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June 27, 2022

Mr. Payson Long
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7013

Re: **Groundwater Monitoring Report**
**Liberty Industrial Finishing Site, NYSDEC #152108**
**500-550 Suffolk Avenue, Brentwood, NY**
**FPM File #1389g-22-03**

Dear Payson:

FPM Group, Ltd. (FPM) has prepared this report on behalf of 550 Liberty Plaza, LLC to document the recent groundwater monitoring activities at the above-referenced property conducted in accordance with the New York State Department of Environmental Conservation (NYSDEC)-approved Site Management Plan (SMP) and our more recent correspondence. The locations of the wells previously used for long-term groundwater monitoring are denoted in red on the attached site plan. However, for this monitoring event we confirmed with you that the only wells required to be sampled were onsite wells MW-02 through MW-06 located along the south property line. The groundwater monitoring procedures and results are documented below. All procedures were in accordance with the Site Management Plan (SMP) and associated documents, and all monitoring work was performed by FPM environmental professionals (EPs).

**Groundwater Monitoring Procedures**

FPM performed a site visit on April 11, 2022 to locate the onsite wells and verify their condition for sampling. Well MW-01R (not targeted for sampling) was identified and found to be secure and operable. Wells MW-05 and MW0-6 (both to be sampled) were also located. These wells have steel standpipe completions, which were somewhat damaged but remain protective of the well casings, and both these wells were determined to be operable. Wells MW-02, MW-03, and MW-04 could not be located. However, this well area had become overgrown and partially covered by soil, which may have obscured the well locations. Wells MW-7 and MW-17 were also not located, but two surface-completed manholes that had become detached from wells were found in this area and it was concluded that these wells had likely been destroyed. Photographs of the intact and damaged wells are included in a photolog in Attachment A.

Additional efforts to locate wells MW-02, MW-03, and MW-04 were made during the April 28, 2022 groundwater monitoring event and during subsequent soil remediation activities in the asphalt-capped area adjoining the well locations. These efforts included using a prior survey to measure the locations accurately relative to MW-01R and then searching each well location carefully, clearing additional overgrown vegetation and surface soil in the well areas, and using a magnetic locating device to search for the steel manholes. Despite these efforts, the wells were not located. One damaged manhole cover was identified and the asphalt in part of this area was noted to be broken up. These observations suggest that these three wells may also have been destroyed. This well area will be examined again during site redevelopment activities in a further effort to locate these wells.

Groundwater monitoring was conducted on April 28, 2022, following notification to the NYSDEC via email on April 26. At each well to be sampled the depth to groundwater and the depth of the well were measured and the minimum volume of groundwater to be purged was calculated. Purging was conducted using a decontaminated stainless steel submersible pump and water quality parameters (pH, conductivity, temperature, and turbidity) were measured. In particular, purging was conducted until the turbidity level was well below 50 NTU as the NYSDEC had directed that the samples could not be filtered. Well sampling data forms documenting the purging procedures and measurements are included in Attachment B.

Following purging each sample was collected into laboratory-provided containers, which were labeled as to the sample name, date and time of sampling, sampler initials, and analyses to be performed. The filled sample containers were placed into a cooler with ice and a chain of custody form was completed to document the sequence of sample possession. At the end of the sampling event, the filled cooler was transported to FPM's office for pickup by a laboratory courier.

Quality assurance/quality control (QA/QC) samples were also collected in accordance with the SMP. QA/QC samples included one blind duplicate sample, one matrix spike/matrix spike duplicate (MS/MSD) sample, and one equipment blank sample.

The groundwater and QA/QC samples were managed under chain of custody and transmitted to Alpha Analytical's Westborough, MA lab, which is New York State Department of Health ELAP-certified for the analyses that were performed. The samples were tested for Target Analyte List (TAL) metals, including mercury, as required in the SMP. The lab data were provided to FPM in Category B deliverables, together with information needed for upload to the NYSDEC's data management system.

FPM reviewed the laboratory data package and compared the groundwater sample results to the NYSDEC's Class GA Ambient Water Quality Standards (Standards). FPM also prepared a Data Usability Summary Report (DUSR) to evaluate data quality, as required in the SMP. As documented in the DUSR (Attachment C), no significant issues were identified with data quality and the data can be relied on for their intended purpose. The sample information is in the process of being uploaded to the NYSDEC's EIMS.

**Groundwater Monitoring Results**

The sample results from this monitoring event are presented on Table 1 and compared to the NYSDEC Standards. The data from the two most recent prior sampling events are also shown on this table for comparison purposes. The results for the metals of interest for this site are highlighted in red on this table and exceedances of the NYSDEC Class GA Ambient Water Quality Standards (Standards) are noted in bold type (and shaded for the metals of interest).

For MW-5 (shallow well), the following observations were noted:

- Cadmium and chromium were detected in the primary and duplicate samples at levels somewhat above their Standards. Copper, nickel and zinc were also detected in the primary and duplicate samples, but at levels below their Standards.

- The most recent prior data show no detections for copper, nickel or zinc in this well, one detection of cadmium (below its Standard) and one detection for chromium above its Standard. The two detections were noted in an unfiltered sample and the results from the corresponding filtered

sample were non-detect, indicating that these metals were not dissolved in the groundwater at detectable levels and the detections likely resulted from sample turbidity.

- Prior historic results for this well dating back to 2006 (previously documented in the July 29, 2020 groundwater monitoring report) were very similar to the 2018 and 2019 results.

- We note that there was some turbidity (20 NTU) in the unfiltered MW-5 and MW-55 samples collected during this sampling event and it is possible that the somewhat higher levels of metals detections in this well, compared to prior events, resulted from the effect of some turbidity in the samples. Collectively, these results indicate that although detections of site-related metals are usually noted in shallow groundwater at this location, the levels are typically below or slightly above the Standards.

For MW-6 (deep well), the following observations were noted:

- Very low levels of cadmium and chromium, well below their Standards, were noted in the sample from this well. Copper, nickel and chromium were not detected. No detectable turbidity was noted in this well following purging.

- The most recent prior data show no detections of any of the site-related metals in this well.

- Prior historic results for this well dating back to 2006 were very similar to the more recent results.

- Collectively, these results indicate that site-related metals impacts are generally absent in deep groundwater at this location.

**Discussion**

Although wells MW-2, MW-3 and MW-4 could not be located for sampling, the recent and older historic data were reviewed to evaluate shallow groundwater conditions at these locations, which are identified as in the onsite source area. Representative sample results for these wells are shown on Table 2.

For MW-2 the following observations were noted:

- The most recent prior data show no detections of site-related metals in this well. Older results (2011 and prior) show occasional detections of cadmium at levels just above the NYSDEC Standard of 5 micrograms per liter (ug/l) and chromium at levels just above the NYSDEC Standard of 50 ug/l. None of the detections of copper, nickel or zinc exceeded Standards.

