



Proactive by Design

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION
MANAGEMENT



MEMORANDUM

To: Joseph Martella, RIDEM

From: Dave Rusczyk, GZA

Cc: Kenneth Lento, National Grid

Date: October 26, 2021

Re: Site Response Action Report
Period October 3, 2021 through October 16, 2021
Former Tidewater Facility
Pawtucket, Rhode Island
RIDEM Case No. 95-022 / Site Remediation File No. SR-26-0934

SITE ACTIVITIES PERFORMED

- Charter Contracting Company, LLC (Charter) continued activities related to implementation of the remedial construction work. These activities included:
 - Continued placement of clean imported engineered cap materials in the southern and eastern portions of the Site.
 - Continued construction of the revetment system in the southern portion of the Site.
 - Continued installation of the perimeter chain link fencing in the southern portion of the Site.
 - Completion of the installation of the galvanized cap on the top of the containment wall.
 - Completion of grubbing of organic material in the northern portion of the Site.
 - Continued performance of the demolition activities in the northern portion of the Site and processing the resulting demolition debris to 6-inch minus for reuse as fill beneath the engineered cap.
 - Abandonment of the monitoring wells in the northern portion of the Site.
 - Initiation of regrading of the ground surface in the northern portion of the Site in preparation for installation of the engineered cap.

- 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 with the exception of the following periods:
 - The battery on Station 4 failed overnight on October 3, 2021 and was replaced the next day (October 4, 2021).
 - The internal circuit breaker within Station 11 repeatedly tripped between September 30, 2021 and October 6, 2021 due to a malfunctioning gas chromatograph. The gas chromatograph was replaced on October 6, 2021.
 - The batteries on Stations 1 through 4 failed during various portions of the Columbus Day weekend. The batteries were replaced on Tuesday morning (10/12/2021). Note, work was not performed at the Site on Columbus Day (10/11/2021).
 - The gas chromatograph on Station 7 was not measuring total volatile organic compound concentrations correctly over the Columbus Day weekend. The gas chromatograph was replaced on Tuesday morning (10/12/2021). Note, work was not performed at the Site on Columbus Day (10/11/2021).



As indicated in the attached weekly perimeter air monitoring graphs, isolated exceedances of the total volatile organic compound perimeter threshold level (0.5 ppmv) were noted during the period covered by this report as follows:

- On October 5, 2021, an isolated TVOC exceedance was observed at Station 3 during the performance of demolition activities in the eastern portion of the Site adjacent to the river. The elevated TVOC concentration however decreased to levels consistent with background conditions prior to the implementation of any engineered controls.
- Isolated elevated TVOC levels were observed at Station 1 on October 11, 2021. These isolated TVOC levels were attributed to an increase in humidity levels rather than the work activities.
- Elevated TVOC levels were observed at Station 3 on October 12, 2021 during the performance of pre-trenching activities for the containment wall. The contractor was immediately notified of the elevated TVOC readings and the impacted soils that were the source of the elevated TVOC levels were covered with polyethylene sheeting. After covering the stockpile of impacted soil, TVOC levels decreased to levels consistent with background conditions.
- GZA collected ambient air samples from upwind and downwind locations on October 7, 2021 and October 14, 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

- Completion of the installation of the underdrain system east of the substation.
- Continued installation of the perimeter chain link fencing.
- Continued import of clean fill to construct the engineered caps in the eastern and southern portions of the Site.
- Completion of the construction of the revetment in the southern portion of the Site.
- Continued performance of demolition activities in the northern portion of the Site.
- Continued regrading in the northern portion of the Site to the subgrade elevations for the engineered cap.
- Initiation of work related to construction of the revetment in the northern portion of the Site.

