 Old Channel Trail  
Montague, MI 49437  
Fax (231) 894-4033

April 30, 2021

Reference No. 007478

Mr. Benjamin J. McPherson  
New York State Department of Environmental Conservation  
270 Michigan Avenue  
Buffalo, NY 14203-2999

Re: Quarterly Progress Report – First Quarter 2021  
Occidental Chemical Corporation, Buffalo Avenue Plant  
NY Permit Number 9-2911-00112/00167-0  
Module II – Corrective Action Requirements

In accordance with Module II of the Niagara Plant's Resource Conservation and Recovery Act (RCRA)/Part 373 Permit, the following is the quarterly data report for the period of January 1, 2021 to March 31, 2021. Table 1 is a summary of the monitoring tasks by quarter that are performed each year along with completion dates where applicable. Table 2 presents a summary of maintenance activities performed during the quarter.

### **Bedrock Groundwater**

The groundwater system was operational 32.7 percent of the time this quarter. As indicated in emails dated September 30<sup>th</sup>, October 7<sup>th</sup>, October 26<sup>th</sup>, November 9<sup>th</sup>, and November 24<sup>th</sup>, 2020, the treatment system was down for knockout pot/piping repairs. The repairs were more extensive than anticipated as the knockout pot could not be relined and had to be replaced. The extraction and treatment system became operational on March 1, 2021. After system startup, downtime occurred due to effluent pH issues.

Downtime for all extraction system wells (or most wells at once) occurred due to some of the issues associated with the treatment system, as well as high decanter levels. Downtime for individual extraction wells occurred due to some of the issues associated with the treatment system as well as a motor replacement at BEW700B.

Performance monitoring data for the bedrock groundwater system are presented as follows:

Hydraulic Monitoring Locations .....	Figure 1
Chemical Monitoring Locations .....	Figure 2
Recovery Volumes by Zone.....	Tables 3, 4, and 5
Average Monthly Flow Rate Summary .....	Table 6
Groundwater Elevations .....	Table 7
Groundwater Contours (regional containment) by Zone .....	Figures 3, 4, and 5

### **Overburden Groundwater**

The Flow Zone 1 remedial system was operational 32.6 percent of the time for WW1 and 33 percent of the time for WW2 this quarter. The Flow Zone 3 remedial system (WWB of the Energy Boulevard Drain Tile System) was operational 33.2 percent of the time this quarter. Downtime occurred due to the issues associated with the treatment system.

Occidental Chemical Corporation (OxyChem) voluntarily operates two additional overburden groundwater collection systems at the Plant. These systems include the abandoned Outfall 005 and adjacent abandoned sanitary sewer in the F- and K-Areas of the Plant (MH159L) and the abandoned D-Area sanitary sewer (MH301). A contractor damaged the underground electrical system associated with MH-159L on March 23, 2021. Pumping from this well is being performed manually via a temporary pump until repairs are complete.

Performance monitoring data for the overburden groundwater system are presented as follows:

Hydraulic Monitoring Locations ..... Figure 6  
 Chemical Monitoring Locations ..... Figure 7  
 Weekly Flow Rates ..... Table 8  
 Average Monthly Flow Rate Summary ..... Table 9  
 Groundwater Elevations ..... Table 10  
 Groundwater Contours, Flow Zone 1 ..... Figure 8  
 Groundwater Contours, Flow Zone 3 ..... Figure 9

An analytical data summary and validation for the overburden chemical monitoring program is presented in Attachment A.

**Non-aqueous Phase Liquid (NAPL) Monitoring**


In accordance with the letter to the NYSDEC dated February 26, 2009, OxyChem incorporated quarterly NAPL monitoring and collection from six bedrock monitoring wells installed and monitored under the S-Area Remedial Requisite Technology Program into the Niagara Plant Corrective Action Program. Three other wells were added in accordance with the recommendations of the 2009 Annual Performance Evaluation. An additional well was added during the first quarter of 2012 in accordance with the recommendations of the 2011 Annual Performance Evaluation. These bedrock monitoring wells, designated OW229, OW243, OW618, OW619, OW620, OW621, OW634, OW635, OW638, and OW643, are located within, or immediately adjacent to, the N-Area of the Niagara Plant and contain N-Area NAPL. Quarterly NAPL checks and recovery have continued in 2019.

NAPL monitoring and collection data are presented as follows:

Bedrock NAPL Monitoring Locations ..... Figure 10  
 Overburden NAPL Monitoring Locations ..... Figure 11  
 Bedrock NAPL Monitoring and Collection ..... Table 11  
 Overburden NAPL Monitoring and Collection ..... Table 12

Should you have any questions on the above, please do not hesitate to contact Joseph Branch at 231-670-6809 or email at [joseph\\_branch@oxy.com](mailto:joseph_branch@oxy.com) or Tim Bathory at 716-278-7679 or email at [timothy\\_bathory@oxy.com](mailto:timothy_bathory@oxy.com).

Very truly yours,

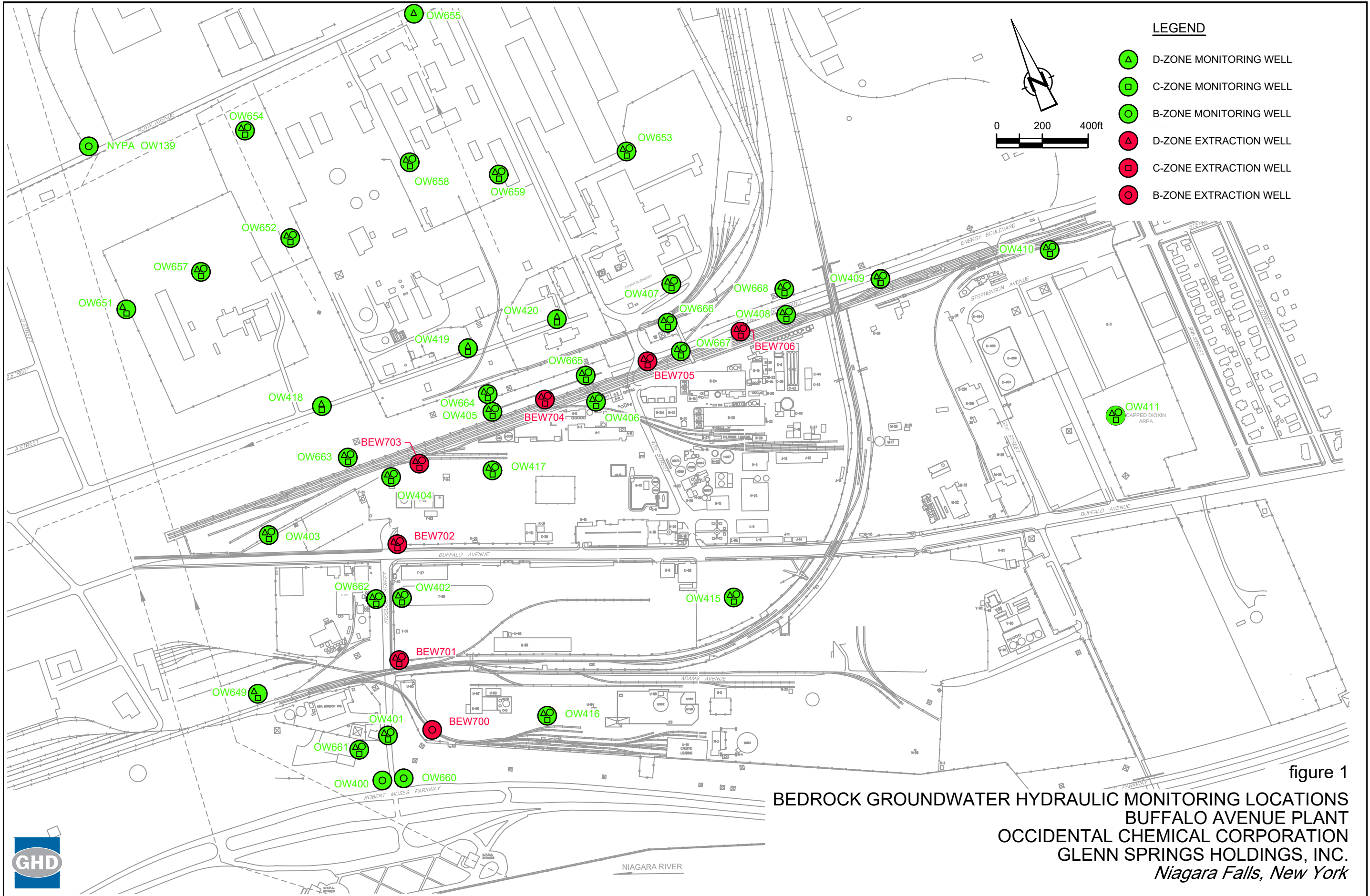
  
 for  
 Tim Bathory  
 Environmental Engineer  
 Buffalo Avenue Plant

  
 Joseph Branch  
 Project Manager  
 Glenn Springs Holdings, Inc.

JP/kf/21/007478

Encl.

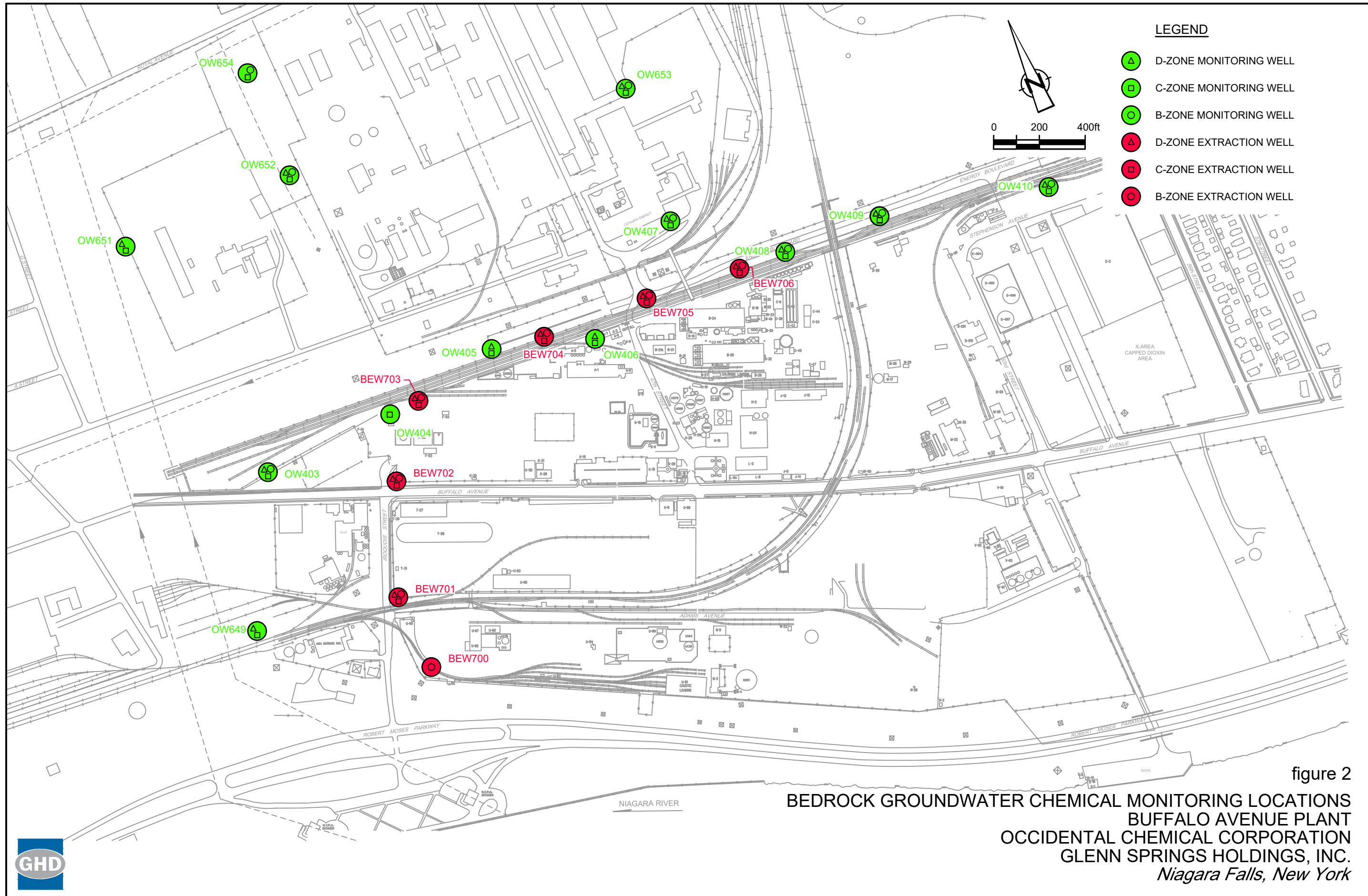
- cc: C. Staniszewski, NYSDEC
- A. Everett, USEPA
- N. Ackerman, OCC
- J. Pentilchuk, GHD