- Collectively, these results indicate that site-related metals impacts that were formerly detected at low levels in this well have not been present above applicable regulatory criteria since at least 2015. Based on these observations, continued monitoring of this well is not anticipated to provide any further useful information to assess site-related groundwater impacts.

For MW-3 the following observations were noted:

- The most recent prior data show no detections of copper, nickel or zinc in this well above NYSDEC Standards. Older prior data are consistent with these more recent results. Cadmium was detected during several recent events at levels just above the NYSDEC Standard (maximum of

8.5 ug/l in filtered samples); older results are similar. Although chromium was detected during some sampling events at levels ranging up to 103 ug/l (filtered samples), the data from 2016 and more recently show only one detection of chromium (56 ug/l) in the filtered samples – all the other filtered samples showed no chromium detections. Data from 2015 and earlier generally show more elevated chromium levels in the filtered samples.

- Collectively, these results indicate that site-related cadmium and chromium impacts that were formerly detected in this well have decreased in recent years and are now generally low. Based on these observations, continued monitoring of this well is not anticipated to provide any further significant information to assess site-related groundwater impacts.

. For MW-4 the following observations were noted:

- The most recent prior data show no detections of copper, nickel or zinc in this well above NYSDEC Standards. Older prior data are consistent with these more recent results. Cadmium was detected during several recent events at levels somewhat above the NYSDEC Standard (maximum of 83 ug/l in filtered samples); older results are similar. Chromium has been detected during both recent and historic sampling events in filtered samples at levels somewhat above its Standard. There does not appear to be any discernable trend in the chromium levels, which have ranged from non-detect to 142 ug/l.

- Collectively, these results indicate that site-related cadmium and chromium impacts remain present in this well at levels that have not changed appreciably since at least 2011. Based on these observations, continued monitoring of this well is not anticipated to provide any further significant information to assess site-related groundwater impacts.

To further assess potential changes in groundwater quality related to the onsite source area, the data from downgradient shallow well MW-10 and deep well MW-16 were reviewed, as shown on Table 2, with the following observations noted:

- At MW-10 there have been no reported detections of copper, nickel or zinc. Cadmium and chromium have been detected in this well at levels somewhat above their Standards since at least 2012, with no significant changes in concentrations noted.

- At MW-16 there have been no reported detections of chromium, copper, nickel or zinc since at least 2013. Cadmium has been detected a few times at levels just above its Standard (maximum of 5.7 ug/l).

These results indicate that groundwater conditions downgradient of the source area appear to be static, with no significant changes noted from year to year.

**Conclusions and Recommendations**

Shallow well MW-5 contained cadmium and chromium at levels somewhat above their Standards. Some turbidity was noted in the sample, and a comparison to historic data from this well suggests that at least some of the metals detected could have resulted from sample turbidity. Overall, the current and historic results do not show any appreciable change in groundwater quality over time. Continued monitoring of this well is not anticipated to provide any further significant information to assess site-related groundwater impacts.

Site-related metals impacts are generally absent in groundwater in deep well MW-6 and the 2022 results are consistent with this observation.

Wells MW-2, MW-3 and MW-4 were not located, despite multiple efforts to identify these wells. An assessment of the historic groundwater monitoring results from these wells suggests that continued groundwater monitoring at these locations is not anticipated to provide any significant new data.

We note that the remaining source area has been capped since 2001 (over 20 years). The cap was recently removed for redevelopment, additional source soil was removed and disposed, and the cap will be re-established during construction. These activities are not anticipated to result in any significant changes to groundwater conditions. Downgradient monitoring wells MW-10 and MW-16 provide supporting our understanding that groundwater conditions downgradient of the source area appear to be static, with no significant changes noted from year to year.

We recommend that groundwater monitoring be discontinued for this site as further monitoring is not anticipated to provide any significant new data concerning groundwater conditions in immediate proximity to the source area, which adjoins the downgradient (south) side of the site. The remaining monitoring wells (MW-5, MW-6 and MW-1A) should be properly abandoned in conjunction with redevelopment.

I can be reached at (631) 737-6200, ext. 528 if you have any questions.

Very truly yours,

Stephanie O. Davis, P.G.

Stephanie O. Davis, PG
Senior Project Manager
Vice President

Cc: Aaron Daniels, 550 Liberty Plaza, LLC
Barry Cohen, Esq.

Attachments
SOD/sod
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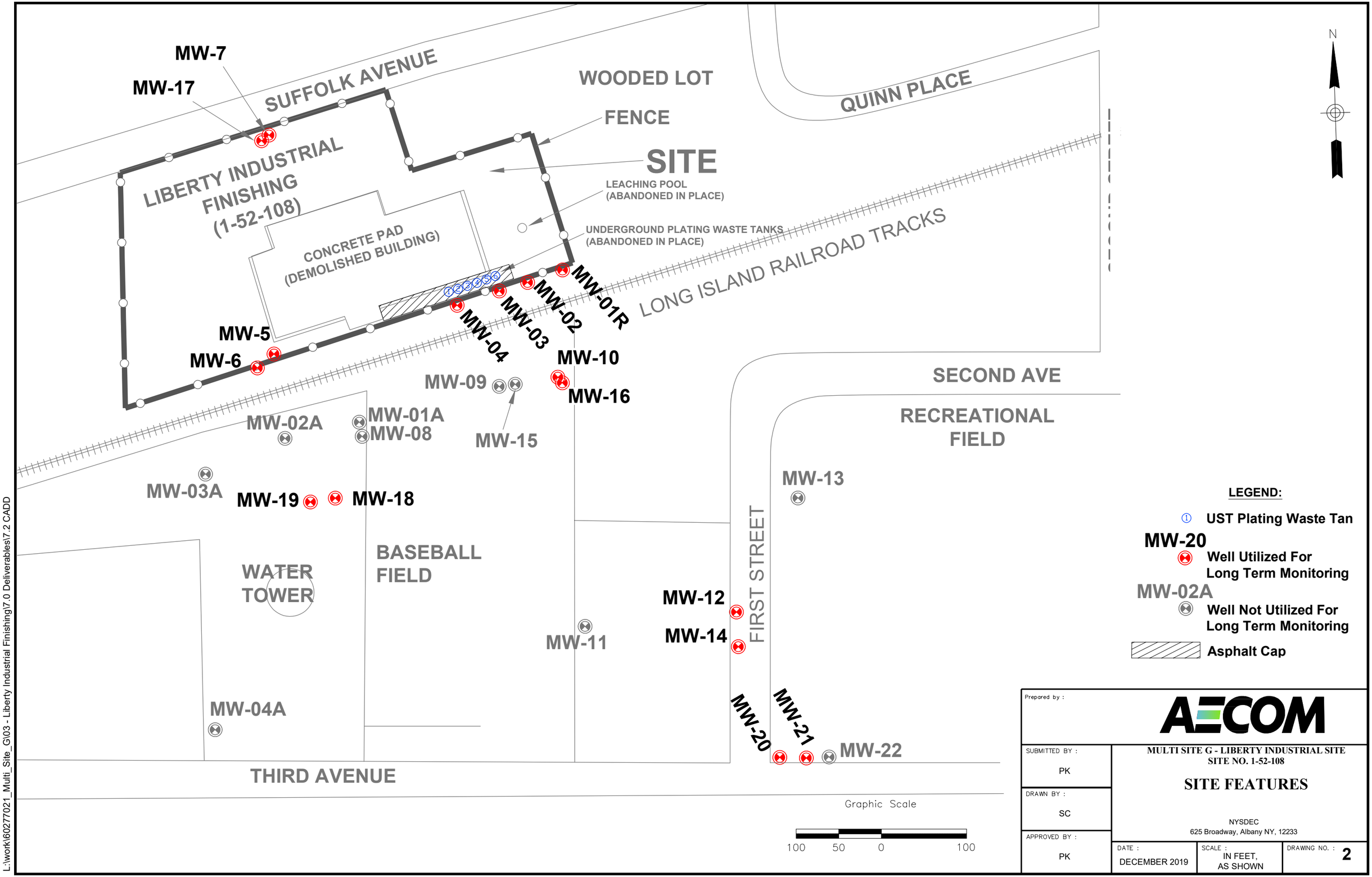
FPM




