



Proactive by Design

GEOTECHNICAL  
ENVIRONMENTAL  
ECOLOGICAL  
WATER  
CONSTRUCTION  
MANAGEMENT



## MEMORANDUM

To: Joseph Martella, RIDEM

From: Dave Rusczyk, GZA

Cc: Kenneth Lento, National Grid

Date: July 26, 2021

Re: Site Response Action Report  
Period June 27, 2021 through July 10, 2021  
Former Tidewater Facility  
Pawtucket, Rhode Island  
RIDEM Case No. 95-022 / Site Remediation File No. SR-26-0934

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### SITE ACTIVITIES PERFORMED

- Charter Contracting Company, LLC (Charter) continued activities related to implementation of the remedial construction work. These activities included:
  - Continued excavating to engineered cap subgrade to the east of the substation building including vacuum excavation proximate to the substation.
  - Continued placement of excavated Site materials as fill beneath engineered cap in the southern portion of the Site.
  - Continued excavation of the anchor trench for the geomembrane liner system and placement of excavated Site materials as fill beneath engineered cap in the southern portion of the Site.
  - Initial placement of the impermeable liner over subgrade soils in the southern portion of the Site.
  - Continued excavation/removal of deep obstructions on the north end of the containment wall.
  - Installation of the foundation system for the new control house foundation for the substation.
  
- Perimeter air monitoring was performed during the period covered by this report with 11 air monitoring stations (4 solar powered units located proximate to the river and 7 electrically powered units). These stations measured and recorded respirable dust and total volatile organic compounds (TVOC) concentrations continuously 24 hours per day/7 days per week. As indicated in the attached weekly perimeter air monitoring graphs, isolated exceedances of the TVOC (0.5 parts per million) and respirable dust ( $150 \mu\text{g}/\text{m}^3$ ) perimeter threshold levels were noted during the period covered by this report.
  - The isolated exceedances of the respirable dust perimeter threshold level were noted on July 5 and July 6, 2021 around the 10 pm timeframe. No work activities were being performed during these timeframes and, given the recent wet weather conditions, these elevated respirable dust levels were attributed to off-Site sources such as smoke from fireworks rather than work related activities or Site conditions.
  - The elevated TVOC perimeter threshold exceedances were detected at the 4 solar powered stations located adjacent to the river. The air samples screened by the 4 solar



powered stations (Stations 1 through 4) are not preheated within the unit prior to measuring the TVOC concentrations. As a result, the TVOC concentrations measured by the solar powered stations are affected and biased high during conditions with elevated humidity/dewpoint levels or during rapid changes in humidity levels. As shown on the TVOC plots for the 4 solar power air monitoring stations, the humidity levels as measured by the on-Site weather station over the past 2-weeks ranged from approximately 40% to 90% and the elevated TVOC levels observed at the 4 solar powered air monitoring stations during this period were attributed to these elevated humidity levels and rapid changes in humidity levels rather than Site work activities.

- GZA collected ambient air samples from upwind and downwind locations on July 1, 2021 and July 8, 2021 for laboratory analysis for benzene, toluene, ethylbenzene, xylenes, and naphthalene. The analytical results from these samples indicated there were no exceedances of the project action levels. The analytical results were posted to the project website and the bulletin boards at the ends of Tidewater Street and Bowles Court and are also attached to this report.

#### ANTICIPATED SITE ACTIVITIES TO BE PERFORMED WITHIN NEXT 2 WEEKS

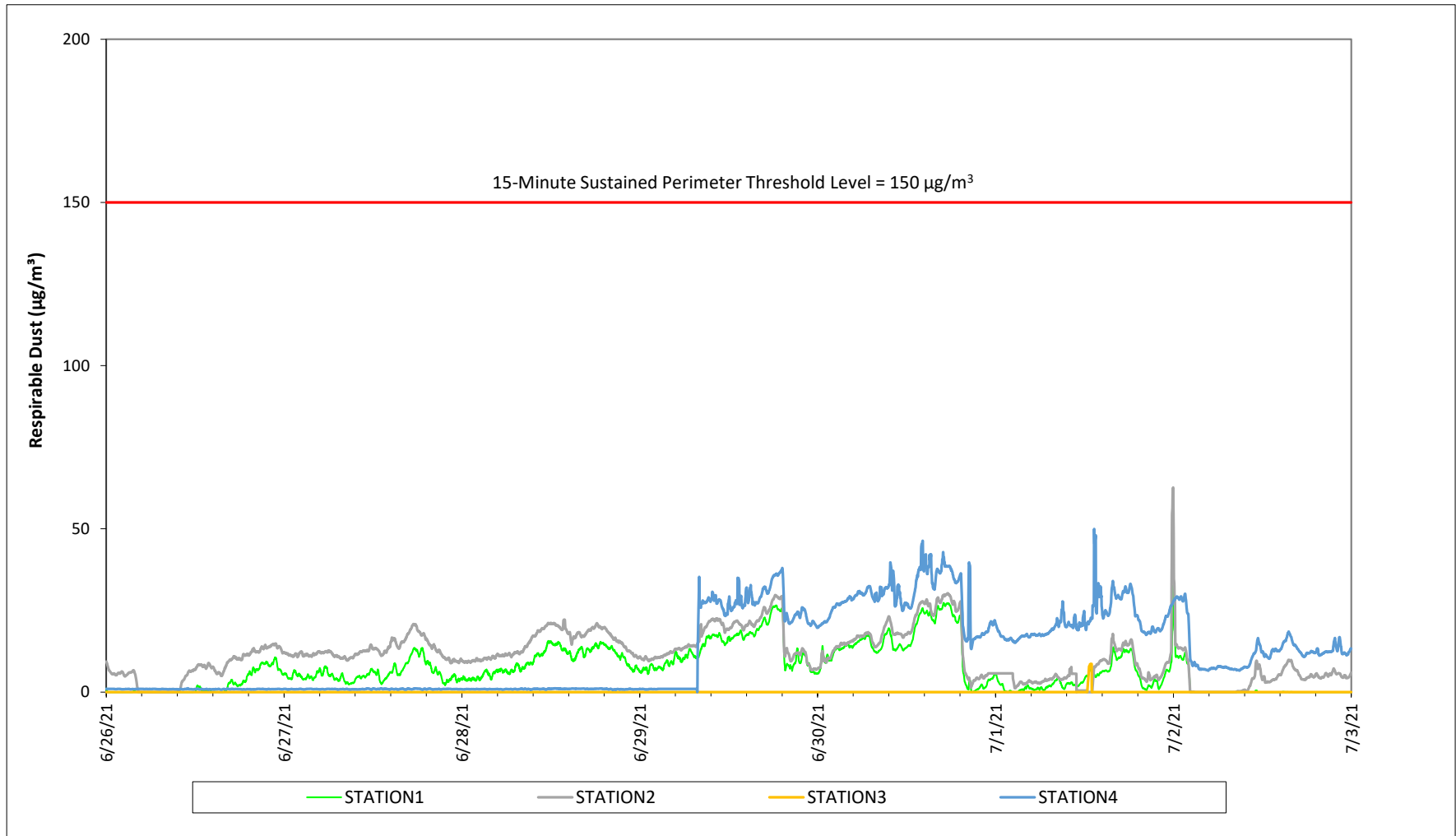
- Continued regrading of the southern portion of the Site to subgrade elevations for the engineered cap.
- Continued installation of the geomembrane liner system in the southern portion of the Site.
- Initial installation of the underdrain system in the southern portion of the Site.
- Continued installation of the containment wall.
- Sealing of penetrations through the containment wall.