- LEGEND**
- ▲ D-ZONE MONITORING WELL
  - ◻ C-ZONE MONITORING WELL
  - B-ZONE MONITORING WELL
  - ▲ D-ZONE EXTRACTION WELL
  - ◻ C-ZONE EXTRACTION WELL
  - B-ZONE EXTRACTION WELL

figure 1  
**BEDROCK GROUNDWATER HYDRAULIC MONITORING LOCATIONS**  
**BUFFALO AVENUE PLANT**  
**OCCIDENTAL CHEMICAL CORPORATION**  
**GLENN SPRINGS HOLDINGS, INC.**  
*Niagara Falls, New York*





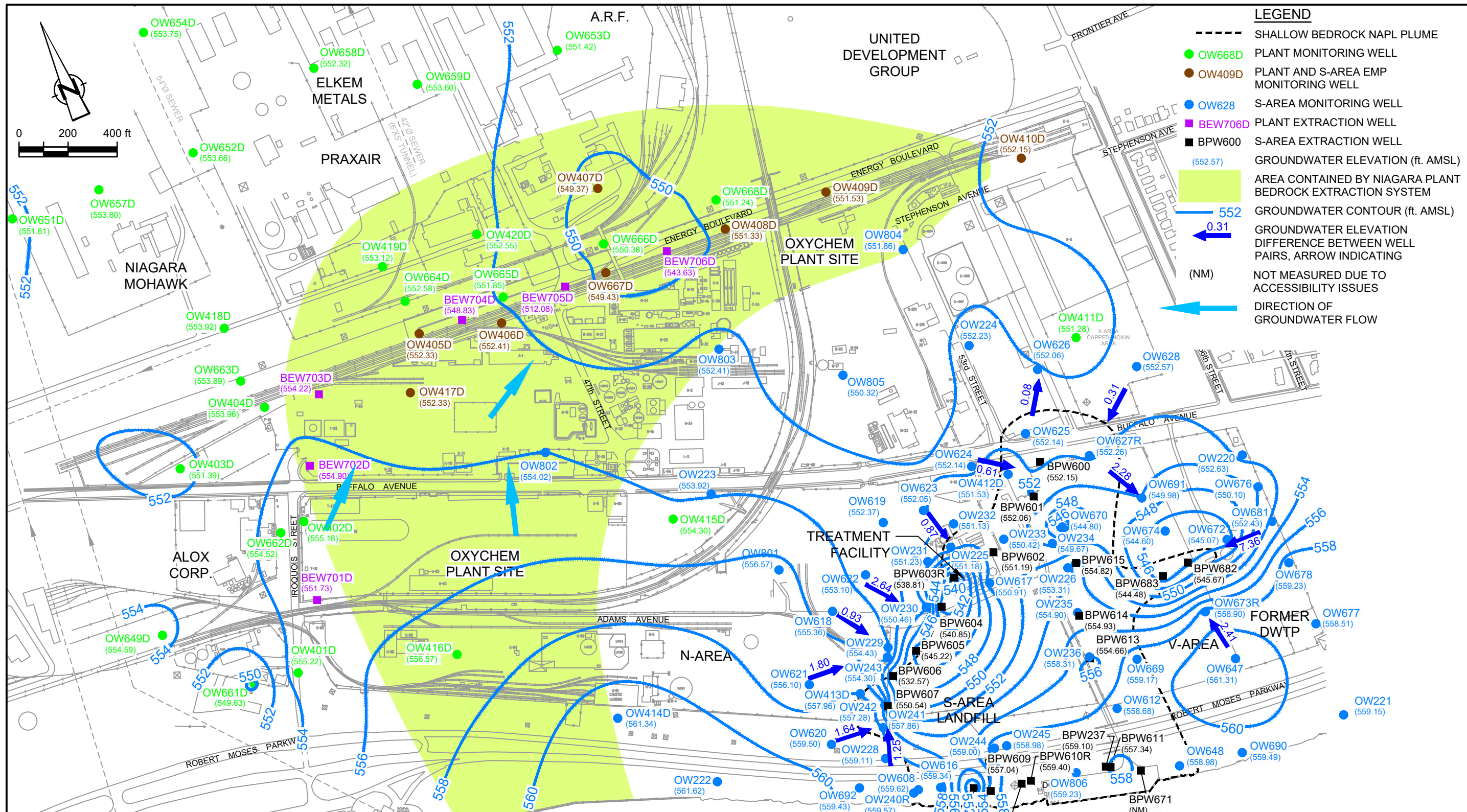
**LEGEND**

- ▲ D-ZONE MONITORING WELL
- ◻ C-ZONE MONITORING WELL
- B-ZONE MONITORING WELL
- ▲ D-ZONE EXTRACTION WELL
- ◻ C-ZONE EXTRACTION WELL
- B-ZONE EXTRACTION WELL

figure 2

**BEDROCK GROUNDWATER CHEMICAL MONITORING LOCATIONS  
 BUFFALO AVENUE PLANT  
 OCCIDENTAL CHEMICAL CORPORATION  
 GLENN SPRINGS HOLDINGS, INC.  
 Niagara Falls, New York**





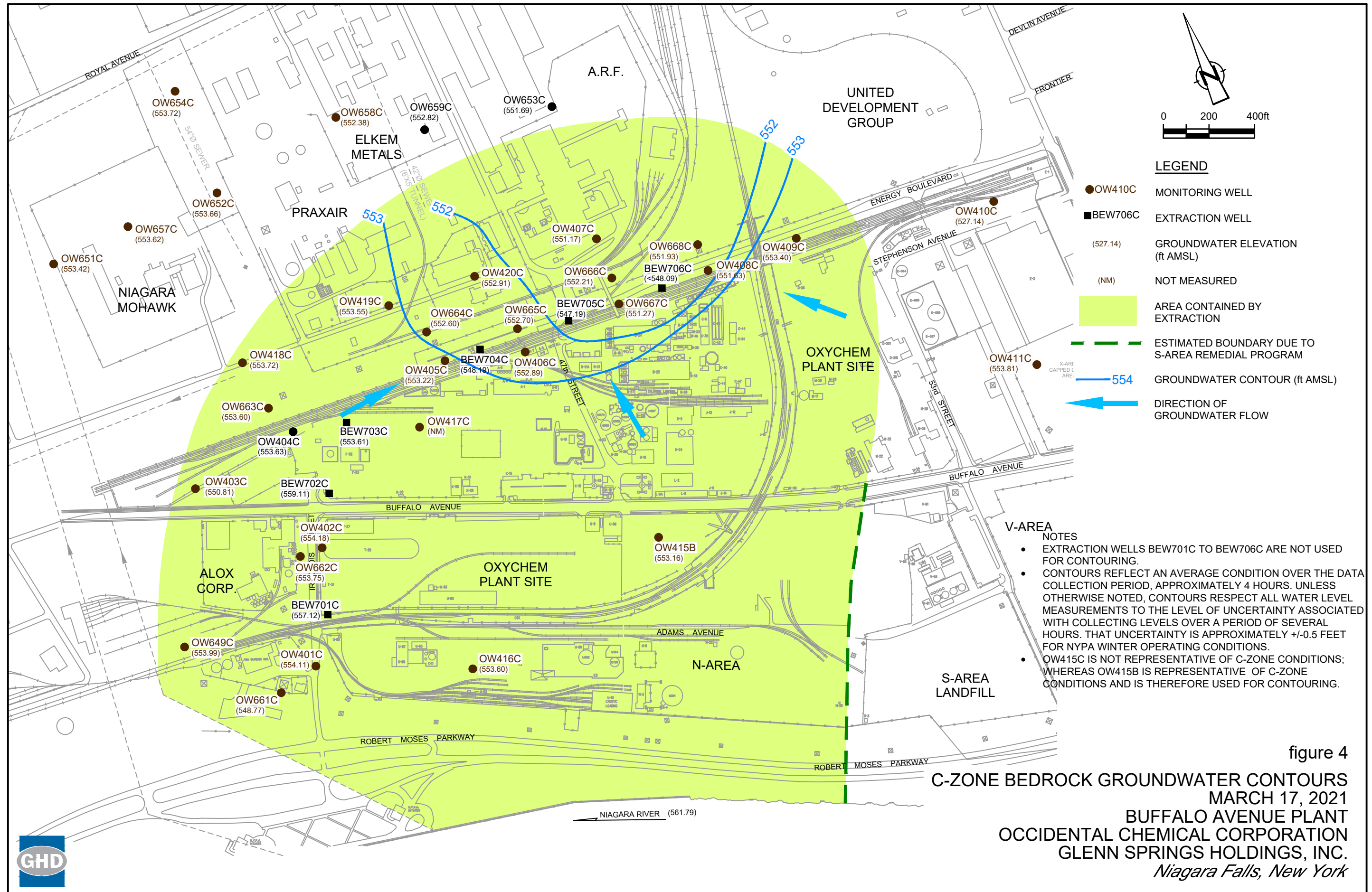
**LEGEND**

- SHALLOW BEDROCK NAPL PLUME
- OW668D PLANT MONITORING WELL
- OW409D PLANT AND S-AREA EMP MONITORING WELL
- OW628 S-AREA MONITORING WELL
- BEW706D PLANT EXTRACTION WELL
- BPW600 S-AREA EXTRACTION WELL
- (552.57) GROUNDWATER ELEVATION (ft. AMSL)
- AREA CONTAINED BY NIAGARA PLANT BEDROCK EXTRACTION SYSTEM
- 552 GROUNDWATER CONTOUR (ft. AMSL)
- 0.31 GROUNDWATER ELEVATION DIFFERENCE BETWEEN WELL PAIRS, ARROW INDICATING
- (NM) NOT MEASURED DUE TO ACCESSIBILITY ISSUES
- DIRECTION OF GROUNDWATER FLOW

- NOTES:**
- CONTOURS REFLECT AN AVERAGE CONDITION OVER THE DATA COLLECTION PERIOD, APPROXIMATELY 4 HOURS. UNLESS OTHERWISE NOTED, CONTOURS RESPECT ALL WATER LEVEL MEASUREMENTS TO THE LEVEL OF UNCERTAINTY ASSOCIATED WITH COLLECTING LEVELS OVER A PERIOD OF SEVERAL HOURS. THAT UNCERTAINTY IS APPROXIMATELY +/-0.5 FEET FOR NYPA WINTER OPERATING CONDITIONS.
  - MEASURED ELEVATIONS FOR S-AREA PLANT EXTRACTION WELLS BEW701D - BEW706D WERE NOT USED FOR CONTOURING.
  - A CONTOUR ELEVATION OF 548.00 ft AMSL WAS USED FOR EXTRACTION WELL BPW606.

figure 3  
**D-ZONE BEDROCK GROUNDWATER CONTOURS**  
 MARCH 17, 2021  
 BUFFALO AVENUE PLANT  
 GLENN SPRINGS HOLDINGS, INC.  
 Niagara Falls, New York





**LEGEND**

- OW410C MONITORING WELL
- BEW706C EXTRACTION WELL
- (527.14) GROUNDWATER ELEVATION (ft AMSL)
- (NM) NOT MEASURED
- AREA CONTAINED BY EXTRACTION
- ESTIMATED BOUNDARY DUE TO S-AREA REMEDIAL PROGRAM
- 554 GROUNDWATER CONTOUR (ft AMSL)
- ← DIRECTION OF GROUNDWATER FLOW

- V-AREA NOTES**
- EXTRACTION WELLS BEW701C TO BEW706C ARE NOT USED FOR CONTOURING.
  - CONTOURS REFLECT AN AVERAGE CONDITION OVER THE DATA COLLECTION PERIOD, APPROXIMATELY 4 HOURS. UNLESS OTHERWISE NOTED, CONTOURS RESPECT ALL WATER LEVEL MEASUREMENTS TO THE LEVEL OF UNCERTAINTY ASSOCIATED WITH COLLECTING LEVELS OVER A PERIOD OF SEVERAL HOURS. THAT UNCERTAINTY IS APPROXIMATELY +/-0.5 FEET FOR NYPA WINTER OPERATING CONDITIONS.
  - OW415C IS NOT REPRESENTATIVE OF C-ZONE CONDITIONS; WHEREAS OW415B IS REPRESENTATIVE OF C-ZONE CONDITIONS AND IS THEREFORE USED FOR CONTOURING.

figure 4  
**C-ZONE BEDROCK GROUNDWATER CONTOURS**  
 MARCH 17, 2021  
 BUFFALO AVENUE PLANT  
 OCCIDENTAL CHEMICAL CORPORATION  
 GLENN SPRINGS HOLDINGS, INC.  
*Niagara Falls, New York*