Prepared by : AECOM

| | |
|---|---|
| SUBMITTED BY : PK | MULTI SITE G - LIBERTY INDUSTRIAL SITE<br>SITE NO. 1-52-108 |
| DRAWN BY : SC | SITE FEATURES |
| APPROVED BY : PK | NYSDEC<br>625 Broadway, Albany NY, 12233 |
| DATE : DECEMBER 2019 | SCALE : IN FEET, AS SHOWN |
| DRAWING NO. : 2 | |

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**Table 1**
**Groundwater Chemical Analytical Results - MW-5**
**Liberty Industrial Finishing Site**
**2018 Through 2022 Sampling Events**

| Sample Location | NYSDEC Class GA Ambient Water Quality Standards [1] | MW-5 | | | | | MW-55 |
|---|---|---|---|---|---|---|---|
| | | | | | | | Duplicate of MW-5 |
| Well Depth (feet) | | 50.0 | | | | | |
| Sampling Date: | | 11/14/2018 | | 12/9/2019 | | 4/28/2022 | |
| Sample Type: | | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Unfiltered |
| Target Analyte List Metals by USEPA Method 6010 in ug/L | | | | | | | |
| Aluminum | NS | ND | ND | 410 | ND | 667 | 625 |
| Antimony | 3 | ND | ND | ND | ND | 0.47 J | ND |
| Aresenic | 25 | ND | ND | ND | ND | 0.50 | 0.54 |
| Barium | 1000 | ND | ND | ND | ND | 71.78 | 72.26 |
| Beryllium | 3 | ND | ND | ND | ND | ND | ND |
| Cadmium | 5 | ND | ND | 2.7 | ND | **16.37** | **15.50** |
| Calcium | NS | 20,000 | 20,000 | 23,000 | 21,000 | 30,300 | 29,400 |
| Chromium | 50 | ND | ND | **110** | ND | **143.3** | **123.9** |
| Cobalt | NS | ND | ND | ND | ND | 0.77 | 1.78 |
| Copper | 200 | ND | ND | ND | ND | 14.47 | 16.27 |
| Iron | 300 | ND | ND | **530** | **530** | **1,810** | **1,960** |
| Lead | 25 | ND | ND | ND | ND | 13.79 | 16.76 |
| Magnesium | 35000 | ND | ND | ND | ND | 4,070 | 3,820 |
| Manganese | 300 | ND | ND | ND | ND | 32.26 | 37.11 |
| Mercury | 0.7 | ND | ND | ND | ND | 0.1 J | 0.10 J |
| Nickel | 100 | ND | ND | ND | ND | 7.67 | 9.81 |
| Potassium | NS | 7,800 | 7,700 | ND | ND | 4,740 | 4,800 |
| Selenium | 10 | ND | ND | ND | ND | ND | ND |
| Sliver | 50 | ND | ND | ND | ND | ND | ND |
| Sodium | 20000 | 10,000 | 11,000 | 16,000 | 16,000 | 11,500 | 11,300 |
| Thallium | 0.5 | ND | ND | ND | ND | ND | 0.26 J |
| Vanadium | NS | ND | ND | ND | ND | 1.57 J | ND |
| Zinc | 2000 | ND | ND | ND | ND | 64.37 | 75.72 |

**Notes:**
(1) 6NYCRR Part 703.5 GA Groundwater Quality Standards (GQS) and Guidance Values (GV) 6/1998
NS - No Standard
ND - Not Detected
Groundwater Contaminant of Concern

# Table 1 (Continued)
# Groundwater Chemical Analytical Results - MW-6
# Liberty Industrial Finishing Site
# 2018 Through 2022 Sampling Events

| Sample Location | NYSDEC Class GA Ambient Water Quality Standards [1] | MW-6 | | | | |
|---|---|---|---|---|---|---|
| Well Depth (feet) | | 265.0 | | | | |
| Sampling Date: | | 11/14/2018 | | 12/9/2019 | | 4/28/2022 |
| Sample Type: | | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered |
| Target Analyte List Metals by USEPA Method 6010 in ug/L | | | | | | |
| Aluminum | NS | ND | ND | ND | ND | 68.6 |
| Antimony | 3 | ND | ND | ND | ND | ND |
| Aresenic | 25 | ND | ND | ND | ND | ND |
| Barium | 1000 | ND | ND | ND | ND | 10.88 |
| Beryllium | 3 | ND | ND | ND | ND | ND |
| Cadmium | 5 | ND | ND | ND | ND | 0.28 |
| Calcium | NS | 9,800 | 9,500 | 12,000 | 11,000 | 7,540 |
| Chromium | 50 | ND | ND | ND | ND | 0.69 J |
| Cobalt | NS | ND | ND | ND | ND | ND |
| Copper | 200 | ND | ND | ND | ND | ND |
| Iron | 300 | ND | ND | **320** | **320** | 132 |
| Lead | 25 | ND | ND | ND | ND | ND |
| Magnesium | 35000 | ND | ND | ND | ND | 2,620 |
| Manganese | 300 | ND | ND | ND | ND | 4.23 |
| Mercury | 0.7 | ND | ND | ND | ND | ND |
| Nickel | 100 | ND | ND | ND | ND | ND |
| Potassium | NS | ND | ND | ND | ND | 674 |
| Selenium | 10 | ND | ND | ND | ND | ND |
| Sliver | 50 | ND | ND | ND | ND | ND |
| Sodium | 20000 | 11,000 | 11,000 | 11,000 | 11,000 | 8,230 |
| Thallium | 0.5 | ND | ND | ND | ND | 0.28 J |
| Vanadium | NS | ND | ND | ND | ND | ND |
| Zinc | 2000 | ND | ND | ND | ND | ND |