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

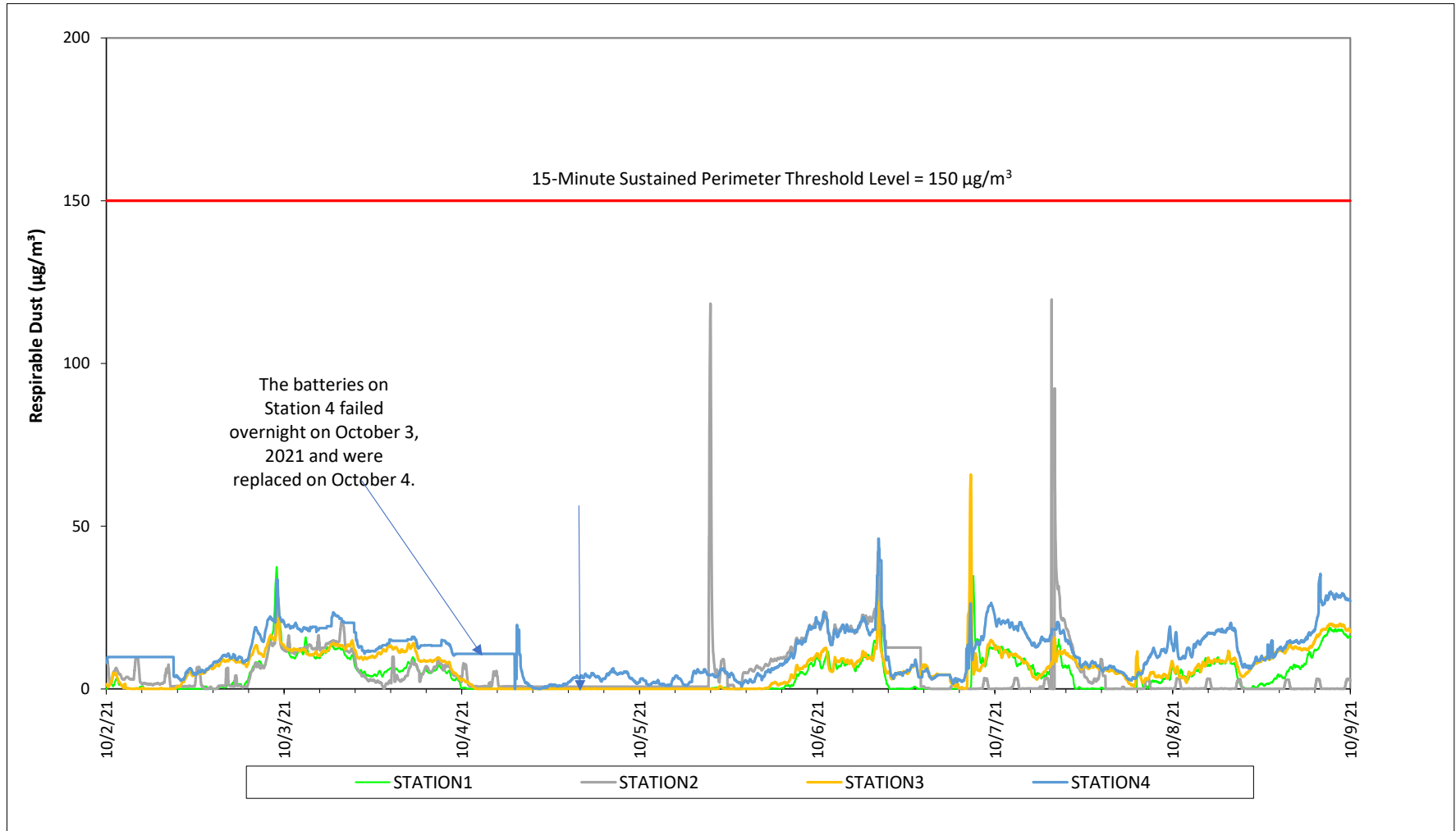
Attachments:

Weekly Perimeter Air Monitoring Results

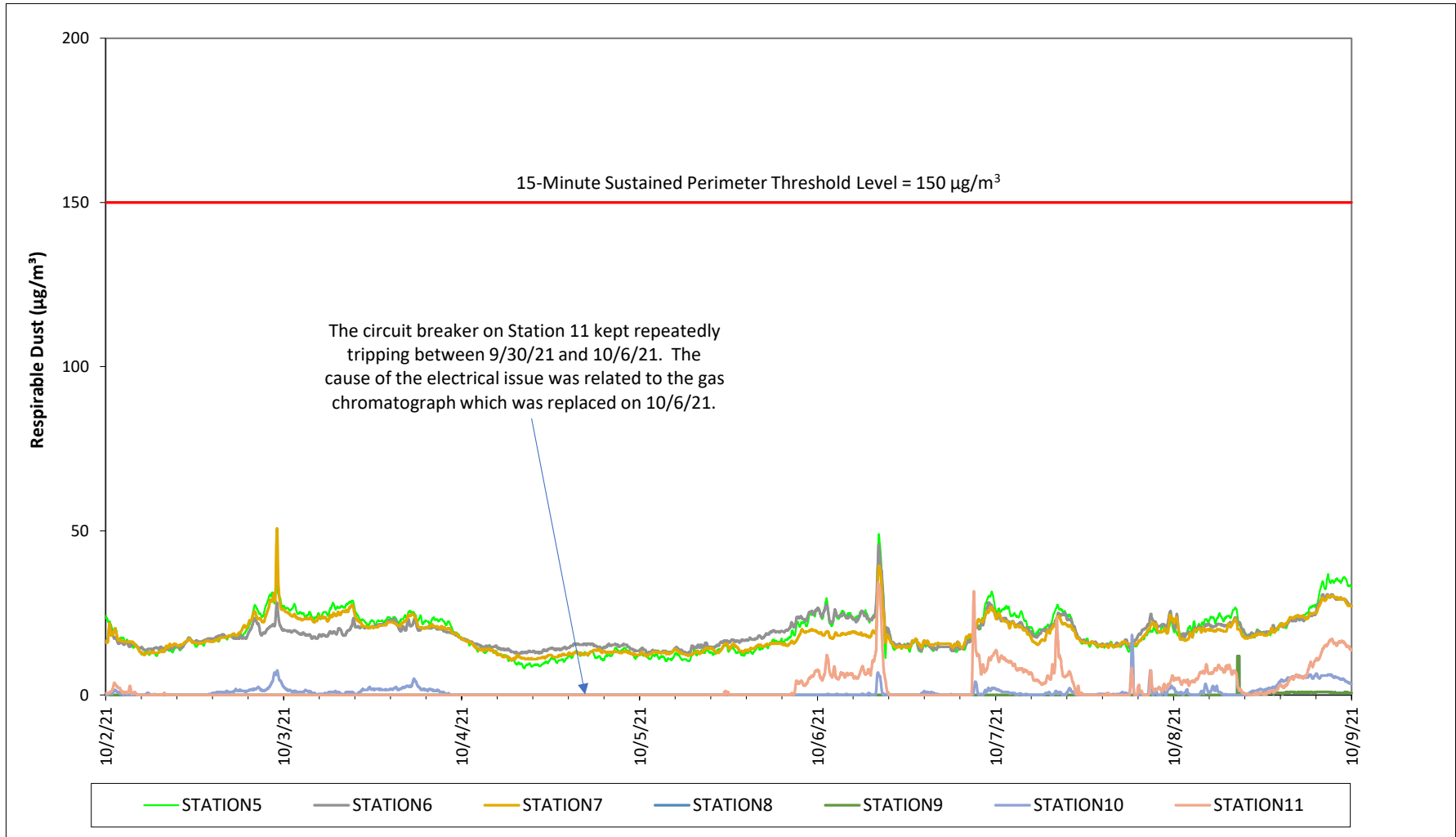
Air Monitoring Station Locations

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