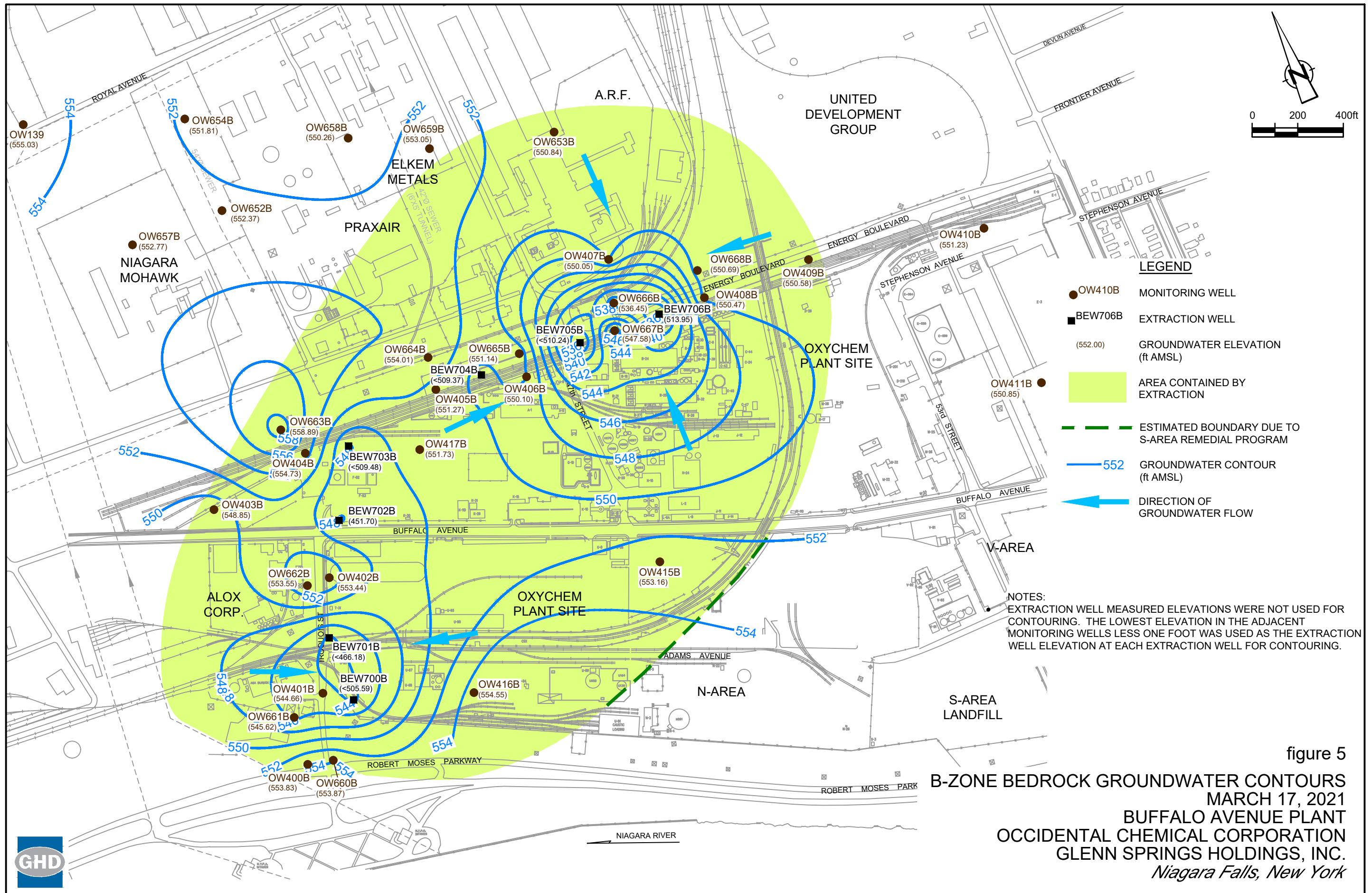
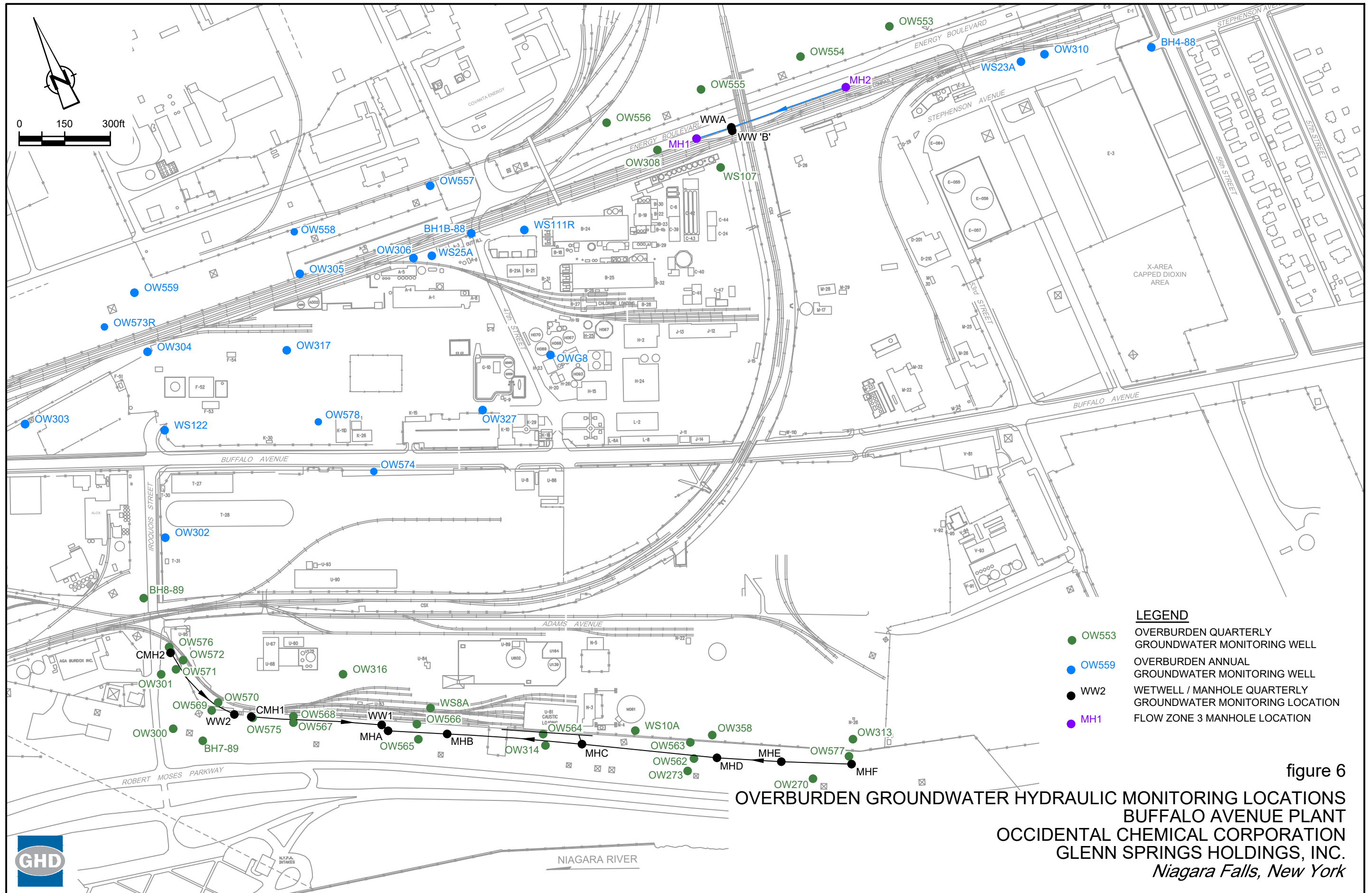


figure 5  
 B-ZONE BEDROCK GROUNDWATER CONTOURS  
 MARCH 17, 2021  
 BUFFALO AVENUE PLANT  
 OCCIDENTAL CHEMICAL CORPORATION  
 GLENN SPRINGS HOLDINGS, INC.  
 Niagara Falls, New York





**LEGEND**

- OW553 OVERBURDEN QUARTERLY GROUNDWATER MONITORING WELL
- OW559 OVERBURDEN ANNUAL GROUNDWATER MONITORING WELL
- WW2 WETWELL / MANHOLE QUARTERLY GROUNDWATER MONITORING LOCATION
- MH1 FLOW ZONE 3 MANHOLE LOCATION

figure 6  
**OVERBURDEN GROUNDWATER HYDRAULIC MONITORING LOCATIONS**  
**BUFFALO AVENUE PLANT**  
**OCCIDENTAL CHEMICAL CORPORATION**  
**GLENN SPRINGS HOLDINGS, INC.**  
*Niagara Falls, New York*





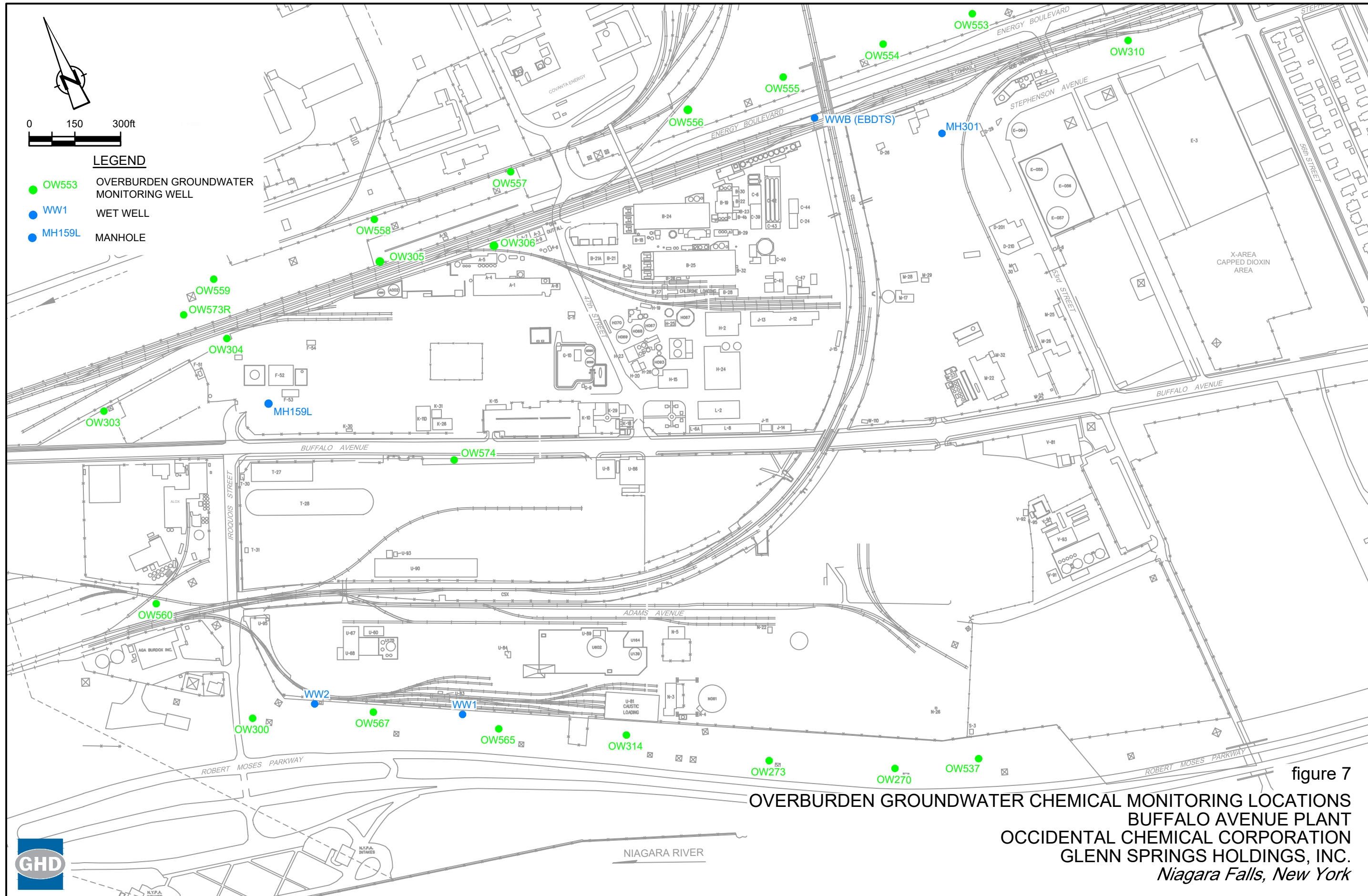
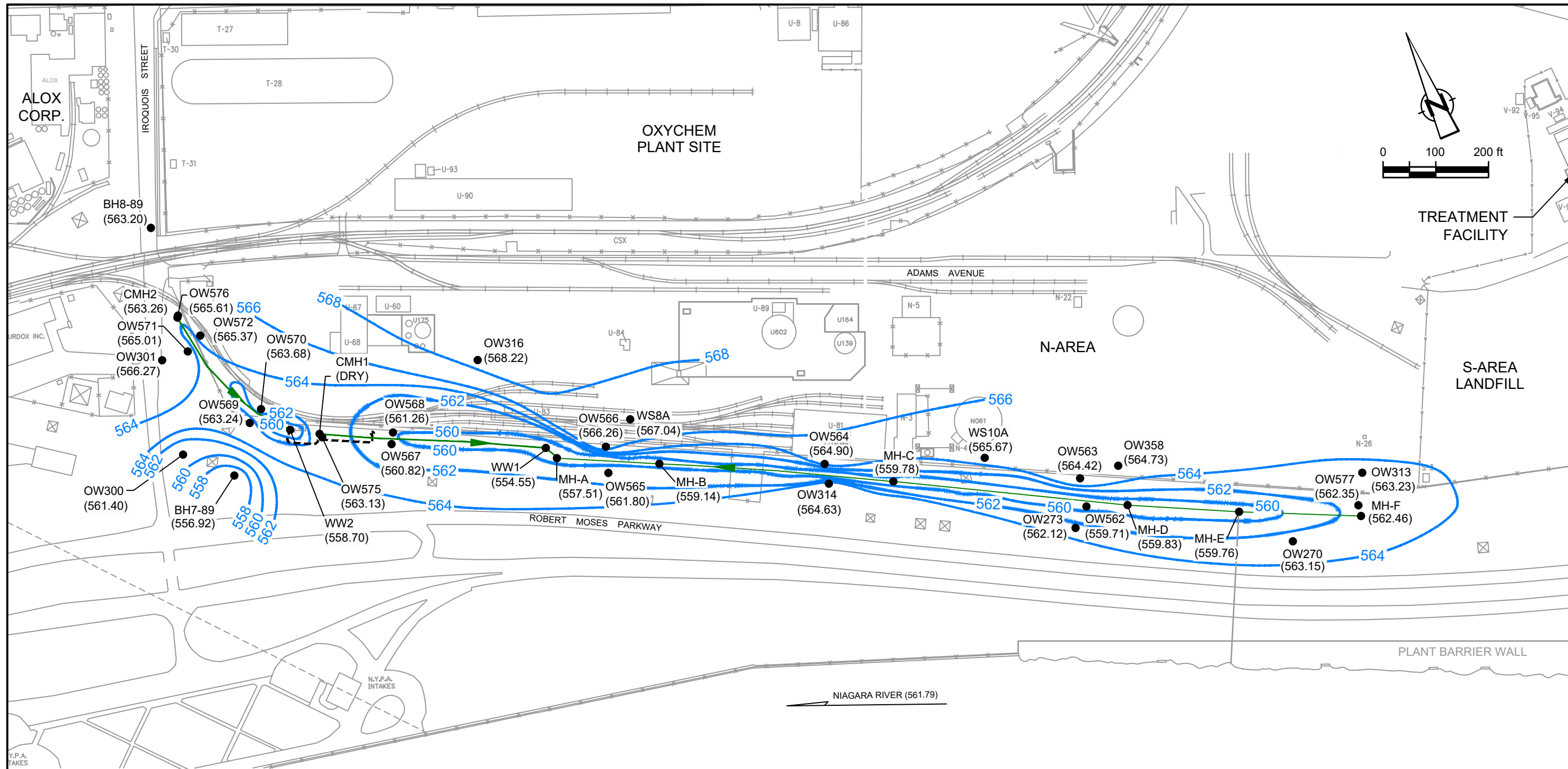