**Notes:**
(1) 6NYCRR Part 703.5 GA Groundwater Quality Standards (GQS) and Guidance Values (GV) 6/1998
NS - No Standard
ND - Not Detected
Groundwater Contaminant of Concern

# Table 2
## Prior Groundwater Chemical Analytical Results - MW-2
## Liberty Industrial Finishing Site
## May 2011 Through December 2019 Sampling Events

| Sample Location | NYSDEC Class GA Ambient Water Quality Standards [1] | MW-2 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wel Depth (feet) | | 54.2 | | | | | | | | | | | |
| Sampling Date: | | 5/26/2011 | | 8/23/2012 | | 11/16/2013 | | 3/18/2015 | | 11/14/2018 | | 12/9/2019 | |
| Sample Type: | | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered |
| **Target Analyte List Metals by USEPA Method 6010 in ug/L** | | | | | | | | | | | | | |
| **Aluminum** | NS | 118 B | ND | 602 | ND | ND | ND | 1,200 | ND | ND | ND | ND | ND |
| **Antimony** | 3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Aresenic** | 25 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Barium** | 1000 | 44.6 B | 44.9 B | 39.8 B | 31.9 B | ND | ND | ND | ND | ND | ND | ND | ND |
| **Beryllium** | 3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Cadmium** | 5 | ND | **5.5** | 3.5 B | 2.7 B | ND | ND | ND | ND | ND | ND | ND | ND |
| **Calcium** | NS | 16,300 | 16,700 | 20,400 | 21,500 | 30,000 | 29,000 | 16,000 | 15,000 | 22,000 | 21,000 | 23,000 | 25,000 |
| **Chromium** | 50 | **51.9** | 48.2 | 26.7 | 12.0 B | **62.0** | **59.0** | ND | ND | ND | ND | ND | ND |
| **Cobalt** | NS | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Copper** | 200 | ND | ND | 14.4 B | 4.2 B | ND | ND | ND | ND | ND | ND | ND | ND |
| **Iron** | 300 | 205 | ND | **853** | ND | ND | ND | **1,700** | ND | ND | ND | ND | ND |
| **Lead** | 25 | ND | ND | ND | ND | ND | ND | 10.0 | ND | ND | ND | ND | ND |
| **Magnesium** | 35000 | 3,180 | 3,250 | 3,720 | 3,870 | ND | ND | ND | ND | ND | ND | ND | ND |
| **Manganese** | 300 | ND | ND | 17.7 B | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Mercury** | 0.7 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Nickel** | 100 | ND | 2.7 B | 4.6 B | 3.3 B | ND | ND | ND | ND | ND | ND | ND | ND |
| **Potassium** | NS | 2,720 | 2,610 | 1,710 E | 1,660 | ND | ND | ND | ND | ND | ND | ND | ND |
| **Selenium** | 10 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Sliver** | 50 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Sodium** | 20000 | **21,300** | **22,400** | **21,400** | **22,900** | 15,000 | 16,000 | 9,600 | 9,700 | 14,000 | 14,000 | 9,400 | 10,000 |
| **Thallium** | 0.5 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Vanadium** | NS | ND | ND | 1.4 B | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Zinc** | 2000 | ND | 24.8 | 51.0 | 26.1 B | ND | ND | ND | ND | ND | ND | ND | ND |

**Notes:**

(1) 6NYCRR Part 703.5 GA Groundwater Quality Standards (GQS) and Guidance Values (GV) 6/1998

NS - No Standard

ND - Not Detected

B- Estimated Value

Groundwater Contaminant of Concern

**Table 2 (Continued)**
**Prior Groundwater Chemical Analytical Results - MW-3**
**Liberty Industrial Finishing Site**
**May 2011 Through December 2019 Sampling Events**

| Sample Location | NYSDEC Class GA Ambient Water Quality Standards [1] | MW-3 | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Well Depth (feet) | | 53.9 | | | | | | | | | | | | | | | |
| Sampling Date: | | 5/26/2011 | | 8/23/2012 | | 11/14/2013 | | 3/18/2015 | | 5/11/2016 | | 9/13/2017 | | 11/14/2018 | | 12/9/2019 | |
| Sample Type: | | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered |
| **Target Analyte List Metals by USEPA Method 6010 in ug/L** | | | | | | | | | | | | | | | | | |
| **Aluminum** | NS | 346 | ND | 360 | ND | 470 | ND | 1,400 | ND | 330 | ND | 240 | ND | 730 | ND | ND | ND |
| **Antimony** | 3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Aresenic** | 25 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Barium** | 1000 | 19.1 B | 18.1 B | 28.9 B | 27.9 B | ND | ND | ND | ND | ND | ND | ND | ND | 65 | ND | ND | ND |
| **Beryllium** | 3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Cadmium** | 5 | **6.6** | 4.6 B | 3.0 B | 2.8 B | 4.7 | 3.5 | 4.2 | 2.4 | ND | **5.8** | **9.6** | **8.5** | **5.0** | 3.8 | 2.7 | ND |
| **Calcium** | NS | 16,900 | 16,800 | 28,600 | 29,400 | 29,000 | 27,000 | 16,000 | 16,000 | 26,000 | 25,000 | 23,000 | 23,000 | 17,000 | 16,000 | 23,000 | 24,000 |
| **Chromium** | 50 | **59.6** | 32.6 | **118** | **103** | **140** | **95.0** | **170** | **61.0** | **97.0** | ND | **67.0** | ND | **52.0** | ND | **57.0** | **56.0** |
| **Cobalt** | NS | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Copper** | 200 | 45.5 | 11.7 B | 14.2 B | 6.5 B | ND | ND | ND | ND | ND | ND | ND | ND | 58.0 | ND | ND | ND |
| **Iron** | 300 | **462** | ND | **414** | 45.4 B | **650** | ND | **1,800** | ND | **700** | ND | **350** | ND | **1,000** | ND | **430** | **370** |
| **Lead** | 25 | 14.1 | ND | ND | ND | 8.5 | ND | 18.0 | ND | 7.2 | ND | 3.9 | ND | 12.0 | ND | ND | ND |
| **Magnesium** | 35000 | 2,710 | 2,760 | 5,100 | 5,180 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Manganese** | 300 | 11.8 B | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Mercury** | 0.7 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Nickel** | 100 | ND | 4.3 B | 3.8 B | 3.4 B | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Potassium** | NS | 1,950 | 1,770 | 2,560 E | 2,480 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Selenium** | 10 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Sliver** | 50 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Sodium** | 20000 | 12,400 | 13,200 | **30,800** | **31,000** | **38,000** | **35,000** | **24,000** | **26,000** | **26,000** | **25,000** | **32,000** | **33,000** | **25,000** | **23,000** | **35,000** | **36,000** |
| **Thallium** | 0.5 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Vanadium** | NS | 1.4 B | ND | 1.1 B | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Zinc** | 2000 | 54.9 | 40.4 B | 19.6 B | 19.3 B | ND | ND | 61.0 | ND | ND | ND | ND | ND | ND | 63.0 | ND | ND |