Please contact Kenneth Lento at 781-907-3655 if you have any questions or comments.

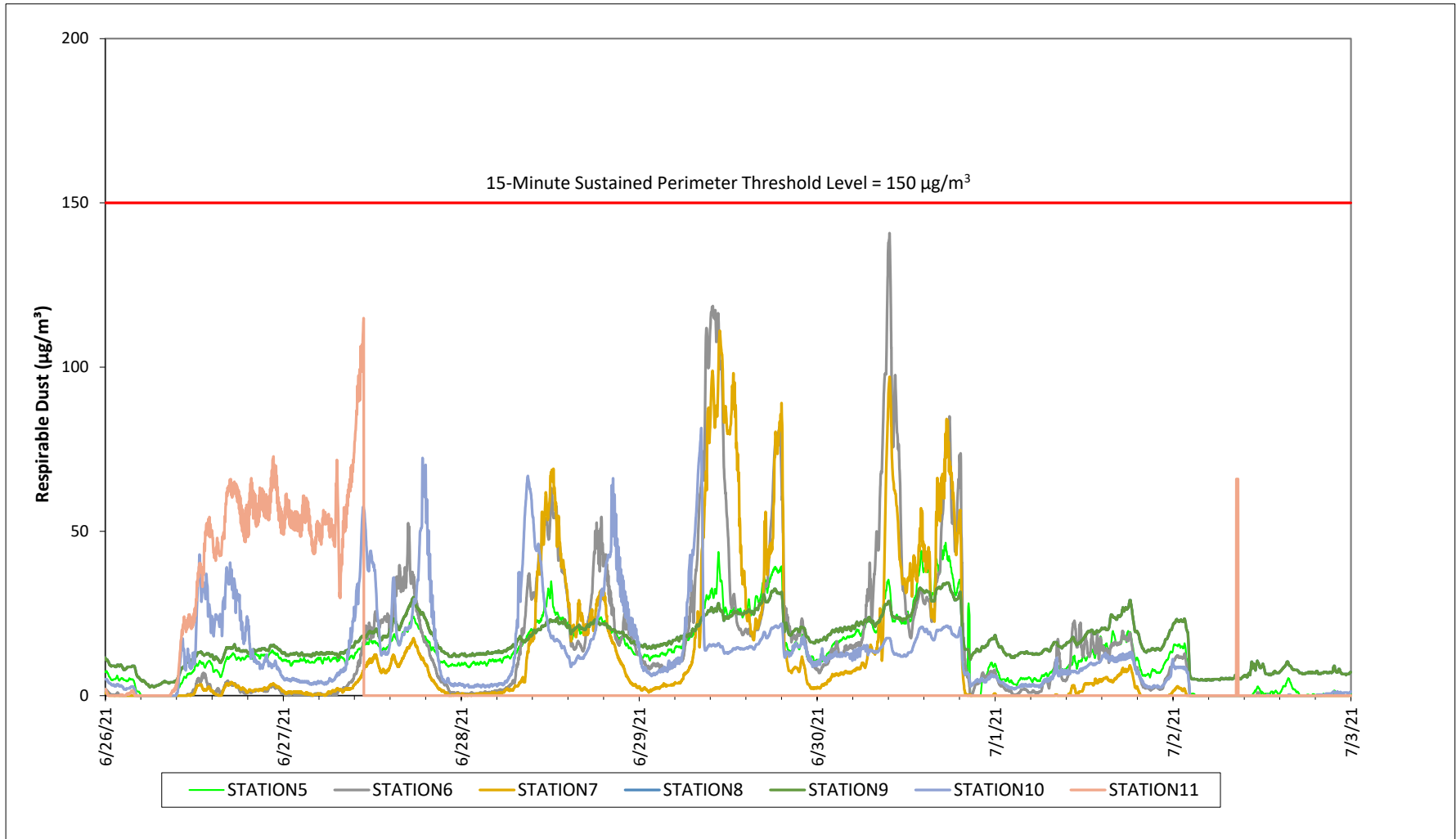
#### **Attachments:**

Weekly Perimeter Air Monitoring Results  
Air Monitoring Station Locations  
Weekly Ambient Air Sampling Results

Prepared by National Grid for the Businesses and Residents Located Near the Former  
Tidewater Facility  
Air Quality Monitoring - Respirable Dust