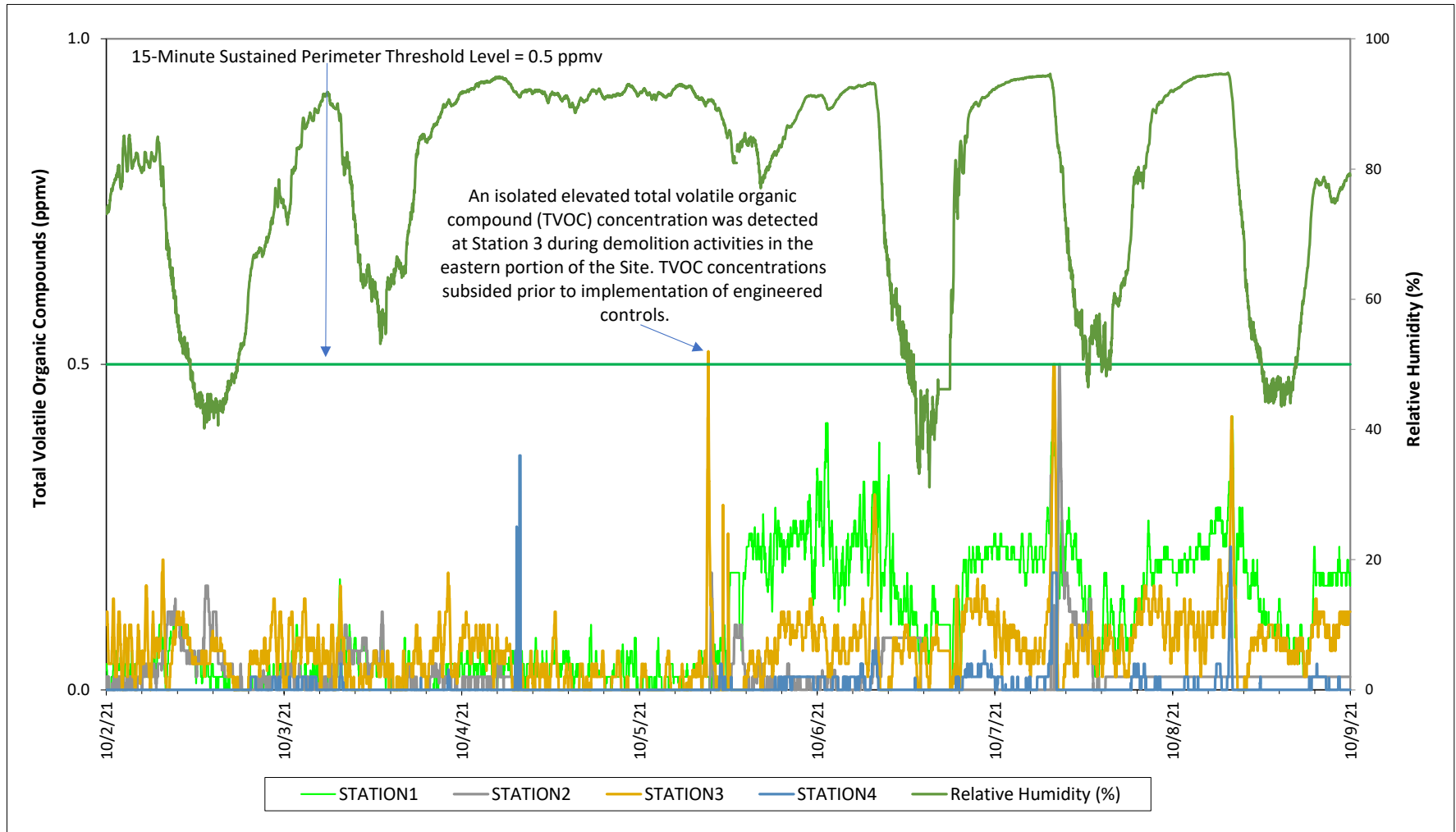


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Air Quality Monitoring - Respirable Dust