**Notes:**
(1) 6NYCRR Part 703.5 GA Groundwater Quality Standards (GQS) and Guidance Values (GV) 6/1998
NS - No Standard
ND - Not Detected
B- Estimated Value
Groundwater Contaminant of Concern

**Table 2 (Continued)**

**Prior Groundwater Chemical Analytical Results - MW-4**

**Liberty Industrial Finishing Site**

**May 2011 Through December 2019 Sampling Events**

| Sample Location | NYSDEC Class GA Ambient Water Quality Standards [1] | MW-4 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Well Depth (feet) | | 53.4 | | | | | | | | | | | |
| Sampling Date: | | 5/26/2011 | | 8/23/2012 | | 11/4/2013 | | 3/18/2015 | | 11/14/2018 | | 12/9/2019 | |
| Sample Type: | | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered |
| **Target Analyte List Metals by USEPA Method 6010 in ug/L** | | | | | | | | | | | | | |
| **Aluminum** | NS | 2,560 | ND | 1,980 | 1,130 | 310 | ND | 2,200 | ND | 1,400 | ND | 940 | 330 |
| **Antimony** | 3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Aresenic** | 25 | 4.8 B | ND | 6.4 B | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Barium** | 1000 | 27.1 B | 13.2 B | 22.8 B | 21.6 B | ND | ND | ND | ND | ND | ND | ND | ND |
| **Beryllium** | 3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Cadmium** | 5 | **54.2** | **19.8** | **28.2** | **27.3** | **26.0** | **21.0** | **20.0** | **11.0** | **98.0** | **83.0** | **47.0** | **46.0** |
| **Calcium** | NS | 14,200 | 12,300 | 18,700 | 19,600 | 33,000 | 30,000 | 8,400 | 8,300 | 33,000 | 29,000 | 25,000 | 25,000 |
| **Chromium** | 50 | **176** | **142** | **74.9** | **58.7** | ND | ND | **53.0** | ND | **100** | ND | **110** | **85.0** |
| **Cobalt** | NS | 3.3 B | 2.6 B | 0.73 B | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Copper** | 200 | ND | 43.5 | 69.7 | 58.9 | ND | ND | 60.0 | ND | 110 | 56.0 | 61.0 | ND |
| **Iron** | 300 | **2,660** | 109 B | **2,000** | **1,110** | **320** | ND | **2,200** | ND | **1,400** | **340** | **1,100** | **380** |
| **Lead** | 25 | 43.2 | ND | 15.5 | 9.8 B | ND | ND | 22.0 | ND | 15.0 | 3.1 | 11.0 | 4.5 |
| **Magnesium** | 35000 | 1,710 | 1,270 | 2,770 | 2,870 | ND | ND | ND | ND | ND | ND | ND | ND |
| **Manganese** | 300 | 47.1 B | 12.3 B | 18.4 B | 14.4 B | ND | ND | ND | ND | ND | ND | ND | ND |
| **Mercury** | 0.7 | 0.036 B | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Nickel** | 100 | ND | 12.8 B | 17.5 B | 15.8 B | ND | ND | ND | ND | ND | ND | ND | ND |
| **Potassium** | NS | 6,600 | 6,790 | 2,340 E | 2,460 | ND | ND | ND | ND | 6,300 | 5,100 | 6,600 | 6,700 |
| **Selenium** | 10 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Sliver** | 50 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Sodium** | 20000 | **26,100** | **29,100** | 13,400 | 14,400 | **21,000** | **21,000** | ND | ND | 9,600 | 8,300 | 12,000 | 13,000 |
| **Thallium** | 0.5 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Vanadium** | NS | 7.0 B | 1.2 B | 4.9 B | 3.2 B | ND | ND | ND | ND | ND | ND | ND | ND |
| **Zinc** | 2000 | 97 | 109 | 257 | 220 | 160 | 130 | 220 | 97.0 | 430 | 260 | 240 | 180 |

**Notes:**

(1) 6NYCRR Part 703.5 GA Groundwater Quality Standards (GQS) and Guidance Values (GV) 6/1998

NS - No Standard

ND - Not Detected

B- Estimated Value

Groundwater Contaminant of Concern

## Table 2 (continued)
## Prior Groundwater Chemical Analytical Results - MW-10
## Liberty Industrial Finishing Site
## November 2013 Through December 2019 Sampling Events

| Sample Location | NYSDEC Class GA Ambient Water Quality Standards [1] | MW-10 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wel Depth (feet) | | 50.0 | | | | | | | | | | | |
| Sampling Date: | | 11/4/2013 | | 3/19/2015 | | 5/9/2016 | | 9/14/2017 | | 11/12/2018 | | 12/10/2019 | |
| Sample Type: | | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered |
| **Target Analyte List Metals by USEPA Method 6010 in ug/L** | | | | | | | | | | | | | |
| **Aluminum** | NS | 210 | ND | ND | ND | ND | ND | 770 | ND | ND | ND | ND | ND |
| **Antimony** | 3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Aresenic** | 25 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Barium** | 1000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Beryllium** | 3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Cadmium** | 5 | **49.0** | **50.0** | **42.0** | **33.0** | **53.0** | **57.0** | **80.0** | **72.0** | **57.0** | **60.0** | **73.0** | **69.0** |
| **Calcium** | NS | 28,000 | 28,000 | 22,000 | 20,000 | 22,000 | 22,000 | 18,000 | 18,000 | 29,000 | 27,000 | 30,000 | 27,000 |
| **Chromium** | 50 | **140** | **140** | **92.0** | **83.0** | **130** | **130** | **82.0** | **81.0** | **120** | **110** | **180** | **160** |
| **Cobalt** | NS | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Copper** | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Iron** | 300 | **420** | ND | **410** | ND | ND | ND | **2200** | ND | ND | ND | **460** | ND |
| **Lead** | 25 | ND | ND | ND | ND | ND | ND | 11.0 | ND | ND | ND | 3.0 | ND |
| **Magnesium** | 35000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Manganese** | 300 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Mercury** | 0.7 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Nickel** | 100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Potassium** | NS | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 5300 | ND |
| **Selenium** | 10 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Sliver** | 50 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Sodium** | 20000 | 9,200 | 9,300 | 12,000 | 13,000 | 18,000 | 18000 | 11,000 | 11,000 | 13,000 | 12,000 | 13,000 | 12,000 |
| **Thallium** | 0.5 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Vanadium** | NS | ND | ND | 1.4 B | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Zinc** | 2000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