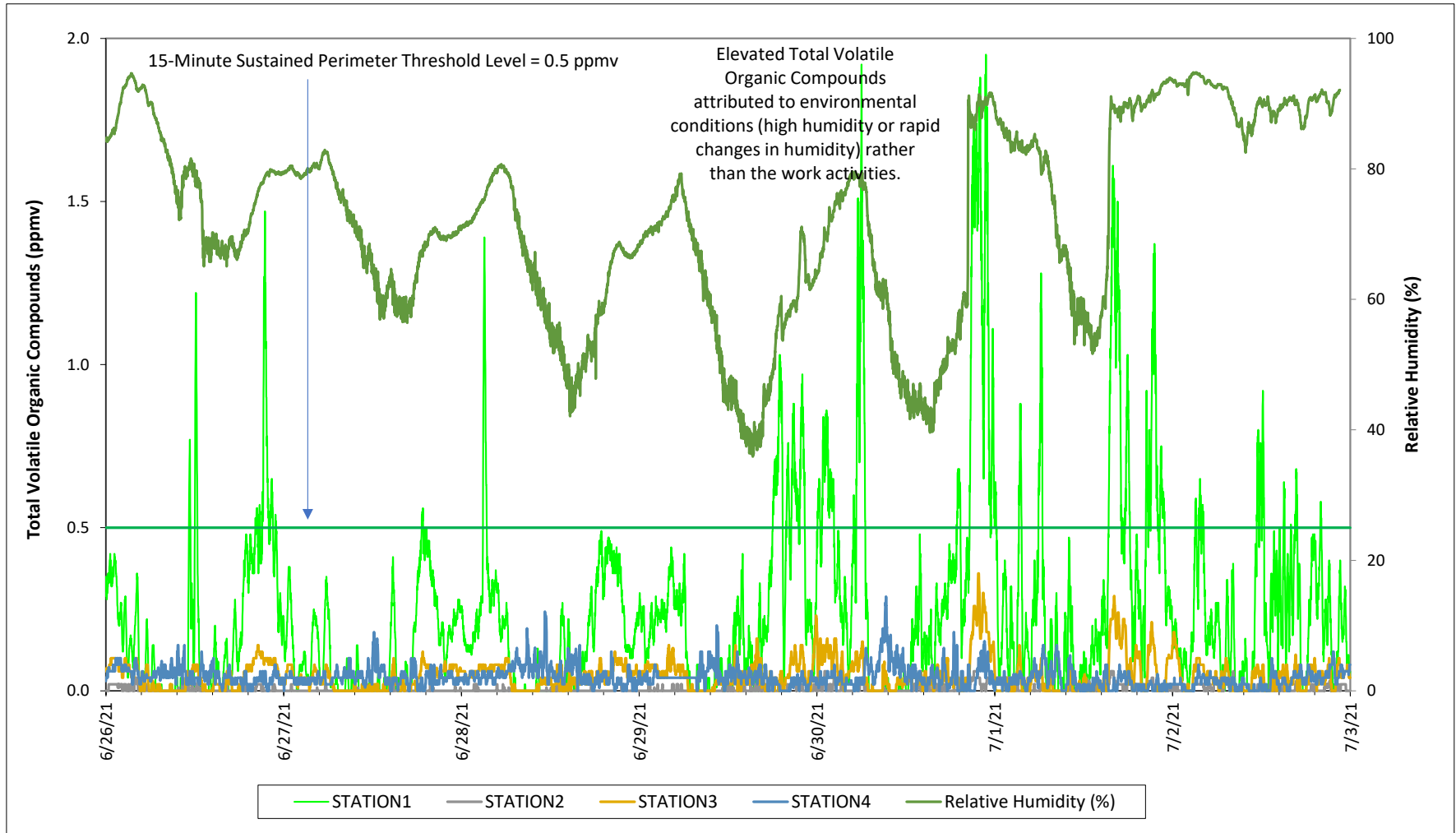


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Air Quality Monitoring - Respirable Dust



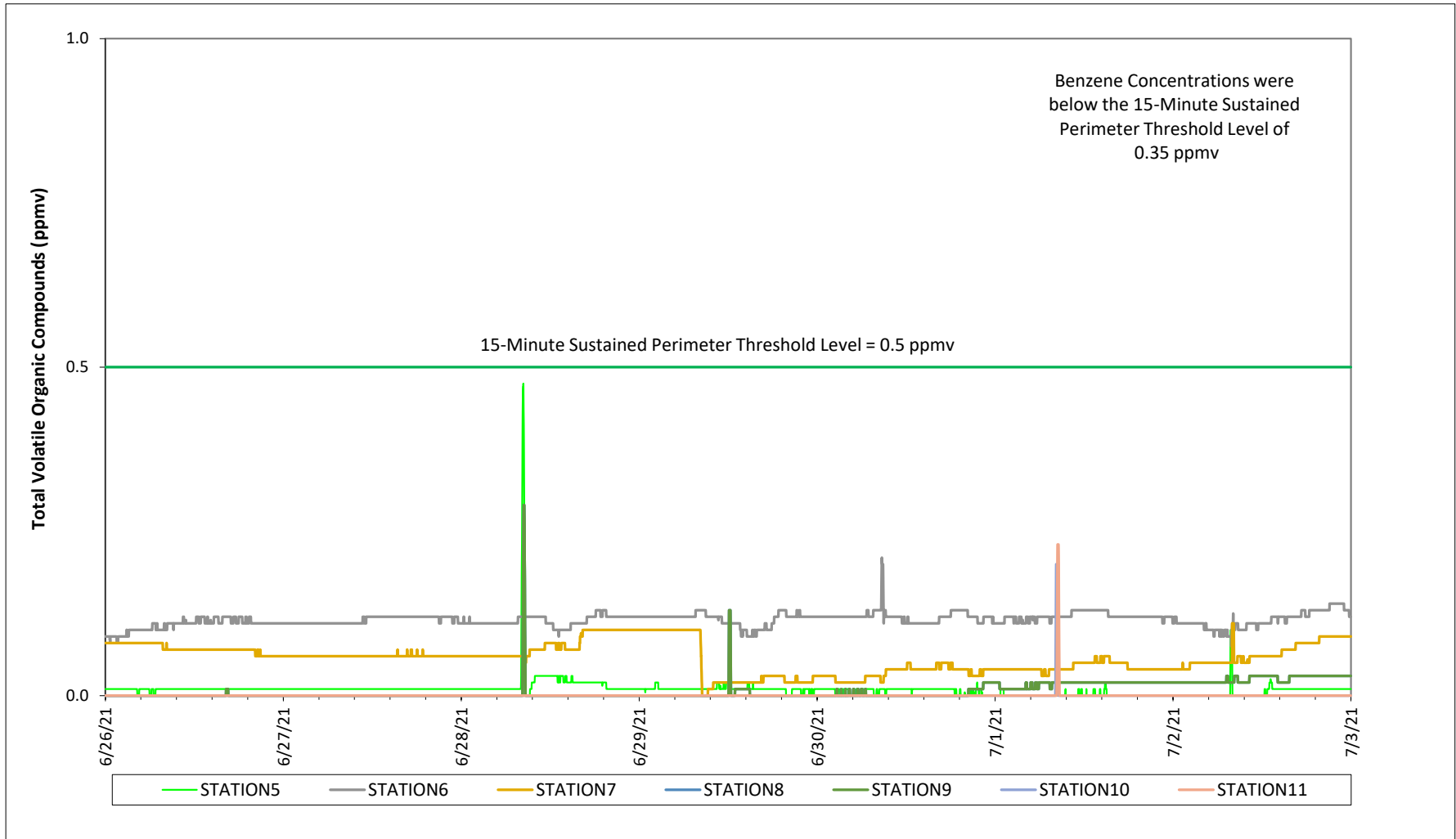
Prepared by National Grid for the Businesses and Residents Located Near the Former  
Tidewater Facility