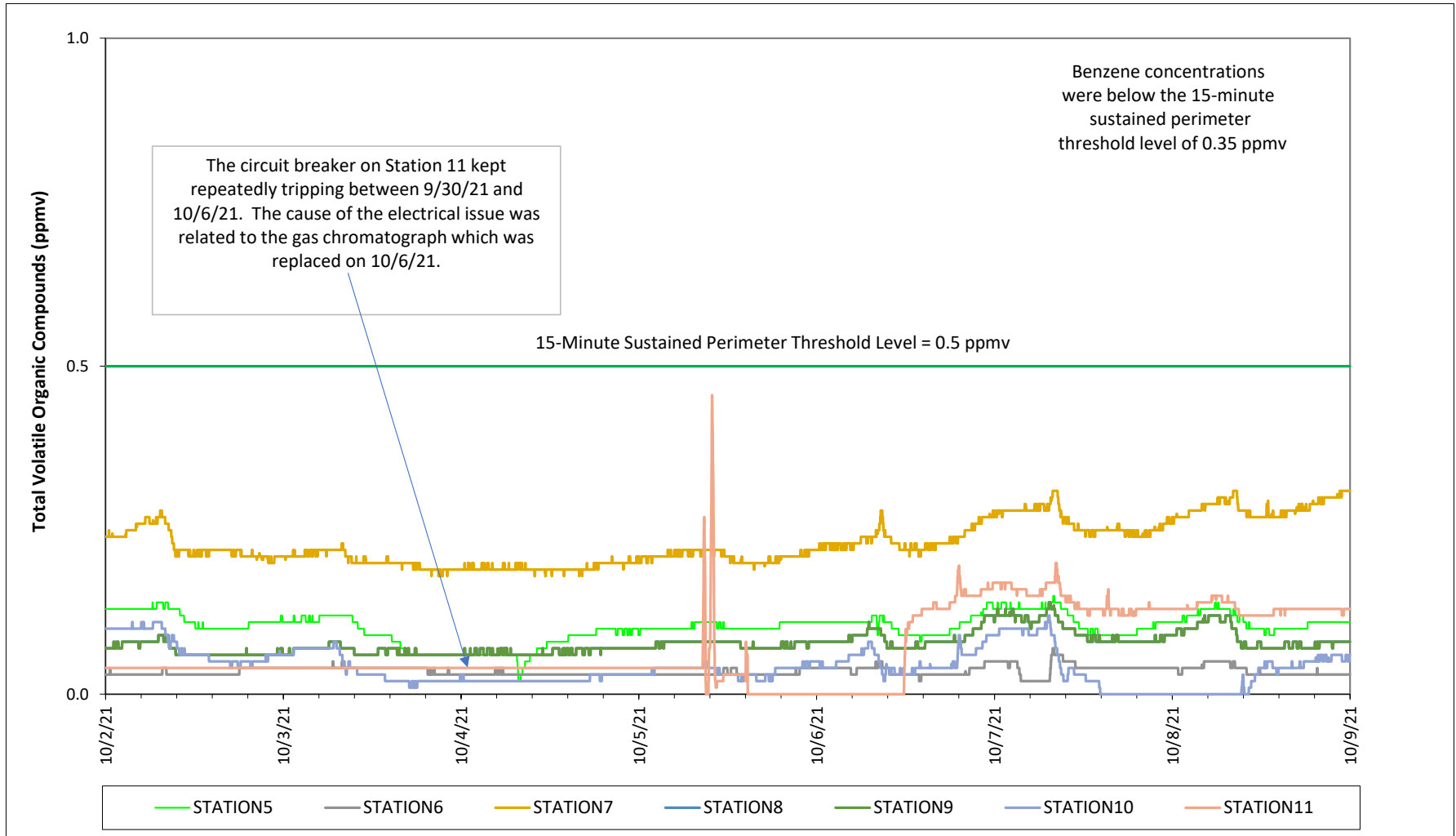
Prepared by National Grid for the Businesses and Residents Located Near the Former
Tidewater Facility