figure 7

**OVERBURDEN GROUNDWATER CHEMICAL MONITORING LOCATIONS  
BUFFALO AVENUE PLANT  
OCCIDENTAL CHEMICAL CORPORATION  
GLENN SPRINGS HOLDINGS, INC.  
Niagara Falls, New York**





**LEGEND**

- FLOW ZONE 1 COLLECTION SYSTEM
- OW316 EXISTING OVERBURDEN MONITORING WELLS
- (568.22) GROUNDWATER ELEVATION
- 564 OVERBURDEN GROUNDWATER CONTOUR (ft AMSL) DASHED WHERE INFERRED

figure 8  
 FLOW ZONE 1 OVERBURDEN GROUNDWATER CONTOURS  
 MARCH 19, 2021  
 BUFFALO AVENUE PLANT  
 OCCIDENTAL CHEMICAL CORPORATION  
 GLENN SPRINGS HOLDINGS, INC.  
 Niagara Falls, New York



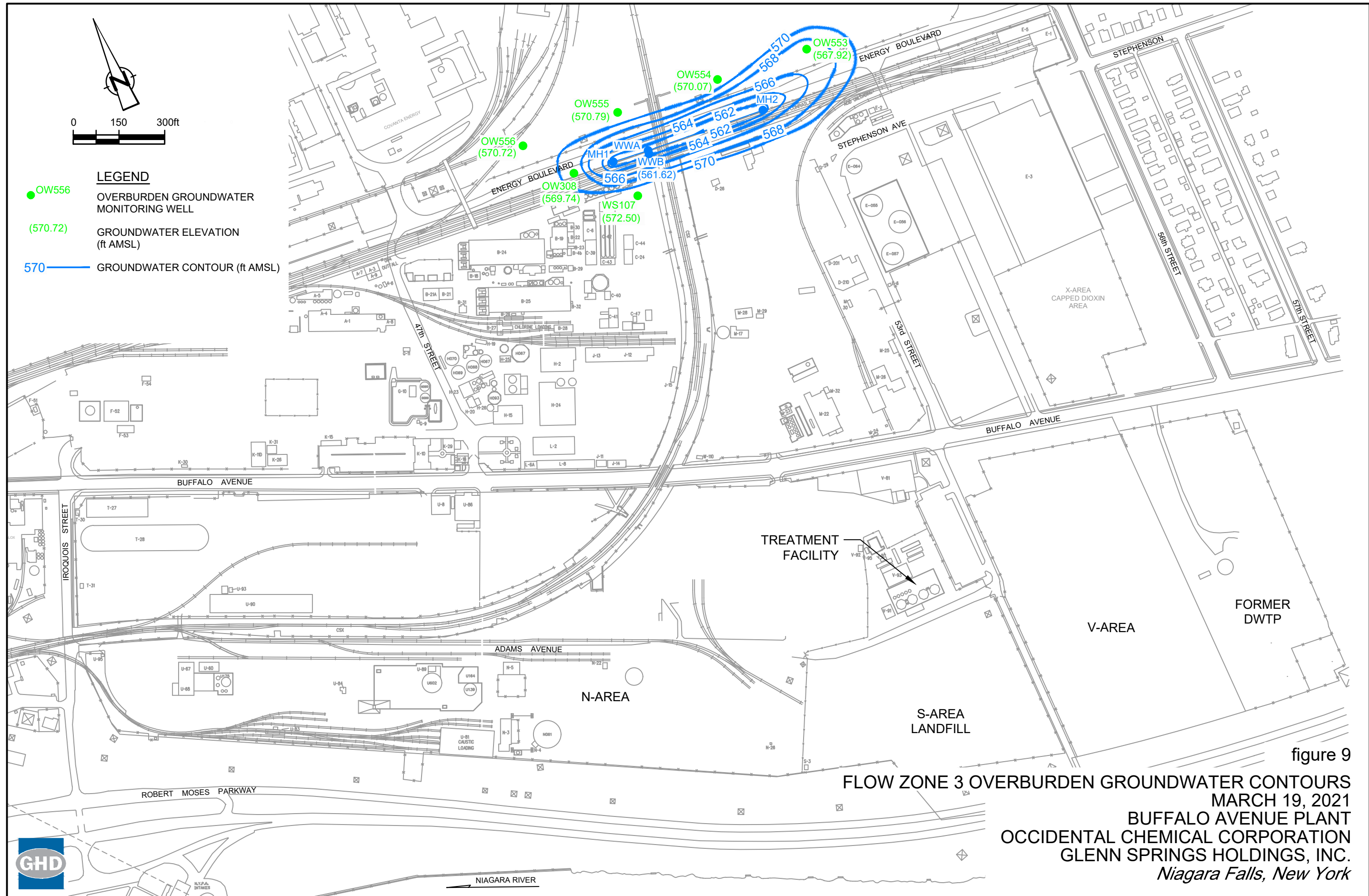
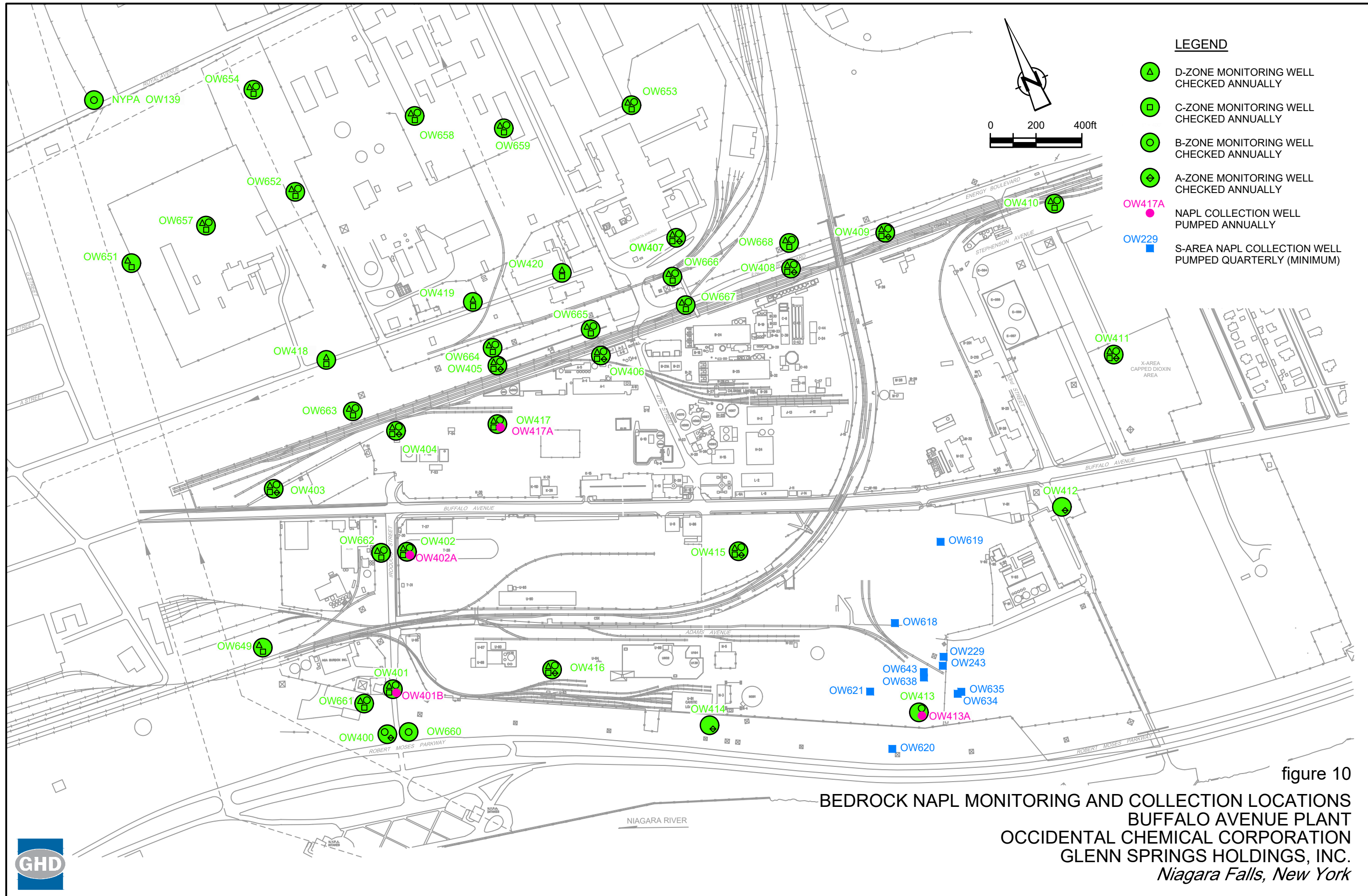


figure 9  
 FLOW ZONE 3 OVERBURDEN GROUNDWATER CONTOURS  
 MARCH 19, 2021  
 BUFFALO AVENUE PLANT  
 OCCIDENTAL CHEMICAL CORPORATION  
 GLENN SPRINGS HOLDINGS, INC.  
 Niagara Falls, New York