Air Quality Monitoring - Total Volatile Organic Compounds

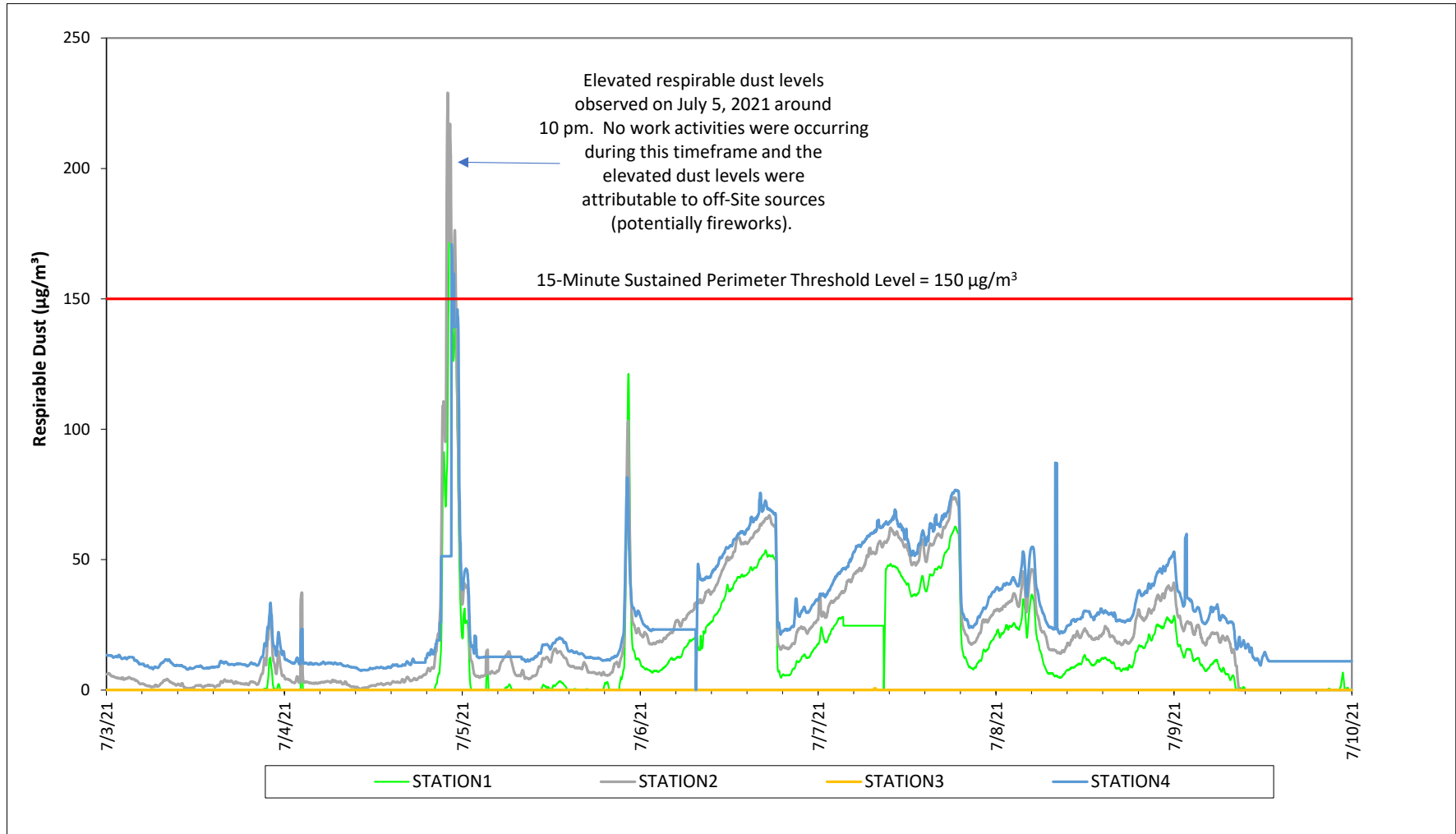


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Air Quality Monitoring - Total Volatile Organic Compounds