Air Quality Monitoring - Total Volatile Organic Compounds

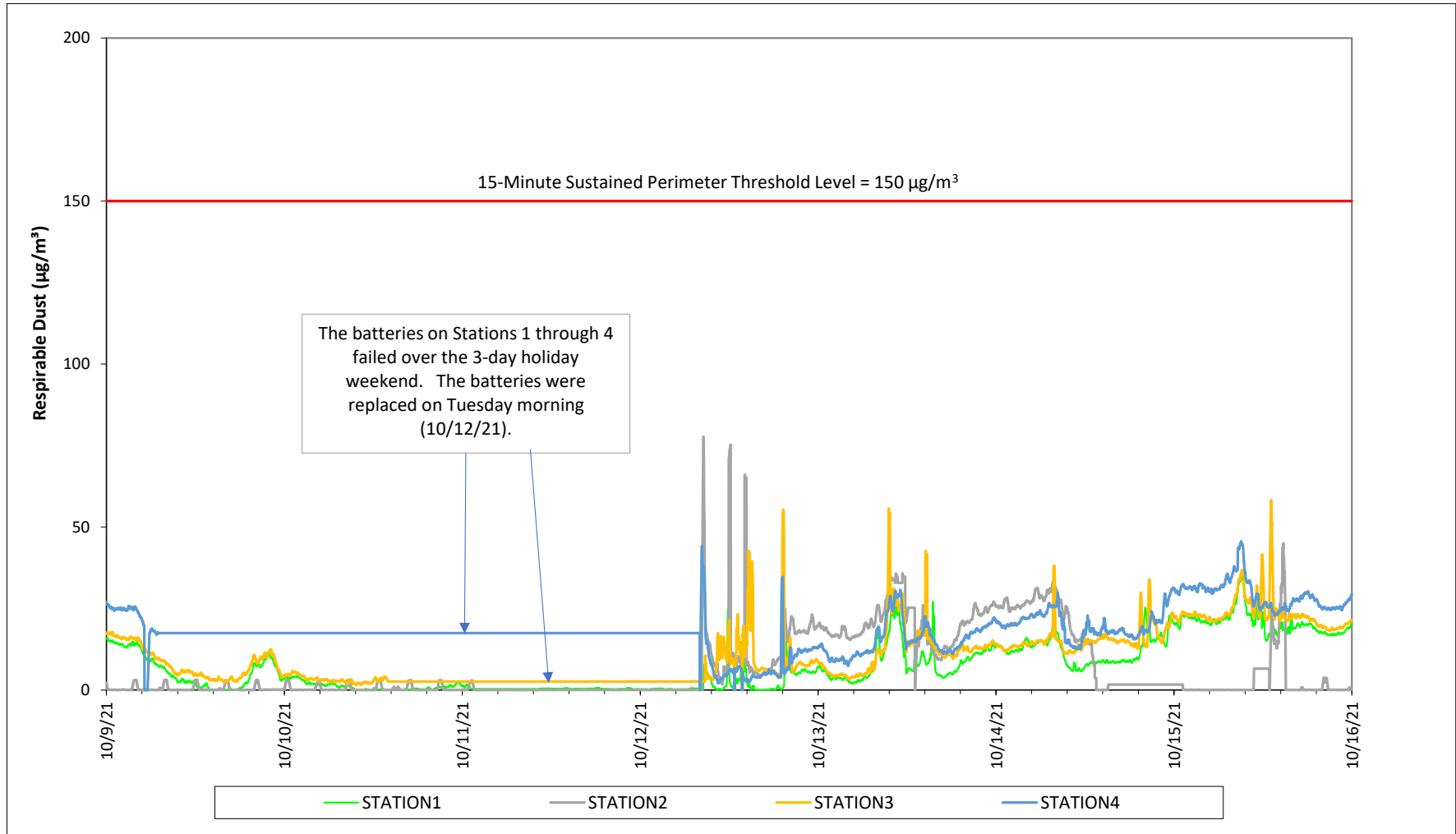


Prepared by National Grid for the Businesses and Residents Located Near the Former Tidewater Facility