**Notes:**

(1) 6NYCRR Part 703.5 GA Groundwater Quality Standards (GQS) and Guidance Values (GV) 6/1998

NS - No Standard

ND - Not Detected

B- Estimated Value

Groundwater Contaminant of Concern

## Table 2 (Continued)
## Prior Groundwater Chemical Analytical Results - MW-16
## Liberty Industrial Finishing Site
## November 2013 Through December 2019 Sampling Events

| Sample Location | NYSDEC Class GA Ambient Water Quality Standards [1] | MW-16 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wel Depth (feet) | | 99.2 | | | | | | | | | | | |
| Sampling Date: | | 11/4/2013 | | 3/19/2015 | | 5/9/2016 | | 9/14/2017 | | 11/12/2018 | | 12/10/2019 | |
| Sample Type: | | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered | Unfiltered | Filtered |
| **Target Analyte List Metals by USEPA Method 6010 in ug/L** | | | | | | | | | | | | | |
| **Aluminum** | NS | 1400 | 440 | ND | ND | 1200 | 370 | 1,200 | 380 | 2,900 | 400 | 620 | 410 |
| **Antimony** | 3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Aresenic** | 25 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Barium** | 1000 | 230 | 240 | ND | ND | 180 | 160 | 140 | 140 | 170 | 160 | 190 | 180 |
| **Beryllium** | 3 | 1.5 | 1.2 | ND | ND | ND | ND | ND | ND | 1.0 | ND | ND | ND |
| **Cadmium** | 5 | 4.4 | 3.9 | 3.9 | 3.4 | 4.2 | 4.1 | **5.2** | **5.1** | **5.5** | **5.7** | **5.2** | 4.4 |
| **Calcium** | NS | 9,800 | 10,000 | 14,000 | 12,000 | 11,000 | 10,000 | 10,000 | 11,000 | 11,000 | 12,000 | 13,000 | 12,000 |
| **Chromium** | 50 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Cobalt** | NS | ND | ND | ND | ND | ND | ND | 58.0 | 50.0 | 2.2 | ND | ND | ND |
| **Copper** | 200 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Iron** | 300 | **1800** | ND | ND | ND | **1600** | ND | **1800** | ND | **4,000** | ND | **480** | ND |
| **Lead** | 25 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Magnesium** | 35000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Manganese** | 300 | **570** | **530** | **380** | **350** | **700** | **580** | **900** | **880** | **1200** | **1100** | **1400** | **1300** |
| **Mercury** | 0.7 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Nickel** | 100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Potassium** | NS | 5100 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Selenium** | 10 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Sliver** | 50 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Sodium** | 20000 | 11,000 | 11,000 | 10,000 | 10,000 | 11,000 | 11000 | 11,000 | 11,000 | 12,000 | 12,000 | 12,000 | 12,000 |
| **Thallium** | 0.5 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Vanadium** | NS | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| **Zinc** | 2000 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

**Notes:**
(1) 6NYCRR Part 703.5 GA Groundwater Quality Standards (GQS) and Guidance Values (GV) 6/1998
NS - No Standard
ND - Not Detected
B- Estimated Value
Groundwater Contaminant of Concern

# ATTACHMENT A

# PHOTOLOG

FPM

# Liberty Industrial Finishing Site, NYSDEC Site #152108
# 500-550 Suffolk Avenue, Brentwood, NY
# Photolog of Well Conditions

**Below: Well MW-01R**. This well was found to be intact with the lid secured. The well was sounded and found to be fully open.

**Below: Well MW-05**. This well was found to be undamaged, although the lid of the steel casing could no longer be secured and appeared to have been broken off forcibly to obtain access to the well. The well cap was also missing. The well was sounded and found to be fully open.

**Below: Well MW-06**. This well was found to be undamaged, although the lid of the steel casing was missing and appeared to have been broken off forcibly to obtain access to the well. The well cap was also missing, although tubing from prior sampling events remained present in the well. The well was sounded and found to be fully open.

**Below and Next Page: Well MW-07 or MW-17?**. Two manholes set in concrete were found in the area where wells MW-07 and MW-17 were formerly located. No other indications of these former wells were identified. It appears that these manhole covers were broken off from their original locations.

**Below: Well MW-07 or MW-17?**.

Wells MW-02, MW-03 and MW-04 could not be identified during a diligent search. The area where these wells were located will be observed during upcoming redevelopment activities and if the wells are located they will be marked for retention, as feasible.

# ATTACHMENT B

# WELL SAMPLING FORMS

FPM

# WELL SAMPLING DATA FORM

0053

Project: 550 Liberty Plaza

Location: 550 Suffolk Ave

Well No.: MW-5 Well Diameter: 4in

Date: 4/28/22 Start Time: 08:53

Weather: Clear, 51° F Finish Time: 08:57

Sampled By: JS/CD

Depth to Bottom of Well: 50.0 Feet.

Depth to Water: 48.98 Feet.

Height of Water Column: 1.02 Feet.

Water Volume in Casing: 0.6 Gallons.

Water Volume to be Purged: 1.9 Gallons.

Water Volume Actually Purged: 2 Gallons.

Purge Method: Submersible Pump

Physical Appearance/Comments: Standpipe (Water was mostly clear with some very minor floating ~~spe~~ particles)

FIELD MEASUREMENTS:

| Time | Gallons | pH | Cond. (uS) | Temp. (°F) | Turbidity (NTU) |
|---|---|---|---|---|---|
| 08:57 | 2 | 6.71 | 1303 | 54.9 | 20.10 |
| | | | | | |
| | | | | | |
| | | | | | |

Sampling and Analytical Methods: TAL Metals

Laboratory Name and Location: Alpha Analytical, Westborough, MA 01581
8 Walkup Drive



FPM

.653

## WELL SAMPLING DATA FORM

Project: 550 Liberty Plaza

Location: 550 Suffolk Ave

Well No.: MW-6 Well Diameter: 4 inch

Date: 4/28/22 Start Time: 9:45 am

Weather: Clear, 51° Finish Time: 10:45

Sampled By: JS / CD

Depth to Bottom of Well: ~~MW-6~~ 265.0 Feet.