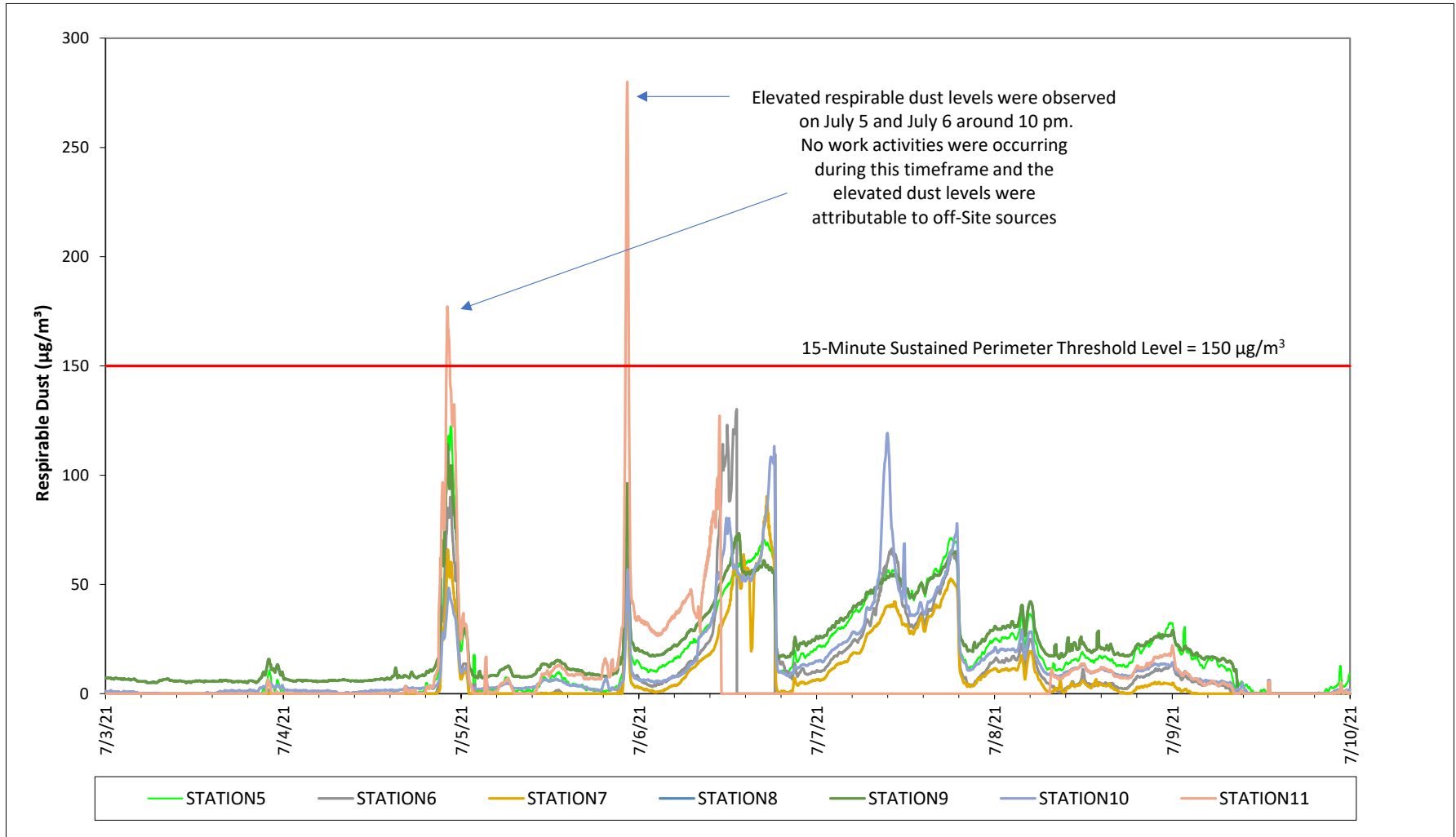


Prepared by National Grid for the Businesses and Residents Located Near the Former  
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Air Quality Monitoring - Respirable Dust



Prepared by National Grid for the Businesses and Residents Located Near the Former  
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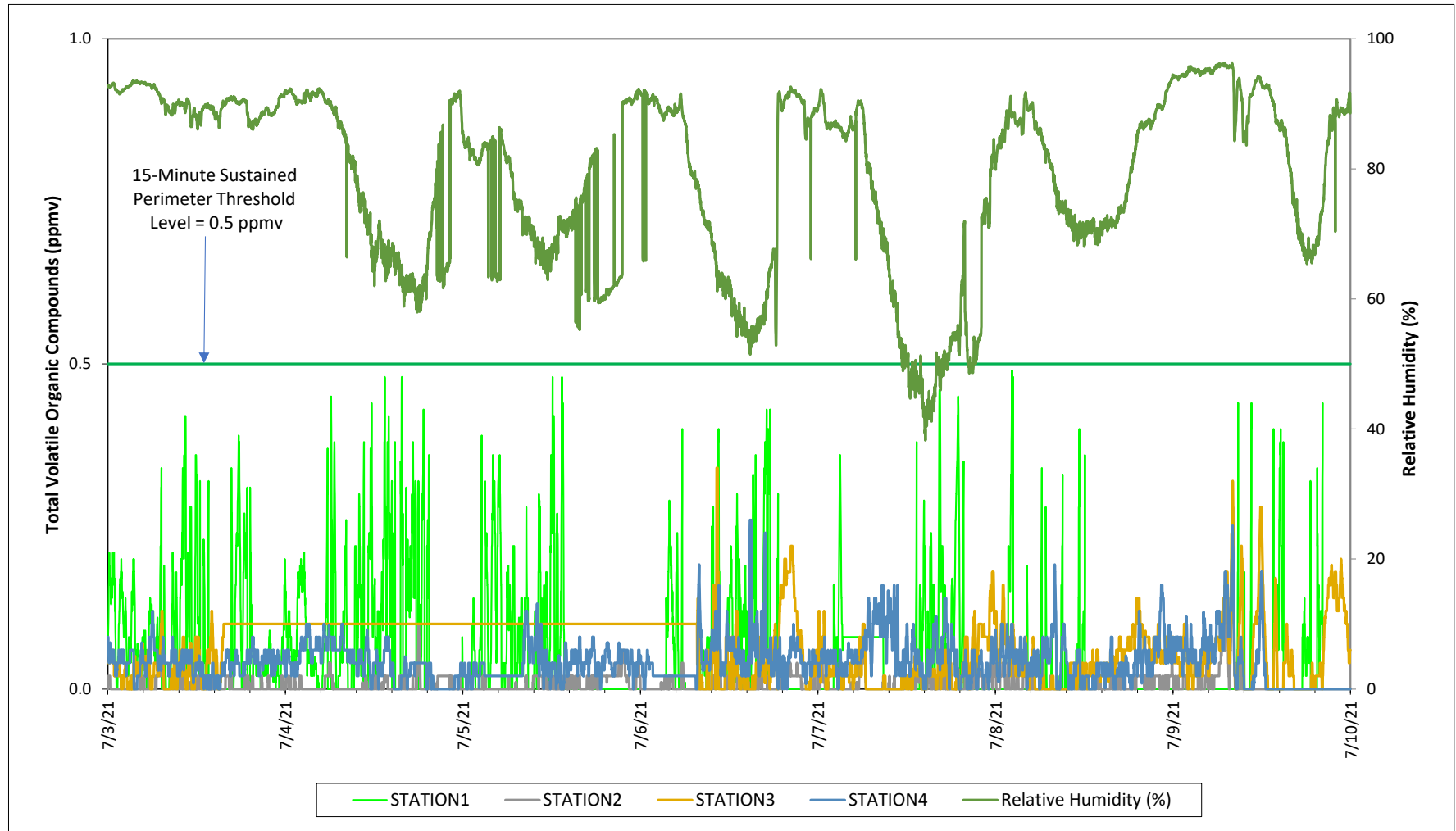
Air Quality Monitoring - Respirable Dust