- LEGEND**
- ⬆ D-ZONE MONITORING WELL CHECKED ANNUALLY
  - ⬆ C-ZONE MONITORING WELL CHECKED ANNUALLY
  - ⬆ B-ZONE MONITORING WELL CHECKED ANNUALLY
  - ⬆ A-ZONE MONITORING WELL CHECKED ANNUALLY
  - OW417A NAPL COLLECTION WELL PUMPED ANNUALLY
  - OW229 NAPL COLLECTION WELL PUMPED ANNUALLY
  - S-AREA NAPL COLLECTION WELL PUMPED QUARTERLY (MINIMUM)

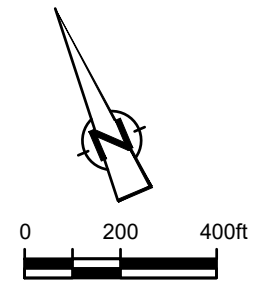


figure 10

**BEDROCK NAPL MONITORING AND COLLECTION LOCATIONS  
 BUFFALO AVENUE PLANT  
 OCCIDENTAL CHEMICAL CORPORATION  
 GLENN SPRINGS HOLDINGS, INC.  
 Niagara Falls, New York**



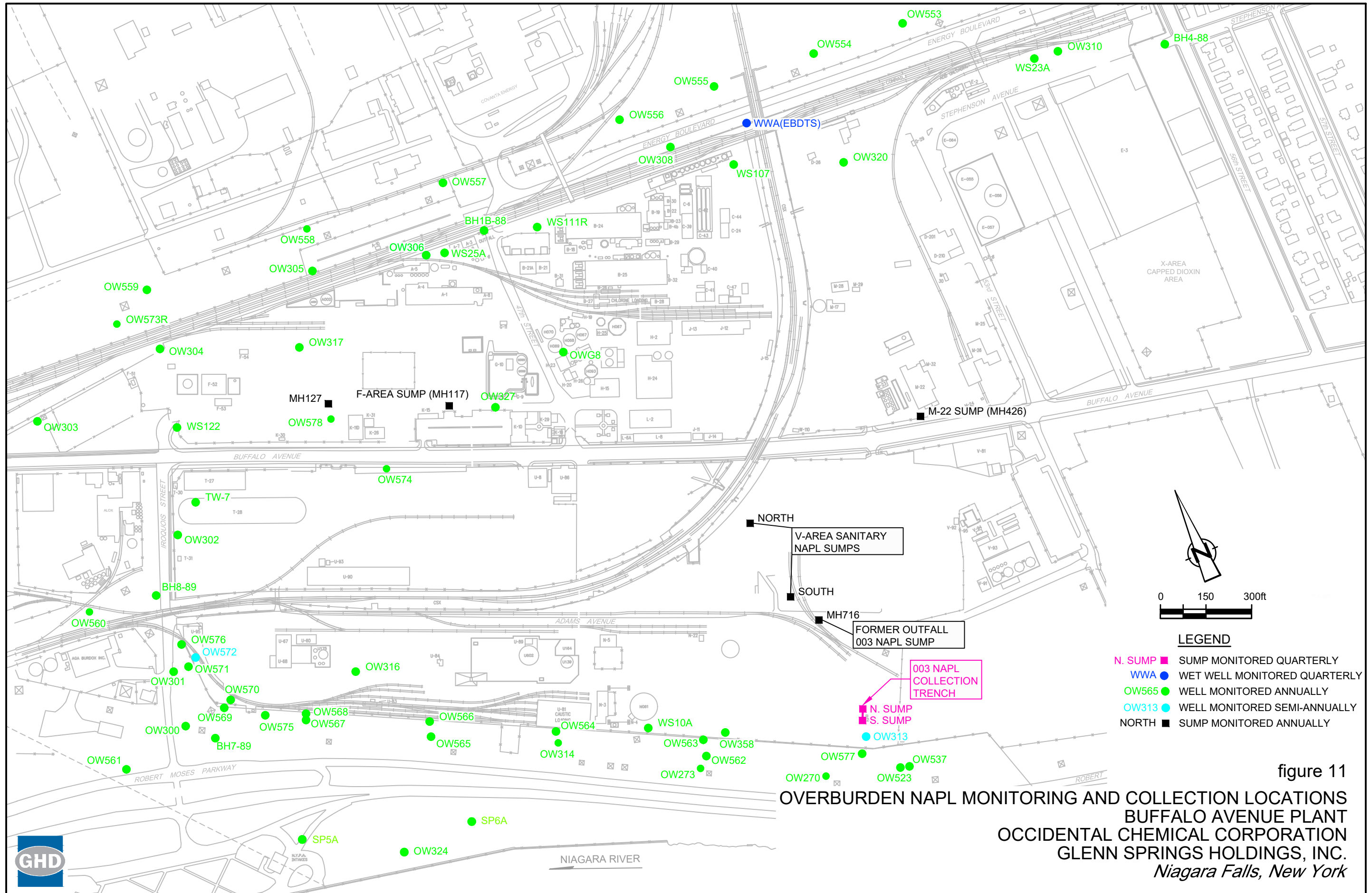


figure 11



Table 1

**Summary of Monitoring Tasks and Associated Completion Dates  
First Quarter 2021  
Buffalo Avenue Plant**

Quarter	Program	Task	Date(s) Task was Completed (2019)	
First	Bedrock Groundwater	Weekly Flow Measurements	1/4, 1/11, 1/18, 1/25, 2/1, 2/8, 2/15, 2/22, 3/1, 3/8, 3/15, 3/22, 3/29	
		Quarterly Hydraulic Monitoring	3/17	
		Annual Chemical Monitoring	(1)	
	Overburden Groundwater	Weekly Flow Measurements	1/4, 1/11, 1/18, 1/25, 2/1, 2/8, 2/15, 2/22, 3/1, 3/8, 3/15, 3/22, 3/29	
		Quarterly Hydraulic Monitoring - Flow Zones 1 and 3	3/19	
	NAPL Monitoring	Quarterly NAPL Monitoring/Collection in 003 Collection Trench	2/1	
		Quarterly NAPL Monitoring/Collection - N-Area Bedrock Wells	2/25	
		Quarterly NAPL Monitoring/Collection of EBDTS	3/19	
		Annual NAPL Monitoring/Collection of Overburden Monitoring Wells	(1)	
	Second	Bedrock Groundwater	Weekly Flow Measurements	
			Quarterly Hydraulic Monitoring	
		Overburden Groundwater	Weekly Flow Measurements	
Quarterly Hydraulic Monitoring - Flow Zones 1 and 3				
Annual Chemical Monitoring - Mercury Cell Area (OW304, OW305, OW306, and OW574) Annual Chemical Monitoring - Plant Wells				
NAPL Monitoring		Quarterly NAPL Monitoring/Collection in 003 Collection Trench		
		Quarterly NAPL Monitoring/Collection - N-Area Bedrock Wells		
		Quarterly NAPL Monitoring/Collection of EBDTS		
Third		Bedrock Groundwater	Weekly Flow Measurements	
			Quarterly Hydraulic Monitoring	
		Overburden Groundwater	Weekly Flow Measurements	
			Quarterly Hydraulic Monitoring - Flow Zones 1 and 3	
	Annual Hydraulic Monitoring - Other Areas			
	NAPL Monitoring	Quarterly NAPL Monitoring/Collection in 003 Collection Trench		
		Quarterly NAPL Monitoring/Collection of EBDTS		
		Quarterly NAPL Monitoring/Collection - N-Area Bedrock Wells		
		Semiannual NAPL Monitoring/Collection of Overburden Monitoring Wells		
		Annual NAPL Check - OW401B, OW402A, OW413A, and OW417A		
		Annual Sump/Manhole NAPL Checks		
	Fourth	Bedrock Groundwater	Weekly Flow Measurements	
Quarterly Hydraulic Monitoring				
Annual Well Inspections				
Overburden Groundwater		Weekly Flow Measurements		
		Quarterly Hydraulic Monitoring - Flow Zones 1 and 3		
		Semiannual Chemical Monitoring - Mercury Cell Area (OW574)		
		Annual Well Inspections		
NAPL Monitoring		Quarterly NAPL Monitoring/Collection in 003 Collection Trench		
		Quarterly NAPL Monitoring/Collection of EBDTS		
		Quarterly NAPL Monitoring/Collection - N-Area Bedrock Wells		

## Notes:

(1) - To be completed in the next quarter

**Summary of Maintenance Activities  
First Quarter 2021  
Buffalo Avenue Plant**

<b>Date</b>	<b>Maintenance Activity</b>
1/4	Drill out BEW-705D
1/4	BEW-703D vault pumped out
1/4 - 3/1	KO Pot and ductwork installation
1/7	Troubleshoot Air Stripper impulse lines
1/11	Troubleshoot Oxidizer sump level
1/11	BEW-706C vault door shock replaced
1/11	Inspect Scrubber tower
1/11	BEWs 706B, C, & D vaults pumped out
1/22	Troubleshoot Compressor high temp
1/25	Various Oxidizer repairs.
1/26	Air Stripper VFD motor check
1/27	Air Stripper VFD motor check complete
1/28	BEW-706D Ladder and door repairs
1/29	BEW-706D Ladder and door repairs
2/1	Troubleshoot LV-200 South Forcemain
2/3	pH calibrations
2/9	XV-401 valve repairs

Table 3

D-Zone Extraction Well Flow Rates  
 First Quarter 2021  
 Buffalo Avenue Plant

Date	BEW701D		BEW702D		BEW703D		BEW704D		BEW705D		BEW706D	
	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)
1/4/2021							0	0.00	0	0.00	0	0.00
1/11/2021							0	0.00	0	0.00	0	0.00
1/18/2021							0	0.00	0	0.00	0	0.00
1/25/2021							0	0.00	0	0.00	0	0.00
2/1/2021							0	0.00	0	0.00	0	0.00
2/8/2021							0	0.00	0	0.00	0	0.00
2/15/2021							0	0.00	0	0.00	0	0.00
2/22/2021							0	0.00	0	0.00	0	0.00
3/1/2021							1000	0.69	2000	1.39	2356	0.23
3/8/2021							402000	43.51	278000	30.09	192000	20.78
3/15/2021							433000	43.21	290000	28.94	193000	19.26
3/22/2021							424000	42.83	272000	27.31	191000	19.29
3/29/2021							424000	42.06	270000	26.79	212000	21.03

Notes:

GPM - gallons per minute  
 BEW701D, 702D, and 703D were shut down on October 9, 2008 following NYSDEC approval.  
 Target rates for BEW704D, 705D, and 706D are 40 GPM each.



**Table 4**  
**C-Zone Extraction Well Flow Rates**  
**First Quarter 2021**  
**Buffalo Avenue Plant**

Date	BEW701C		BEW702C		BEW703C		BEW704C		BEW705C		BEW706C	
	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)
1/4/2021							0	0.00	0	0.00	0	0.00
1/11/2021							0	0.00	0	0.00	0	0.00
1/18/2021							0	0.00	0	0.00	0	0.00
1/25/2021							0	0.00	0	0.00	0	0.00
2/1/2021							0	0.00	0	0.00	0	0.00
2/8/2021							0	0.00	0	0.00	0	0.00
2/15/2021							0	0.00	0	0.00	0	0.00
2/22/2021							0	0.00	0	0.00	0	0.00
3/1/2021							0	0.00	0	0.00	0	0.00
3/8/2021							957000	108.50	938000	106.35	940000	106.58
3/15/2021							1086000	108.38	1061000	105.89	1072000	106.99
3/22/2021							1061000	107.17	1031000	104.14	1042000	105.25
3/29/2021							1074000	106.55	1044000	103.57	1052000	104.37

Notes:

GPM - gallons per minute.

BEW701C, 702C, and 703C were shut down on May 22, 2007 following NYSDEC approval.

Target rates for BEW704C, 705C, and 706C are 100 GPM each.

(1) The totalizer for BEW706C malfunctioned the week of January 27, 2020. The average flow of the weeks before and after was used.