Depth to Water: 45.78 Feet.

Height of Water Column: 219.22 Feet.

Water Volume in Casing: 143.15 Gallons.

Water Volume to be Purged: 430 Gallons.

Water Volume Actually Purged: 430 Gallons.

Purge Method: Submersible Pump

Physical Appearance/Comments: Standpipe within thick brush

(Water was clear at time of sampling, no turbid particles visible)

FIELD MEASUREMENTS:

| Time | Gallons | pH | Cond. (uS) | Temp. (°F) | Turbidity (NTU) |
|---|---|---|---|---|---|
| 9:45 ~~30 min~~ | | 7.12 | 161.8 | 53.8 | 0 |
| ~~1 hr~~ 10:15 | | 7.13 | 164.5 | 54.1 | — |
| 10:45 ~~1 hr 30 min~~ | | 7.17 | 128.1 | 54.5 | — |
| | | | | | |

Sampling and Analytical Methods: TAL Metals

Laboratory Name and Location: Alpha Analytical, Westborough, MA 01581
8 Walkup Drive

S:\Hydro Dept Forms\wellsampform.wpd

FPM

# ATTACHMENT C

# DATA USABILITY SUMMARY REPORT

FPM

# LIBERTY INDUSTRIAL FINISHING SITE, NYSDEC #152108
# DATA USABILITY SUMMARY REPORT
# April 28, 2022 Groundwater Sampling
# Lab Report #L2222303

This data usability summary report (DUSR) was prepared in accordance with Appendix 2B of New York State Department of Environmental Conservation (NYSDEC) DER-10 using the entire original laboratory report, including the sample data summary report and the supporting data package. The sampling event included 2 primary environmental groundwater samples and associated quality assurance/quality control (QA/QC) samples collected on April 28, 2022.

## Sample Collection

The samples were collected in labeled laboratory-provided sample containers; no issues with sample containers or labeling were reported by the laboratory. All sample collection was conducted under Chain of Custody (COC) procedures.

Field QA/QC samples, including a field blank, a duplicate sample, and a matrix spike/matrix spike duplicate (MS/MSD) sample, were collected to evaluate field sampling methods and laboratory procedures.

## Sample Analyses

The samples were transmitted to and analyzed by Alpha Analytical (Alpha) at their Westborough, MA laboratory, which is New York State Department of Health-certified for the analyses performed. The samples were prepared and analyzed for Target Analyte List (TAL) metals using Methods 3005A and 6020B and for mercury using Method 7470A. The analytes are appropriate for the intended use of the data and the analytical methods are appropriate for the analyte list. The sample holding times were met and no problems with sample receipt or handling were reported by the laboratory.

## QA/QC Results

One field blank sample was collected during sampling event. Field blank samples are prepared by pouring laboratory-provided clean water over or through the sampling equipment and the results are used to evaluate the potential for field contamination to affect the results from the primary environmental samples. The field blank sample was tested for the same analyte groups that the primary samples were tested for. No detections of any metals were noted in the field blank sample except as follows:

- A low estimated concentration of barium and a low concentration of sodium were detected in the field blank sample. These low-level detections (well below applicable regulatory criteria) likely resulted from field-related contamination and do not present a concern. As noted by the laboratory, no carry-over of sodium was noted based on prior analyses.

Based on these results, field contamination does not appear to present a significant concern for the primary environmental sample results.

A duplicate sample (MW-55) was collected in the field and prepared and analyzed by the laboratory to evaluate the precision of the laboratory analyses. The results from the parent

sample (MW-5) and the duplicate sample were very similar, suggesting that the laboratory data are anticipated to be reasonably precise.

An MS/MSD sample (separate aliquots of a primary environmental sample) was collected in the field and prepared by the lab to evaluate the effect of the matrix on the reliability of the analytical results. Spiking occurs in the laboratory prior to sample preparation and analysis. One MS/MSD sample was included in this sample delivery group and was prepared from the MW-6 primary environmental sample. Based on information provided by the analytical laboratory, no issues were noted with the MS/MSD results and matrix-related effects have not significantly affected the analytical results.

Method blank (MB) batch samples were analyzed by the laboratory to evaluate the potential for cross-contamination associated with the sample preparation and analysis. The MB results did not show concentrations of any analytes above their method detection limits and/or the reporting limits, with the following exceptions:

- Low estimated concentrations of chromium and thallium were noted in the MB for batch WG1639016-1. The detected levels were well below applicable regulatory levels and no corrective action was needed.

Based on the MB results, cross-contamination associated with sample preparation and analysis does not appear to present a significant concern.

Laboratory control samples (LCSs) were used by the laboratory to verify the accuracy of the analyses. The LCS results were all within established guidelines. Based on these results, the analytical results do not appear to be affected by laboratory-related accuracy issues.

**Questions and Responses as per DER-10**

1. Is the data package complete as defined under the current requirements for the NYSDEC ASP Category B deliverables?

   The data package is complete under the current requirements for the NYSDEC ASP Category B deliverables.

2. Have all holding times been met?

   All samples were received and analyzed within the EPA-recommended holding times for the analyses performed.

3. Do all the QC data, including blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data, fall within the protocol-required limits and specifications?

   No – Although the majority of QC data were found to fall within the protocol-required limits and specifications, minor exceptions were noted above; however, these exceptions do not appear to affect the data set at levels of concern.

4. Have all the data been generated using established and agreed-upon analytical protocols?

   Yes - the data for TAL metals were generated using Methods 3005A and 6020B, and

mercury was analyzed using Method 7470A.

5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?

   Yes – a representative number of raw data results were checked against the data summary sheets and quality control verification forms and no issues were noted.

6. Have the correct data qualifiers been used?

   Yes – results below the reporting limit and above the method detection limit have been J-qualified. No other qualifiers were indicated or applied.

7. Have any quality control (QC) exceedances been specifically noted in the DUSR and have the corresponding QC summary sheets from the data package been attached to the DUSR?

   Yes – exceedances have been noted in the DUSR and the corresponding QC summary sheets are attached.

**Conclusions**

The groundwater samples were collected in accordance with the requirements for this project. No field or laboratory conditions occurred that would result in non-valid analytical data other than as noted above. The data appear adequate for their intended purpose.