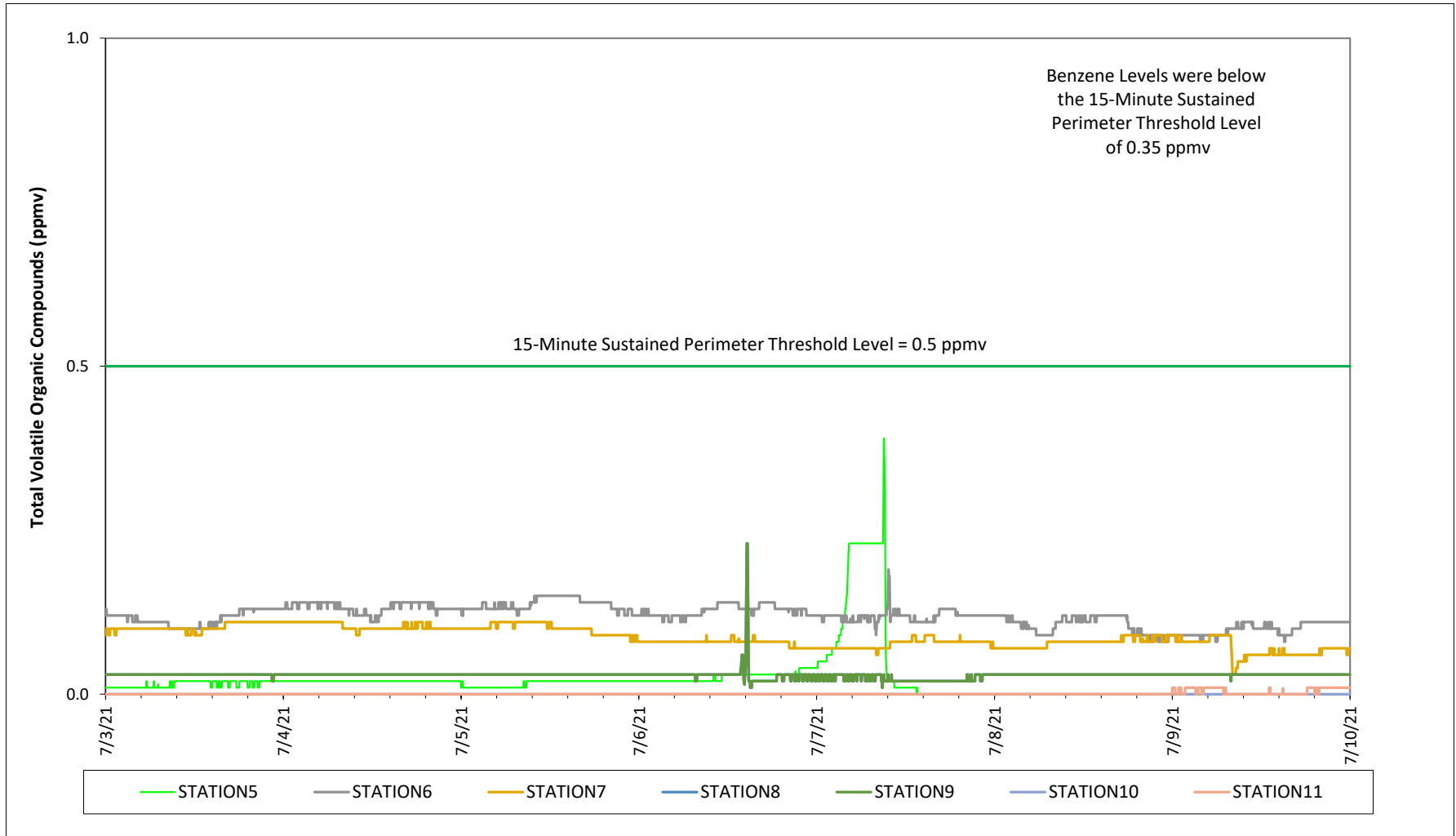
Prepared by National Grid for the Businesses and Residents Located Near the Former  
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Air Quality Monitoring - Total Volatile Organic Compounds