**Table 5**  
**B-Zone Extraction Well Flow Rates**  
**First Quarter 2021**  
**Buffalo Avenue Plant**

Date	BEW700B		BEW701B		BEW702B		BEW703B		BEW704B		BEW705B		BEW706B	
	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)
1/4/2021	0	0.00	0	0.00	0	0.000	0	0.000	0	0.00	0	0.00	0	0.00
1/11/2021	0	0.00	0	0.00	0	0.000	0	0.000	0	0.00	0	0.00	0	0.00
1/18/2021	0	0.00	0	0.00	0	0.000	0	0.000	0	0.00	0	0.00	0	0.00
1/25/2021	0	0.00	0	0.00	0	0.000	0	0.000	0	0.00	0	0.00	0	0.00
2/1/2021	0	0.00	0	0.00	0	0.000	0	0.000	0	0.00	0	0.00	0	0.00
2/8/2021	0	0.00	0	0.00	0	0.000	0	0.000	0	0.00	0	0.00	0	0.00
2/15/2021	0	0.00	0	0.00	0	0.000	0	0.000	0	0.00	0	0.00	0	0.00
2/22/2021	0	0.00	0	0.00	0	0.000	0	0.000	0	0.00	0	0.00	0	0.00
3/1/2021	0	0.00	0	0.00	199	0.002	137	0.002	0	0.00	0	0.00	0	0.00
3/8/2021	29000	4.35	17000	1.72	35	0.003	2	0.000	94000	10.04	38000	4.06	63000	6.73
3/15/2021	40000	3.99	16000	1.60	34	0.003	118	0.012	101000	10.08	39000	3.89	64000	6.39
3/22/2021	41000	4.12	14000	1.41	23	0.002	2	0.000	98000	9.90	39000	3.92	60000	6.06
3/29/2021	42000	4.17	13000	1.29	40	0.004	162	0.016	97000	9.62	38000	3.77	54000	5.36

Notes:

GPM - gallons per minute.

(1) Totalizer malfunction occurred for BEW706B. The average flow of the weeks before and after was used.

Table 6

**Bedrock Extraction System Monthly Flow Rate Summary  
First Quarter 2021  
Buffalo Avenue Plant**

<u>System Component</u>	Target Flow Rates (gpm)	Month			Quarterly Average (gpm)
		Jan-21 (gpm)	Feb-21 (gpm)	Mar-21 (gpm)	
B-Zone	40	0	0	23	8
C-Zone	300	0	0	318	144
D-Zone	120	0	0	91	106
Operational Average	460	0	0	432	258
<b><u>Treatment Plant</u></b>					
Operational Average		0	0	478	159
Operating Time		0.0%	0.0%	98.0%	32.7%
<b>Quarterly Average Operating Time =</b>		32.7%			
<b>Total Volume Treated in Quarter =</b>		20,905,920 gallons			

## Notes:

GPM - gallons per minute.

Flow rates shown are the average flow rate while the pump/treatment system is operational.

Table 7

**Bedrock Groundwater Elevation Summary**  
**First Quarter 2021**  
**Buffalo Avenue Plant**

Well	Top of Riser Elevation	Ground Surface Elevation	Date of Installation	Riser Diameter (inches)	Monitored Interval				Well Bottom		Water Level Data	
					Top (AMSL)	Bottom (AMSL)	Top (BGS)	Bottom (BGS)	Elev. of (AMSL)	Depth to (BGS)	3/17/2021 (ft BTOC) (ft AMSL)	
BEW700B	565.59	568.69	12/2/1994	8	457.1	- 414.0	111.6	- 154.7	414.0	154.7	>60	<505.59
BEW701B	566.18	569.15	12/9/1994	8	458.8	- 413.8	110.4	- 155.4	413.8	155.4	>100	<466.18
BEW701C	566.33	569.60	11/17/1994	8	498.4	- 460.9	71.2	- 108.7	460.9	108.7	9.21	557.12
BEW701D	565.86	569.03	12/7/1994	8	545.9	- 500.9	23.1	- 68.1	500.9	68.1	14.13	551.73
BEW702B	568.83	572.24	8/15/1994	8	452.9	- 415.9	119.3	- 156.3	415.9	156.3	117.13	451.70
BEW702C	568.86	571.95	8/8/1994	8	496.4	- 455.9	75.6	- 116.1	455.9	116.1	9.75	559.11
BEW702D	569.20	572.17	7/6/1994	8	548.6	- 499.4	23.6	- 72.8	499.4	72.8	14.30	554.90
BEW703B	569.48	572.57	9/8/1994	8	450.8	- 410.8	121.8	- 161.8	410.8	161.8	>60	<509.48
BEW703C	569.00	572.10	9/15/1994	8	501.8	- 453.7	70.3	- 118.4	453.7	118.4	15.39	553.61
BEW703D	569.87	572.77	9/16/1994	8	550.0	- 504.2	22.8	- 68.6	504.2	68.6	15.65	554.22
BEW704B	569.37	573.41	10/14/1994	8	452.3	- 417.3	121.1	- 156.1	417.3	156.1	>60	<509.37
BEW704C	569.24	573.31	10/14/1994	8	498.3	- 454.3	75.0	- 119.0	454.3	119.0	21.05	548.19
BEW704D	570.24	573.10	9/30/1994	8	546.3	- 501.3	26.8	- 71.8	501.3	71.8	21.41	548.83
BEW705B	570.24	573.26	10/11/1994	8	453.7	- 416.0	119.6	- 157.3	416.0	157.3	>60	<510.24
BEW705C	570.06	573.15	9/30/1994	8	502.0	- 456.5	71.2	- 116.7	456.5	116.7	22.87	547.19
BEW705D	570.66	573.65	10/10/1994	8	550.2	- 505.2	23.4	- 68.4	505.2	68.4	58.58	512.08
BEW706B	569.58	572.69	9/19/1994	8	452.9	- 416.4	119.8	- 156.3	416.4	156.3	55.63	513.95
BEW706C	568.97	571.9	10/11/1994	8	504.1	- 455.6	67.8	- 116.3	455.6	116.3	>20.88	<548.09
BEW706D	569.46	572.49	9/26/1994	8	550.7	- 504.2	21.8	- 68.3	504.2	68.3	25.83	543.63
OW139	570.63	569.08	1958	12	559.2	435.2	9.9	- 133.9	435.2	133.9	15.60	555.03
OW400B	579.25	579.61	5/10/1989	4	454.6	- 424.5	125.0	- 155.1	424.5	155.1	25.42	553.83
OW401B	568.54	568.95	5/24/1989	4	462.9	- 413.9	106.1	- 155.1	413.9	155.1	23.88	544.66
OW401C	568.55	568.94	5/25/1989	4	492.3	- 462.8	76.6	- 106.1	462.8	106.1	14.44	554.11
OW401D	568.42	568.87	5/26/1989	6.25	545.9	- 507.9	23.0	- 61.0	507.9	61.0	13.20	555.22
OW402B	569.46	570.33	6/28/1989	4	473.8	- 409.9	96.5	- 160.4	409.9	160.4	16.02	553.44
OW402C	569.48	570.3	6/26/1989	4	488.5	- 473.8	81.8	- 96.5	473.8	96.5	15.30	554.18
OW402D	569.22	570.01	6/29/1989	6.25	544.7	- 518.8	25.3	- 51.2	518.8	51.2	14.04	555.18
OW403B	570.04	570.48	5/16/1989	4	457.8	- 427.8	112.7	- 142.7	427.8	142.7	21.19	548.85
OW403C	570.02	570.26	5/22/1989	4	487.3	- 457.7	83.0	- 112.6	457.7	112.6	19.21	550.81
OW403D	570.08	570.31	5/23/1989	6.25	546.8	- 502.8	23.5	- 67.5	502.8	67.5	18.69	551.39
OW404B	571.03	571.53	6/9/1989	4	438.3	- 404.8	133.2	- 166.7	404.8	166.7	16.30	554.73
OW404C	570.82	571.38	6/7/1989	4	498.5	- 468.2	72.9	- 103.2	468.2	103.2	17.19	553.63

Table 7

**Bedrock Groundwater Elevation Summary  
First Quarter 2021  
Buffalo Avenue Plant**

Well	Top of Riser Elevation	Ground Surface Elevation	Date of Installation	Riser Diameter (inches)	Monitored Interval				Well Bottom		Water Level Data			
					Top (AMSL)	Bottom (AMSL)	Top (BGS)	Bottom (BGS)	Elev. of (AMSL)	Depth to (BGS)	3/17/2021 (ft BTOC) (ft AMSL)			
OW404D	570.45	571.85	6/23/1989	6.25	549.3	-	498.0	22.6	-	73.9	498.0	73.9	16.49	553.96
OW405B	572.78	573.14	3/27/1989	4	453.3	-	408.3	119.8	-	164.8	408.3	164.8	21.51	551.27
OW405C	572.7	573.07	5/31/1989	4	501.2	-	453.2	71.9	-	119.9	453.2	119.9	19.48	553.22
OW405D	572.6	573.11	6/9/1989	6.25	545.6	-	501.2	27.5	-	71.9	501.2	71.9	20.27	552.33
OW406B	571.52	571.77	6/8/1989	4	467.9	-	404.4	103.9	-	167.4	404.4	167.4	21.42	550.10
OW406C	571.44	571.73	6/14/1989	4	497.6	-	467.8	74.1	-	103.9	467.8	103.9	18.55	552.89
OW406D	571.81	572.1	6/16/1989	6.25	548.6	-	497.2	23.5	-	74.9	497.2	74.9	19.40	552.41
OW407B	572.05	572.46	5/2/1989	4	465.4	-	450.4	107.1	-	122.1	450.4	122.1	22.00	550.05
OW407C	571.27	572.12	5/1/1989	4	479.8	-	465.2	92.3	-	106.9	465.2	106.9	20.10	551.17
OW407D	571.32	571.72	5/4/1989	6.25	552.9	-	510.4	18.8	-	61.3	510.4	61.3	21.95	549.37
OW408B	575.04	571.98	7/20/1989	4	445.2	-	403.6	126.8	-	168.4	403.6	168.4	24.57	550.47
OW408C	575.68	572.71	7/11/1989	4	494.5	-	445.9	78.2	-	126.8	445.9	126.8	24.05	551.63
OW408D	576.2	573.12	7/6/1989	6.25	552.1	-	525.0	21.0	-	48.1	525.0	48.1	24.87	551.33
OW409B	575.7	572.79	6/20/1989	3	461.8	-	415.9	111.0	-	156.9	415.9	156.9	25.12	550.58
OW409C	575.57	572.95	6/26/1989	4	510.1	-	462.0	62.9	-	111.0	462.0	111.0	22.17	553.40
OW409D	575.46	575.76	6/28/1989	6.25	552.0	-	509.8	23.8	-	66.0	509.8	66.0	23.93	551.53
OW410B	572.32	572.62	6/26/1989	4	441.4	-	407.7	131.2	-	164.9	407.7	164.9	21.09	551.23
OW410C	572.57	572.72	7/17/1989	4	486.5	-	471.5	86.2	-	101.2	471.5	101.2	45.43	527.14
OW410D	571.96	572.64	6/27/1989	6.25	547.1	-	516.3	25.5	-	56.3	516.3	56.3	19.81	552.15
OW411B	574.08	574.82	4/4/1989	4	454.9	-	406.6	119.9	-	168.2	406.6	168.2	23.23	550.85
OW411C	574.39	574.78	4/11/1989	4	500.0	-	470.0	74.8	-	104.8	470.0	104.8	20.58	553.81
OW411D	574.51	574.84	4/14/1989	6.25	546.7	-	515.2	28.1	-	59.6	515.2	59.6	23.23	551.28
OW415B	571.38	571.73	5/31/1989	4	482.1	-	467.1	89.6	-	104.6	467.1	104.6	18.22	553.16
OW415C	571.26	571.56	5/30/1989	4	511.9	-	497.1	59.7	-	74.5	497.1	74.5	17.31	553.95
OW415D	571.3	571.6	5/31/1989	6.25	548.7	-	511.8	22.9	-	59.8	511.8	59.8	17.00	554.30
OW416B	570	570.69	5/22/1989	6.25	470.8	-	455.8	99.9	-	114.9	455.8	114.9	15.45	554.55
OW416C	569.9	570.57	~5/22/1989	6.25	500.7	-	470.7	69.9	-	99.9	470.7	99.9	16.30	553.60
OW416D	569.68	570.32	~5/22/1989	6.25	539.6	-	500.5	30.7	-	69.8	500.5	69.8	13.11	556.57
OW417B	572.93	572.7	~5/19/1989	6.25	461.1	-	412.6	111.6	-	160.1	412.6	160.1	21.20	551.73
OW417C	572.23	572.9	~5/19/1989	6.25	490.1	-	460.8	82.8	-	112.1	460.8	112.1	(1)	(1)
OW417D	572.26	572.5	~5/19/1989	6.25	545.5	-	505.9	27.0	-	66.6	505.9	66.6	19.93	552.33
OW418C	569.62	570.08	5/29/2003	4	501.0	-	458.7	69.1	-	111.4	458.7	111.4	15.90	553.72