Attachments

S:\Liberty Industrial\GW Monitoring\DUSR GW Spls 4-2022.Docx

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L2222303 |
| Client: | FPM Group<br>640 Johnson Avenue<br>Suite 101<br>Bohemia, NY 11716 |
| ATTN: | Stephanie Davis |
| Phone: | (631) 737-6200 |
| Project Name: | 550 LIBERTY PLAZA |
| Project Number: | 550 LIBERTY PLAZA |
| Report Date: | 05/24/22 |



Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

**Project Name:** 550 LIBERTY PLAZA
**Project Number:** 550 LIBERTY PLAZA

**Lab Number:** L2222303
**Report Date:** 05/24/22

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L2222303-01 | MW-5 | WATER | 550 SUFFOLK AVE | 04/28/22 08:57 | 04/28/22 |
| L2222303-02 | MW-55 | WATER | 550 SUFFOLK AVE | 04/28/22 08:57 | 04/28/22 |
| L2222303-03 | MW-6 | WATER | 550 SUFFOLK AVE | 04/28/22 11:00 | 04/28/22 |
| L2222303-04 | FB0428 | WATER | 550 SUFFOLK AVE | 04/28/22 11:15 | 04/28/22 |

| | | | |
|---|---|---|---|
| **Project Name:** | 550 LIBERTY PLAZA | **Lab Number:** | L2222303 |
| **Project Number:** | 550 LIBERTY PLAZA | **Report Date:** | 05/24/22 |

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

| | | | |
|---|---|---|---|
| **Project Name:** | 550 LIBERTY PLAZA | **Lab Number:** | L2222303 |
| **Project Number:** | 550 LIBERTY PLAZA | **Report Date:** | 05/24/22 |

**Case Narrative (continued)**

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Total Metals

L2222303-04: The Field Blank has a result for sodium present above the reporting limit. The sample was verified as being labeled correctly by the laboratory and the previous analysis showed there was no potential for carry over.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Caitlin Walukevich Caitlin Walukevich

Title: Technical Director/Representative Date: 05/24/22

**Project Name:** 550 LIBERTY PLAZA
**Project Number:** 550 LIBERTY PLAZA
**Lab Number:** L2222303
**Report Date:** 05/24/22

## SAMPLE RESULTS

Lab ID: L2222303-04
Client ID: FB0428
Sample Location: 550 SUFFOLK AVE
Date Collected: 04/28/22 11:15
Date Received: 04/28/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Prep Method | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Metals - Mansfield Lab** | | | | | | | | | | | |
| Aluminum, Total | ND | | mg/l | 0.0100 | 0.00327 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Antimony, Total | ND | | mg/l | 0.00400 | 0.00042 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Arsenic, Total | ND | | mg/l | 0.00050 | 0.00016 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Barium, Total | 0.00026 | J | mg/l | 0.00050 | 0.00017 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Beryllium, Total | ND | | mg/l | 0.00050 | 0.00010 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Cadmium, Total | ND | | mg/l | 0.00020 | 0.00005 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Calcium, Total | ND | | mg/l | 0.100 | 0.0394 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Chromium, Total | ND | | mg/l | 0.00100 | 0.00017 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Cobalt, Total | ND | | mg/l | 0.00050 | 0.00016 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Copper, Total | ND | | mg/l | 0.00100 | 0.00038 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Iron, Total | ND | | mg/l | 0.0500 | 0.0191 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Lead, Total | ND | | mg/l | 0.00100 | 0.00034 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Magnesium, Total | ND | | mg/l | 0.0700 | 0.0242 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Manganese, Total | ND | | mg/l | 0.00100 | 0.00044 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Mercury, Total | ND | | mg/l | 0.00020 | 0.00009 | 1 | 05/17/22 21:44 | 05/18/22 14:12 | EPA 7470A | 1,7470A | DMB |
| Nickel, Total | ND | | mg/l | 0.00200 | 0.00055 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Potassium, Total | ND | | mg/l | 0.100 | 0.0309 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Selenium, Total | ND | | mg/l | 0.00500 | 0.00173 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Silver, Total | ND | | mg/l | 0.00040 | 0.00016 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Sodium, Total | 0.228 | | mg/l | 0.100 | 0.0293 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Thallium, Total | ND | | mg/l | 0.00100 | 0.00014 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Vanadium, Total | ND | | mg/l | 0.00500 | 0.00157 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |
| Zinc, Total | ND | | mg/l | 0.01000 | 0.00341 | 1 | 05/17/22 19:05 | 05/18/22 10:32 | EPA 3005A | 1,6020B | SV |

**Project Name:** 550 LIBERTY PLAZA
**Project Number:** 550 LIBERTY PLAZA
**Lab Number:** L2222303
**Report Date:** 05/24/22

# Method Blank Analysis
# Batch Quality Control

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1639016-1 | | | | | | | | | | |
| Aluminum, Total | ND | | mg/l | 0.0100 | 0.00327 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Antimony, Total | ND | | mg/l | 0.00400 | 0.00042 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Arsenic, Total | ND | | mg/l | 0.00050 | 0.00016 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Barium, Total | ND | | mg/l | 0.00050 | 0.00017 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Beryllium, Total | ND | | mg/l | 0.00050 | 0.00010 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Cadmium, Total | ND | | mg/l | 0.00020 | 0.00005 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Calcium, Total | ND | | mg/l | 0.100 | 0.0394 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Chromium, Total | 0.00021 | J | mg/l | 0.00100 | 0.00017 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Cobalt, Total | ND | | mg/l | 0.00050 | 0.00016 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Copper, Total | ND | | mg/l | 0.00100 | 0.00038 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Iron, Total | ND | | mg/l | 0.0500 | 0.0191 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Lead, Total | ND | | mg/l | 0.00100 | 0.00034 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Magnesium, Total | ND | | mg/l | 0.0700 | 0.0242 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Manganese, Total | ND | | mg/l | 0.00100 | 0.00044 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Nickel, Total | ND | | mg/l | 0.00200 | 0.00055 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Potassium, Total | ND | | mg/l | 0.100 | 0.0309 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Selenium, Total | ND | | mg/l | 0.00500 | 0.00173 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Silver, Total | ND | | mg/l | 0.00040 | 0.00016 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Sodium, Total | ND | | mg/l | 0.100 | 0.0293 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Thallium, Total | 0.00029 | J | mg/l | 0.00100 | 0.00014 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Vanadium, Total | ND | | mg/l | 0.00500 | 0.00157 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |
| Zinc, Total | ND | | mg/l | 0.01000 | 0.00341 | 1 | 05/17/22 19:05 | 05/18/22 09:24 | 1,6020B | SV |

**Prep Information**

Digestion Method: EPA 3005A

| Parameter | Result | Qualifier | Units | RL | MDL | Dilution Factor | Date Prepared | Date Analyzed | Analytical Method | Analyst |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1639020-1 | | | | | | | | | | |
| Mercury, Total | ND | | mg/l | 0.00020 | 0.00009 | 1 | 05/17/22 21:44 | 05/18/22 13:41 | 1,7470A | DMB |