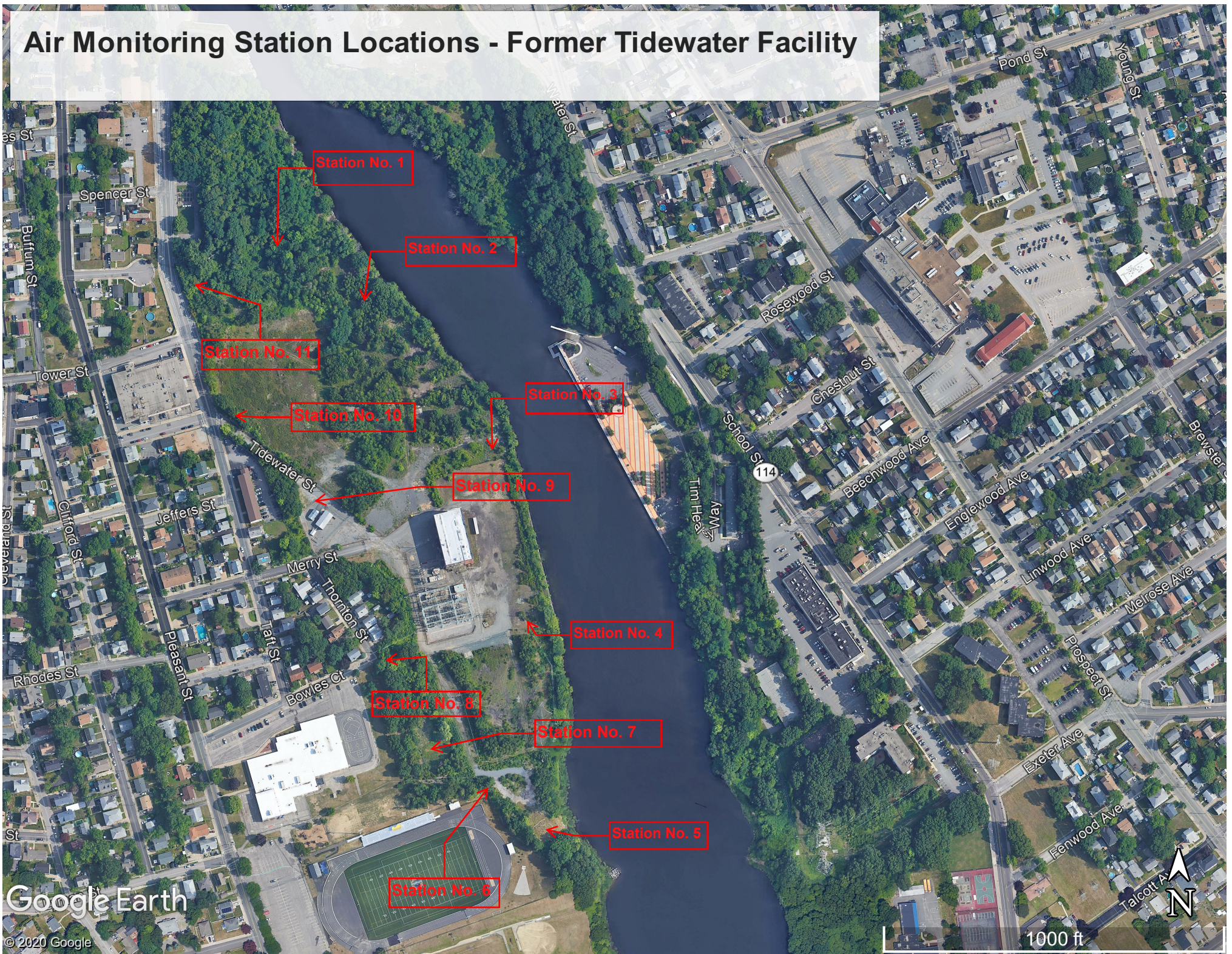


Prepared by National Grid for the Businesses and Residents Located Near the Former  
Tidewater Facility

Air Quality Monitoring - Total Volatile Organic Compounds



# Air Monitoring Station Locations - Former Tidewater Facility



**Prepared by National Grid for the Businesses and Residents Located Near the Former Tidewater Facility  
Weekly Ambient Air Sampling Results**