Table 7

**Bedrock Groundwater Elevation Summary**  
**First Quarter 2021**  
**Buffalo Avenue Plant**

Well	Top of Riser Elevation	Ground Surface Elevation	Date of Installation	Riser Diameter (inches)	Monitored Interval				Well Bottom		Water Level Data	
					Top (AMSL)	Bottom (AMSL)	Top (BGS)	Bottom (BGS)	Elev. of (AMSL)	Depth to (BGS)	3/17/2021 (ft BTOC)	(ft AMSL)
OW418D	569.72	570.14	1/11/2002	6	547.0	- 504.3	23.1	- 65.8	504.3	65.8	15.80	553.92
OW419C	570.4	570.7	6/4/2003	4	502.7	- 455.7	68.0	- 115.0	455.7	115.0	16.85	553.55
OW419D	570.22	570.75	1/10/2002	6	550.3	- 505.6	20.5	- 65.2	505.6	65.2	17.10	553.12
OW420C	571.03	571.28	6/2/2003	4	500.3	- 452.5	71.0	- 118.8	452.5	118.8	18.12	552.91
OW420D	570.67	571.24	1/4/2002	6	548.7	- 503.1	22.5	- 68.1	503.1	68.1	18.12	552.55
OW649C	567.52	568.04	~10/31/1991	4	488.5	- 458.1	79.6	- 110.0	458.1	110.0	13.53	553.99
OW649D	568.29	568.35	10/31/1991	4	549.2	- 510.4	19.1	- 57.9	510.4	57.9	13.70	554.59
OW651C	568.62	568.91	10/10/1991	4	507.9	- 477.6	61.1	- 91.3	477.6	91.3	15.20	553.42
OW651D	568.53	568.72	~9/16/1991	6	553.2	- 507.7	15.5	- 61.0	507.7	61.0	16.92	551.61
OW652B	570.48	570.83	~9/16/1991	4	473.8	- 443.8	97.1	- 127.1	443.8	127.1	18.11	552.37
OW652C	570.18	570.64	2/5/1993	4	509.4	- 477.4	61.3	- 93.3	477.4	93.3	16.52	553.66
OW652D	569.98	570.25	9/16/1991	4	552.7	- 509.7	17.6	- 60.6	509.7	60.6	16.32	553.66
OW653B	572.19	572.55	~2/12/1993	4	475.4	- 451.4	97.2	- 121.2	451.4	121.2	21.35	550.84
OW653C	572.12	572.49	2/12/1993	4	503.1	- 478.1	69.4	- 94.4	478.1	94.4	20.43	551.69
OW653D	572	572.38	9/10/1991	6	552.1	- 503.7	20.3	- 68.7	503.7	68.7	20.58	551.42
OW654B	569.53	569.91	~8/27/1991	4	478.8	- 444.3	91.1	- 125.6	444.3	125.6	17.72	551.81
OW654C	570.14	570.39	~8/27/1991	4	509.7	- 481.8	60.7	- 88.6	481.8	88.6	16.42	553.72
OW654D	570.16	570.41	8/27/1991	6	556.0	- 510.7	14.4	- 59.7	510.7	59.7	16.41	553.75
OW655D	571.23	571.46	8/22/1991	6	552.7	- 507.4	18.8	- 64.1	507.4	64.1	19.20	552.03
OW657B	570.22	570.59	~4/9/1993	4	472.9	- 439.5	97.7	- 131.1	439.5	131.1	17.45	552.77
OW657C	570.42	570.83	~4/9/1993	4	503.7	- 475.7	67.2	- 95.2	475.7	95.2	16.80	553.62
OW657D	571.65	570.21	~4/9/1993	4	553.6	- 507.6	16.6	- 62.6	507.6	62.6	17.85	553.80
OW658B	570.48	570.93	~4/6/1993	4	473.4	- 439.9	97.6	- 131.1	439.9	131.1	20.22	550.26
OW658C	570.66	570.94	~4/6/1993	4	502.9	- 475.8	68.0	- 95.1	475.8	95.1	18.28	552.38
OW658D	570.75	571.1	~4/6/1993	4	552.6	- 506.1	18.6	- 65.1	506.1	65.1	18.43	552.32
OW659B	570.02	570.49	~3/30/1993	4	474.0	- 440.4	96.5	- 130.1	440.4	130.1	18.60	553.05
OW659C	570	570.41	~3/30/1993	4	503.9	- 475.8	66.5	- 94.6	475.8	94.6	17.20	552.82
OW659D	570.01	570.29	~3/30/1993	4	549.7	- 505.8	20.6	- 64.5	505.8	64.5	16.40	553.60
OW660B	579.42	579.85	10/19/1994	4	454.8	- 409.5	125.0	- 170.3	409.5	170.3	25.55	553.87
OW661B	568.63	569.05	12/15/1994	4	451.0	- 419.0	118.1	- 150.1	419.0	150.1	23.01	545.62
OW661C	568.87	569.22	10/24/1994	4	502.2	- 454.2	67.0	- 115.0	454.2	115.0	20.10	548.77
OW661D	568.88	569.25	11/1/1994	4	546.9	- 505.1	22.3	- 64.1	505.1	64.1	19.25	549.63

Table 7

**Bedrock Groundwater Elevation Summary**  
**First Quarter 2021**  
**Buffalo Avenue Plant**

Well	Top of Riser Elevation	Ground Surface Elevation	Date of Installation	Riser Diameter (inches)	Monitored Interval				Well Bottom		Water Level Data			
					Top (AMSL)	Bottom (AMSL)	Top (BGS)	Bottom (BGS)	Elev. of (AMSL)	Depth to (BGS)	3/17/2021 (ft BTOC) (ft AMSL)			
OW662B	569.79	570.08	7/6/1994	4	456.1	-	415.1	114.0	-	155.0	415.1	155.0	16.24	553.55
OW662C	569.75	570.02	7/5/1994	4	501.0	-	459.0	69.0	-	111.0	459.0	111.0	16.00	553.75
OW662D	569.92	570.24	7/1/1994	4	546.1	-	503.2	24.1	-	67.0	503.2	67.0	15.40	554.52
OW663B	571.79	572.15	8/9/1994	4	452.7	-	413.6	119.5	-	158.6	413.6	158.6	12.90	558.89
OW663C	572.08	572.37	8/10/1994	4	501.4	-	455.9	71.0	-	116.5	455.9	116.5	18.48	553.60
OW663D	572.21	572.33	8/9/1994	4	549.5	-	504.5	22.8	-	67.8	504.5	67.8	18.32	553.89
OW664B	571.53	571.85	12/14/1994	4	449.9	-	418.9	122.0	-	153.0	418.9	153.0	17.52	554.01
OW664C	571.5	571.84	12/5/1994	4	499.8	-	452.8	72.0	-	119.0	452.8	119.0	18.90	552.60
OW664D	571.56	571.9	12/12/1994	4	548.1	-	502.9	23.8	-	69.0	502.9	69.0	18.98	552.58
OW665B	573.06	573.37	7/22/1994	4	450.0	-	415.0	123.4	-	158.4	415.0	158.4	21.92	551.14
OW665C	573.04	573.33	7/25/1994	4	498.9	-	453.4	74.4	-	119.9	453.4	119.9	20.34	552.70
OW665D	573.13	573.42	7/22/1994	4	547.0	-	502.3	26.4	-	71.2	502.3	71.2	21.28	551.85
OW666B	571.37	571.59	1/12/1995	4	453.2	-	410.2	118.4	-	161.4	410.2	161.4	34.92	536.45
OW666C	571.29	571.69	1/10/1995	4	504.7	-	456.2	67.0	-	115.5	456.2	115.5	19.08	552.21
OW666D	571.2	571.57	1/10/1995	4	552.5	-	507.1	19.1	-	64.5	507.1	64.5	20.82	550.38
OW667B	576.28	573.48	10/6/1994	4	453.4	-	413.4	120.1	-	160.1	413.4	160.1	28.70	547.58
OW667C	575.78	572.97	10/5/1994	4	503.8	-	456.2	69.2	-	116.8	456.2	116.8	24.51	551.27
OW667D	576.31	573.48	10/6/1994	4	552.2	-	506.2	21.3	-	67.3	506.2	67.3	26.88	549.43
OW668B	570.86	571.29	1/4/1995	4	454.3	-	420.8	117.0	-	150.5	420.8	150.5	20.17	550.69
OW668C	570.95	571.2	1/4/1995	4	502.9	-	457.7	68.3	-	113.5	457.7	113.5	19.02	551.93
OW668D	571.1	571.25	12/23/1994	4	551.0	-	506.0	20.3	-	65.3	506.0	65.3	19.86	551.24
River	568.91	N/A	N/A	N/A	N/A	-	N/A	N/A	-	N/A	N/A	N/A	7.12	561.79

## Notes:

ft BTOC – feet below top of casing

ft AMSL – feet above mean sea level

NM - Not measured

NC - Not calculated

N/A - Not applicable

(1) - Well buried under stone

(2) - Water level measured on June 15, 2020

(3) - Water level measured on September 21, 2020

**Table 8**  
**Overburden Weekly Flow Rates**  
**First Quarter 2021**  
**Buffalo Avenue Plant**

Date	Flow Zone 1						Flow Zone 3		Abandoned Outfall 005		Abandoned D-Area Sanitary Sewer	
	System Total		Wet Well 2		Wet Well 1		WWB		MH159L		MH301	
	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)	Total Flow (gallons)	Average Flow Rate (gpm)
1/4/2021	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
1/11/2021	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
1/18/2021	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
1/25/2021	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2/1/2021	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2/8/2021	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2/15/2021	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
2/22/2021	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
3/1/2021	2000	0.10	2000	0.10	0	0.00	49000	2.54	0	0.00	40000	2.08
3/8/2021	173000	36.78	10000	1.04	163000	35.75	158000	16.06	24000	2.38	86000	9.56
3/15/2021	322000	39.88	7000	0.70	315000	39.18	53000	5.29	25000	2.48	35000	3.49
3/22/2021	256000	25.85	6000	0.60	250000	25.25	40000	3.99	26000	2.58	28000	2.81
3/29/2021	64000	5.77	10000	1.16	171000	18.15	54000	5.36	4000	0.40	40000	3.97

Notes:

GPM - gallons per minute.

Flow rates shown are the average flow rate while the pump is operational.

(1) Totalizer malfunction occurred for MH301. The average flow of the weeks before and after was used.



Table 9

**Overburden Performance Summary  
First Quarter 2021  
Buffalo Avenue Plant**

**Flow Rate Summary**

System Component	Average Flow				Quarterly Total (gallons)
	Jan-21	Feb-21	Mar-21	Quarterly	
<b><u>Flow Zone 1</u></b>					
Wet Well 1	0.0	0.0	23.7	7.9	899,000
Wet Well 2	0.0	0.0	0.8	0.27	35,000
<b>TOTAL</b>	<b>0.0</b>	<b>0.0</b>	<b>24.5</b>	<b>8.2</b>	<b>934,000</b>
<b><u>Flow Zone 3</u></b>					
WWB	0.0	0.0	6.6	2.2	354,000
<b><u>Abandoned Outfall 005</u></b>					
MH159L	0.0	0.0	1.6	0.5	79,000
<b><u>Abandoned D-Area Sanitary Sewer</u></b>					
MH301	0.0	0.0	5.0	1.7	229,000

**Operating Time Summary**

System Component	Average Percent Operational			
	Jan-21	Feb-21	Mar-21	Quarterly
<b><u>Flow Zone 1</u></b>				
Wet Well 1	0.0%	0.0%	97.9%	32.6%
Wet Well 2	0.0%	0.0%	98.9%	33.0%
<b><u>Flow Zone 3</u></b>				
WWB	0.0%	0.0%	99.7%	33.2%
<b><u>Abandoned Outfall 005</u></b>				
MH159L	0.0%	0.0%	69.0%	23.0%
<b><u>Abandoned D-Area Sanitary Sewer</u></b>				
MH301	0.0%	0.0%	99.7%	33.2%

Notes:

GPM - gallons per minute.