| Sample Date                  | Compounds  |           |              |               |             |
|------------------------------|------------|-----------|--------------|---------------|-------------|
|                              | Benzene    | Toluene   | Ethylbenzene | Total Xylenes | Naphthalene |
|                              | (ppb v/v)  |           |              |               |             |
| 12-3-20 UP STREAM            | 0.13       | 0.22      | 0.079        | 0.054         | < 0.5       |
| 12-3-20 DOWN STREAM          | 0.13       | 0.2       | 0.073        | 0.05          | < 0.5       |
| 12-10-20 UP STREAM           | 0.25       | 0.23      | < 0.2        | 0.14          | < 0.5       |
| 12-10-20 DOWN STREAM         | 0.17       | 0.2       | < 0.2        | < 0.7         | < 0.5       |
| 12-16-20 UP STREAM           | 0.19       | 0.2       | 0.083        | 0.12          | < 0.5       |
| 12-16-20 DOWN STREAM         | 0.13       | 0.16      | 0.078        | 0.094         | < 0.5       |
| 12-23-20 UP STREAM           | 0.15       | 0.16      | < 0.2        | 0.1           | < 0.5       |
| 12-23-20 DOWN STREAM         | 0.13       | 0.11      | < 0.2        | < 0.7         | < 0.5       |
| 12-30-20 UP STREAM           | 0.21       | 0.22      | < 0.2        | < 0.7         | < 0.5       |
| 12-30-20 DOWN STREAM         | 0.089      | < 0.2     | < 0.2        | < 0.7         | < 0.5       |
| 1/7/21 UP STREAM             | 0.29       | 1.5       | 0.22         | 2.1           | < 0.5       |
| 1/7/21 DOWN STREAM           | 0.16       | 0.27      | 0.086        | 0.42          | < 0.5       |
| 1/14/21 UP STREAM            | 0.43       | 0.44      | < 0.2        | 0.23          | < 0.5       |
| 1/14/21 DOWN STREAM          | 0.4        | 0.52      | 0.076        | 0.3           | < 0.5       |
| 1-21-21 UPSTREAM             | 0.15       | 0.28      | 0.1          | < 0.7         | 0.24        |
| 1-21-21 DOWNSTREAM           | 0.18       | 0.23      | 0.11         | 0.1           | < 0.5       |
| 1-28-21 UPSTREAM             | 0.21       | 0.19      | < 0.2        | < 0.7         | < 0.5       |
| 1-28-21 DOWNSTREAM           | 0.21       | 0.17      | < 0.2        | < 0.7         | < 0.5       |
| 2-4-21 UPSTREAM              | 0.2        | 1.1       | 0.23         | 1.4           | 0.18        |
| 2-4-21 DOWNSTREAM            | 0.23       | 0.29      | 0.26         | 0.29          | < 1.1       |
| 2-11-21 UPSTREAM             | 0.19       | 0.12      | < 0.2        | < 0.7         | < 0.5       |
| 2-11-21 DOWNSTREAM           | 0.17       | < 0.2     | < 0.2        | < 0.7         | < 0.5       |
| 2-18-21 UPSTREAM             | 0.46       | 2.8       | 0.11         | 0.25          | < 0.5       |
| 2-18-21 DOWNSTREAM           | 0.31       | 0.42      | 0.13         | 0.45          | < 0.5       |
| 2-25-21 UPSTREAM             | < 0.2      | 0.16      | < 0.2        | 0.16          | < 0.5       |
| 2-25-21 DOWNSTREAM           | 0.13       | < 0.2     | 0.081        | 0.3           | < 0.5       |
| 3-4-21 UPSTREAM              | 0.2        | 0.21      | < 0.2        | 0.18          | 0.27        |
| 3-4-21 DOWNSTREAM            | 0.15       | 0.12      | < 0.2        | 0.16          | < 0.5       |
| 3-11-21 UPSTREAM             | 0.18       | 0.17      | < 0.2        | 0.23          | 0.3         |
| 3-11-21 DOWNSTREAM           | 0.18       | 0.22      | 0.23         | 1.0           | < 0.5       |
| 3-18-21 DOWNSTREAM           | 0.44       | 1.6       | 0.19         | 0.67          | < 0.5       |
| 3-25-21 UPSTREAM             | 0.17       | 0.32      | 0.85         | 4.1           | 0.53        |
| 3-25-21 DOWNSTREAM           | 0.33       | 0.67      | 0.16         | 0.57          | 0.27        |
| 4-1-21 UPSTREAM              | 0.22       | 0.17      | < 0.2        | < 0.7         | < 0.5       |
| 4-1-21 DOWNSTREAM            | 0.12       | 0.11      | < 0.2        | < 0.7         | < 0.5       |
| 4-8-21 UPSTREAM              | 0.096      | 0.12      | 1.5          | 8.0           | < 0.5       |
| 4-8-21 DOWNSTREAM            | 0.086      | 0.14      | 0.086        | 0.38          | 0.19        |
| 4-15-21 UPSTREAM             | 0.85       | 0.57      | 0.1          | 0.44          | < 0.5       |
| 4-15-21 DOWNSTREAM           | 0.11       | 0.11      | 0.26         | 1.20          | < 0.5       |
| 4-22-21 UPSTREAM             | 0.11       | < 0.2     | < 0.2        | < 0.7         | < 0.5       |
| 4-22-21 DOWNSTREAM           | 0.11       | 0.16      | < 0.2        | < 0.7         | < 0.5       |
| 4-29-21 UPSTREAM             | 0.14       | 0.34      | 0.11         | 0.32          | 0.26        |
| 4-29-21 DOWNSTREAM           | 0.19       | 0.39      | 0.11         | 0.37          | 0.27        |
| 5-6-21 UPSTREAM              | 0.086      | 0.15      | < 0.2        | < 0.7         | 0.38        |
| 5-6-21 DOWNSTREAM            | 1.0        | 8.4       | 0.21         | 0.69          | < 0.5       |
| 5-13-21 UPSTREAM             | < 0.2      | 0.36      | < 0.2        | 0.19          | 0.34        |
| 5-13-21 DOWNSTREAM           | 0.12       | < 0.2     | < 0.2        | < 0.7         | < 0.5       |
| 5-20-2021 UPSTREAM           | 0.38       | 2.5       | < 0.2        | < 0.7         | < 0.5       |
| 5-20-2021 DOWNSTREAM         | 0.16       | 0.56      | 0.3          | 1.40          | < 0.5       |
| <b>Project Action Levels</b> | <b>6.2</b> | <b>80</b> | <b>230</b>   | <b>23</b>     | <b>20</b>   |

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Weekly Ambient Air Sampling Results**

| Sample Date                  | Compounds  |           |              |               |             |
|------------------------------|------------|-----------|--------------|---------------|-------------|
|                              | Benzene    | Toluene   | Ethylbenzene | Total Xylenes | Naphthalene |
|                              | (ppb v/v)  |           |              |               |             |
| 5-27-21 UPSTREAM             | 0.095      | 0.12      | 0.45         | 2.10          | 0.4         |
| 5-27-21 DOWNSTREAM           | 0.075      | 0.094     | < 0.2        | < 0.7         | < 0.5       |
| 6-3-21 UPSTREAM              | < 0.2      | 0.16      | < 0.2        | < 0.7         | < 0.5       |
| 6-3-21 DOWNSTREAM            | 0.075      | 0.11      | < 0.2        | < 0.7         | < 0.5       |
| 6-10-21 UPSTREAM             | < 0.2      | < 0.2     | < 0.2        | < 0.7         | < 0.5       |
| 6-10-21 DOWNSTREAM           | < 0.2      | < 0.2     | < 0.2        | < 0.7         | < 0.5       |
| 6-17-21 UPSTREAM             | 0.64       | 0.6       | 0.48         | 0.66          | 0.64        |
| 6-17-21 DOWNSTREAM           | 0.12       | 0.12      | 0.16         | < 0.7         | < 0.5       |
| 6-24-21 UPSTREAM             | < 0.2      | 0.17      | < 0.2        | < 0.7         | < 0.5       |
| 6-24-21 DOWNSTREAM           | < 0.2      | 0.45      | 0.19         | 0.82          | < 0.5       |
| 7-1-21 UPSTREAM              | 1.10       | 7.9       | 0.12         | 0.39          | < 0.7       |
| 7-1-21 DOWNSTREAM            | 0.13       | 0.74      | < 0.2        | 0.29          | < 0.7       |
| 7-8-21 UPSTREAM              | < 0.2      | 0.29      | < 0.2        | 0.38          | 0.29        |
| 7-8-21 DOWNSTREAM            | < 0.2      | < 0.2     | < 0.2        | < 0.7         | < 0.5       |
| <b>Project Action Levels</b> | <b>6.2</b> | <b>80</b> | <b>230</b>   | <b>23</b>     | <b>20</b>   |

**Notes:**

1. The Project Action Levels are consistent with the Air Quality Monitoring Plan developed for the Site.
2. Air samples are collected in stainless steel summa canisters over an approximately 8-hour period.
3. Air samples are analyzed by EuroFins TestAmerica of Burlington, VT.
4. Results and action levels are listed in parts per billion volume/volume (ppb v/v).
5. An upstream ambient air sample was not collected on March 18, 2021 due to a problem with the sampling equipment.