Table 10

**Overburden Groundwater Elevation Summary  
First Quarter 2021  
Buffalo Avenue Plant**

Well	Top of Riser Elevation	Ground Surface Elevation	Date of Installation	Riser Diameter (inches)	Screened Interval				Well Bottom		Water Level Data	
					Top (ft AMSL)	Bottom (ft AMSL)	Top (ft BGS)	Bottom (ft BGS)	Elev. of (ft AMSL)	Depth to (ft BGS)	3/19/2021 (ft BTOC) (ft AMSL)	
BH1B-88 <sup>(1)</sup>	572.53	572.70	12/20/1988	2	568.8	- 557.8	3.9	- 14.9	557.8	14.9	-	-
BH4-88 <sup>(1)</sup>	572.12	572.45	12/9/1988	2	568.2	- 565.2	4.3	- 7.3	565.2	7.3	-	-
BH7-89	572.32	572.67	5/24/1989	2	560.6	- 553.2	12.1	- 19.5	553.2	19.5	15.40	556.92
BH8-89	568.00	568.23	1/6/1989	2	563.4	- 549.4	4.8	- 18.8	549.4	18.8	4.80	563.20
CMH1	569.50	568.53	1997	NA	NA	- 558.0	NA	- 10.5	558.0	10.5	<sup>(2)</sup>	<sup>(2)</sup>
CMH2	569.42	568.49	1997	NA	NA	- 562.5	NA	- 6.0	562.5	6.0	6.16	563.26
MH-A	568.89	569.85	Unknown	NA	NA	- 556.5	NA	- 13.4	556.5	13.4	11.38	557.51
MH-B	568.87	568.72	Unknown	NA	NA	- 556.5	NA	- 12.2	556.5	12.2	9.73	559.14
MH-C	568.88	568.59	Unknown	NA	NA	- 557.0	NA	- 11.6	557.0	11.6	9.10	559.78
MH-D	569.89	568.50	Unknown	NA	NA	- 556.3	NA	- 12.2	556.3	12.2	10.06	559.83
MH-E	568.81	567.48	Unknown	NA	NA	- 555.8	NA	- 11.7	555.8	11.7	9.05	559.76
MH-F	568.90	567.83	1998	NA	NA	- 553.5	NA	- 14.4	553.5	14.4	6.44	562.46
OW270	571.55	570.88	10/16/1987	2	564.5	- 545.5	6.4	- 25.4	545.5	25.4	8.40	563.15
OW273	570.00	570.28	10/20/1987	2	563.5	- 551.5	6.8	- 18.8	551.5	18.8	7.88	562.12
OW300	567.07	567.56	5/25/1989	2	560.5	- 545.0	7.1	- 22.6	545.0	22.6	5.67	561.40
OW301	568.38	568.95	7/24/1989	2	564.8	- 557.8	4.2	- 11.2	557.8	11.2	2.11	566.27
OW302 <sup>(1)</sup>	569.98	570.10	10/26/1988	2	565.6	- 563.6	4.5	- 6.5	563.6	6.5	-	-
OW303 <sup>(1)</sup>	570.81	570.10	11/2/1988	2	566.3	- 562.3	3.8	- 7.8	562.3	7.8	-	-
OW304 <sup>(1)</sup>	571.50	571.40	10/20/1988	2	565.3	- 560.3	6.1	- 11.1	560.3	11.1	-	-
OW305 <sup>(1)</sup>	572.75	573.20	10/31/1988	2	569.4	- 564.4	3.8	- 8.8	564.4	8.8	-	-
OW306 <sup>(1)</sup>	571.85	571.90	11/15/1988	2	567.9	- 564.9	4.0	- 7.0	564.9	7.0	-	-
OW308	574.24	571.40	11/17/1988	2	567.6	- 564.6	3.8	- 6.8	564.6	6.8	4.50	569.74
OW310 <sup>(1)</sup>	572.28	572.80	11/22/1988	2	569.3	- 564.3	3.5	- 8.5	564.3	8.5	-	-
OW313	569.26	568.70	10/13/1988	2	550.8	- 545.8	17.9	- 22.9	545.8	22.9	6.03	563.23
OW314	569.04	568.90	6/12/1989	2	565.4	- 553.4	3.5	- 15.5	553.4	15.5	4.41	564.63
OW316	569.77	570.10	11/9/1988	2	566.1	- 559.1	4.0	- 11.0	559.1	11.0	1.55	568.22
OW317 <sup>(1)</sup>	572.60	572.50	9/26/1988	2	568.8	- 563.8	3.7	- 8.7	563.8	8.7	-	-
OW327 <sup>(1)</sup>	570.75	571.40	2/9/1990	2	567.4	- 565.4	4.0	- 6.0	565.4	6.0	-	-
OW358	571.49	569.02	9/26/1989	2	563.9	- 550.9	5.1	- 18.1	550.9	18.1	6.76	564.73
OW553	573.51	573.77	8/27/1991	2	570.1	- 565.1	3.7	- 8.7	565.1	8.7	5.59	567.92
OW554	573.83	572.35	9/3/1991	2	568.4	- 563.4	4.0	- 9.0	563.4	9.0	3.76	570.07
OW555	571.51	571.65	9/3/1991	2	568.5	- 563.5	3.2	- 8.2	563.5	8.2	.72	570.79
OW556	571.73	571.93	8/30/1991	2	567.8	- 562.8	4.1	- 9.1	562.8	9.1	1.01	570.72
OW557 <sup>(1)</sup>	571.69	572.16	5/16/1991	2	567.5	- 562.5	4.7	- 9.7	562.5	9.7	-	-
OW558 <sup>(1)</sup>	571.28	571.21	5/16/1991	2	567.4	- 562.4	3.8	- 8.8	562.4	8.8	-	-
OW559 <sup>(1)</sup>	569.73	570.35	9/10/1991	2	566.7	- 561.7	3.7	- 8.7	561.7	8.7	-	-
OW562	568.49	568.48	12/9/1996	2	555.2	- 550.2	13.3	- 18.3	550.2	18.3	7.19	559.71
OW563	567.67	568.02	12/5/1996	2	560.6	- 555.6	7.4	- 12.4	555.6	12.4	3.25	564.42

Table 10

**Overburden Groundwater Elevation Summary  
First Quarter 2021  
Buffalo Avenue Plant**

Well	Top of Riser Elevation	Ground Surface Elevation	Date of Installation	Riser Diameter (inches)	Screened Interval				Well Bottom		Water Level Data	
					Top (ft AMSL)	Bottom (ft AMSL)	Top (ft BGS)	Bottom (ft BGS)	Elev. of (ft AMSL)	Depth to (ft BGS)	3/19/2021 (ft BTOC)	(ft AMSL)
OW564	569.05	569.58	12/11/1996	2	560.4	- 555.4	9.2	- 14.2	555.4	14.2	4.15	564.90
OW565	568.89	569.53	12/10/1996	2	557.0	- 552.0	12.5	- 17.5	552.0	17.5	7.09	561.80
OW566	568.55	568.83	12/5/1996	2	559.4	- 554.4	9.4	- 14.4	554.4	14.4	2.29	566.26
OW567	569.12	569.15	4/23/1998	2	560.1	- 555.1	9.0	- 14.0	555.1	14.0	8.30	560.82
OW568	568.26	568.95	4/23/1998	2	560.3	- 555.3	8.7	- 13.7	555.3	13.7	7.00	561.26
OW569	567.20	567.74	4/23/1998	2	562.7	- 559.7	5.0	- 8.0	559.7	8.0	3.96	563.24
OW570	568.46	568.70	4/23/1998	2	563.6	- 560.6	5.1	- 8.1	560.6	8.1	4.78	563.68
OW571	567.80	568.52	4/24/1998	2	566.2	- 561.2	2.3	- 7.3	561.2	7.3	2.79	565.01
OW572	567.95	568.30	4/24/1998	2	565.9	- 560.9	2.4	- 7.4	560.9	7.4	2.58	565.37
OW573R <sup>(1)</sup>	573.02	573.48	6/29/2004	2	569.0	- 564.0	4.5	- 9.5	564.0	9.5	-	-
OW574 <sup>(1)</sup>	571.16	571.24	11/15/1999	2	560.8	- 555.8	10.4	- 15.4	555.8	15.4	-	-
OW575	568.40	568.45	1/15/2002	1	564.6	- 559.8	3.9	- 8.7	559.8	8.7	5.27	563.13
OW576	568.32	568.52	1/15/2002	1	565.6	- 560.9	2.9	- 7.6	560.9	7.6	2.71	565.61
OW577	567.53	567.59	1/15/2002	1	563.3	- 558.0	4.3	- 9.6	558.0	9.6	5.18	562.35
OW578 <sup>(1)</sup>	572.21	572.48	6/6/2002	1	568.6	- 564.6	3.9	- 7.9	564.6	7.9	-	-
OWG8 <sup>(1)</sup>	570.66	571.10	6/3/1986	2	566.2	- 564.2	4.9	- 6.9	564.2	6.9	-	-
WS107	573.18	573.73	7/30/1980	1.5	565.6	- 563.6	8.1	- 10.1	563.6	10.1	0.68	572.50
WS10A	572.58	569.78	1/16/1979	1.5	567.9	- 552.9	1.9	- 16.9	552.9	16.9	6.91	565.67
WS111R <sup>(1)</sup>	572.35	572.70	6/6/2002	1	568.2	- 565.2	4.5	- 7.5	565.2	7.5	-	-
WS122 <sup>(1)</sup>	571.57	572.25	7/7/1980	1.5	564.6	- 562.6	7.7	- 9.7	562.6	9.7	-	-
WS23A <sup>(1)</sup>	572.30	572.74	1/29/1979	1.5	570.5	- 565.5	2.2	- 7.2	565.5	7.2	-	-
WS25A <sup>(1)</sup>	571.10	571.67	1/26/1979	1.5	569.3	- 564.3	2.4	- 7.4	564.3	7.4	-	-
WS8A	570.10	570.20	3/19/1979	1.5	566.3	- 551.3	3.9	- 18.9	551.3	18.9	3.06	567.04
WW1	570.30	569.26	1997	NA	NA	- 545.3	NA	- 24.0	545.3	24.0	15.75	554.55
WW2	569.27	568.82	1997	NA	NA	- 553.8	NA	- 15.0	553.8	15.0	10.57	558.70
WWB	573.74	572.68	1980	NA	NA	- 556.7	NA	- 16.0	556.7	16.0	12.12	561.62

## Notes:

- ft BGS - Feet below ground surface
- ft BTOC - Feet below top of casing
- ft AMSL - Feet above mean sea level
- MH - Manhole chamber
- NA - Not applicable
- NM - Not measured
- "-" Not measured per monitoring schedule
- (1) - Annual measurements only
- (2) - Dry

Table 11

**Summary of Bedrock NAPL Monitoring and Collection  
First Quarter 2021  
Buffalo Avenue Plant**

Date	Bedrock A-Wells				S-Area Bedrock Wells in the N-Area									
	OW402A (Gallons)	OW413A (Gallons)	OW417A (Gallons)	OW401B (Gallons)	Shallow				Intermediate		Deep			
					OW229 (Gallons)	OW243 (Gallons)	OW618 (Gallons)	OW619 (Gallons)	OW620 (Gallons)	OW621 (Gallons)	OW634 (Gallons)	OW638 (Gallons)	OW635 (Gallons)	OW643 (Gallons)
February 25, 2021	--	--	--	--	NR	0.1	0.1	NR	ND	0.5	NR	3.5	NR	2
Cumulative Volume (as of December 31, 2020)	6154.05	579.75	<40.80	6.00	11.20	55.70	20.85	0.00	0.00	29.50	5.50	134.20	8.75	239.45
Cumulative Volume (as of March 31, 2021)	6154.05	579.75	<40.80	6.00	11.20	55.60	20.95	0.00	0.00	30.00	5.50	134.20	8.75	241.45
Monitoring Frequency <sup>(1)</sup>	Annual	Annual	Annual	Annual	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly	Quarterly

## Notes:

-- Not checked per schedule.

ND None detected.

NR Not recoverable

<sup>(1)</sup> Frequency revised in second quarter 2010 to reflect NYSDEC's May 4, 2010 letter.

Table 12

**Summary of Overburden NAPL Monitoring and Collection  
First Quarter 2021  
Buffalo Avenue Plant**

<b>Date</b>	<b>003 NAPL Collection Trench (Gallons)</b>	<b>OW313 (Gallons)</b>	<b>OW572 (Gallons)</b>	<b>OW317 (Gallons)</b>	<b>OW320 (Gallons)</b>	<b>OW358 (Gallons)</b>	<b>OW523 (Gallons)</b>	<b>OW562 (Gallons)</b>	<b>OW563 (Gallons)</b>	<b>TW-7 (Gallons)</b>	<b>OW306 (Gallons)</b>	<b>BH8-89 (Gallons)</b>	<b>OW564 (Gallons)</b>	<b>OW537 (Gallons)</b>	<b>OW577 (Gallons)</b>	<b>Energy Boulevard Drain Tile System (Gallons)</b>
February 1, 2021	ND	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
March 19, 2021	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NR
Subtotal (Third Quarter)	0.00	0.30	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cumulative volume (as of December 31, 2021)	959.75	46.10	38.83	0.21	1.50	0.50	0.30	0.00	9.00	0.56	0.00	0.00	0.00	0.00	0.25	6011.25
Cumulative volume (as of March 31, 2021)	959.75	46.10	38.83	0.21	1.50	0.50	0.30	0.00	9.00	0.56	0.00	0.00	0.00	0.00	0.25	6011.25
Monitoring Frequency <sup>(1)</sup>	Quarterly	Semiannual	Semiannual	Annual	Annual	Annual	Annual	Annual	Annual	Annual	Annual	Annual	Annual	Annual	Annual	Quarterly

## Notes:

-- Not checked per schedule.

ND - None detected.

NR - Not recoverable.

<sup>(1)</sup> Frequency revised in second quarter 2010 to reflect NYSDEC's May 4, 2010 letter.