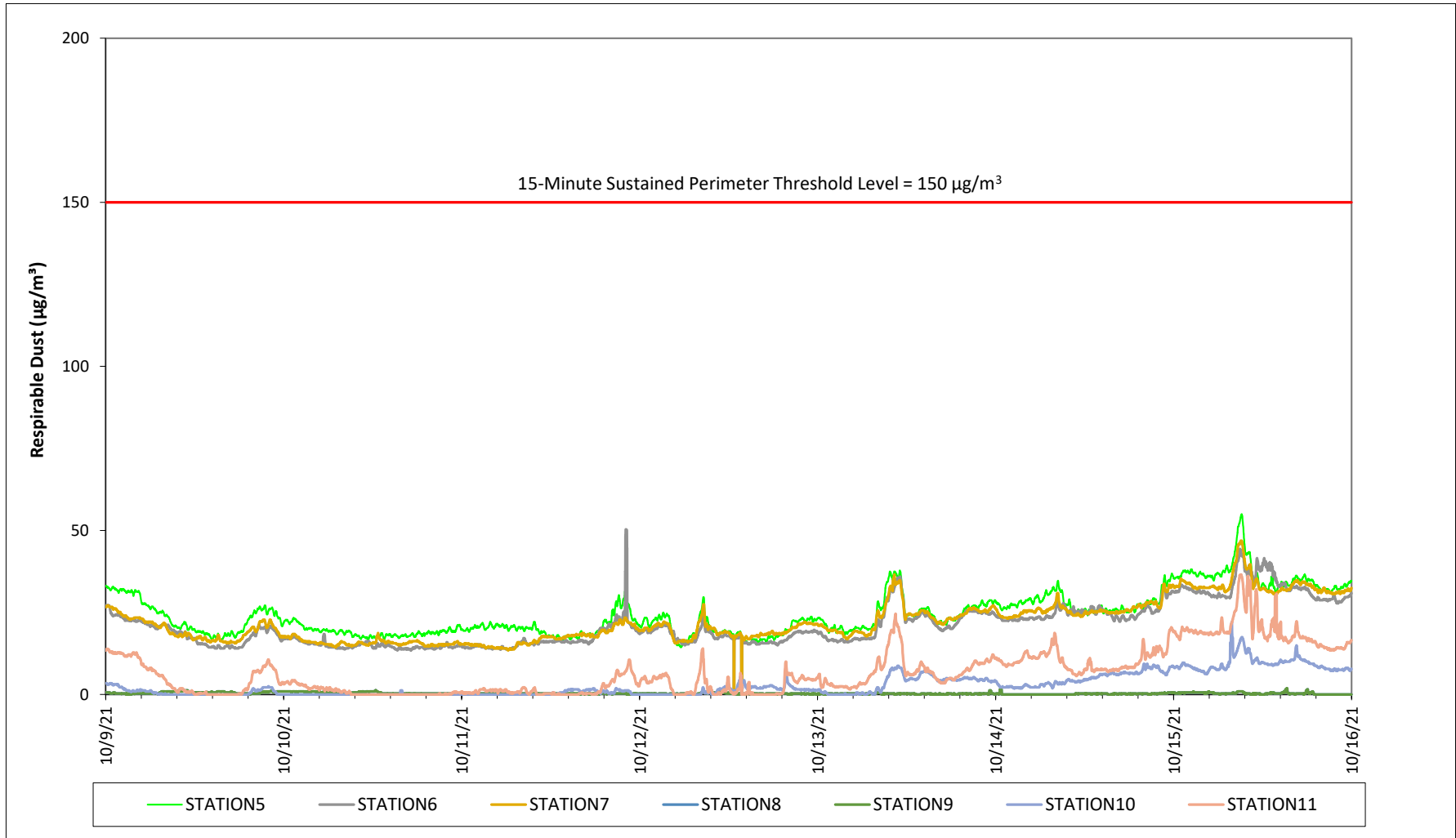
Air Quality Monitoring - Total Volatile Organic Compounds



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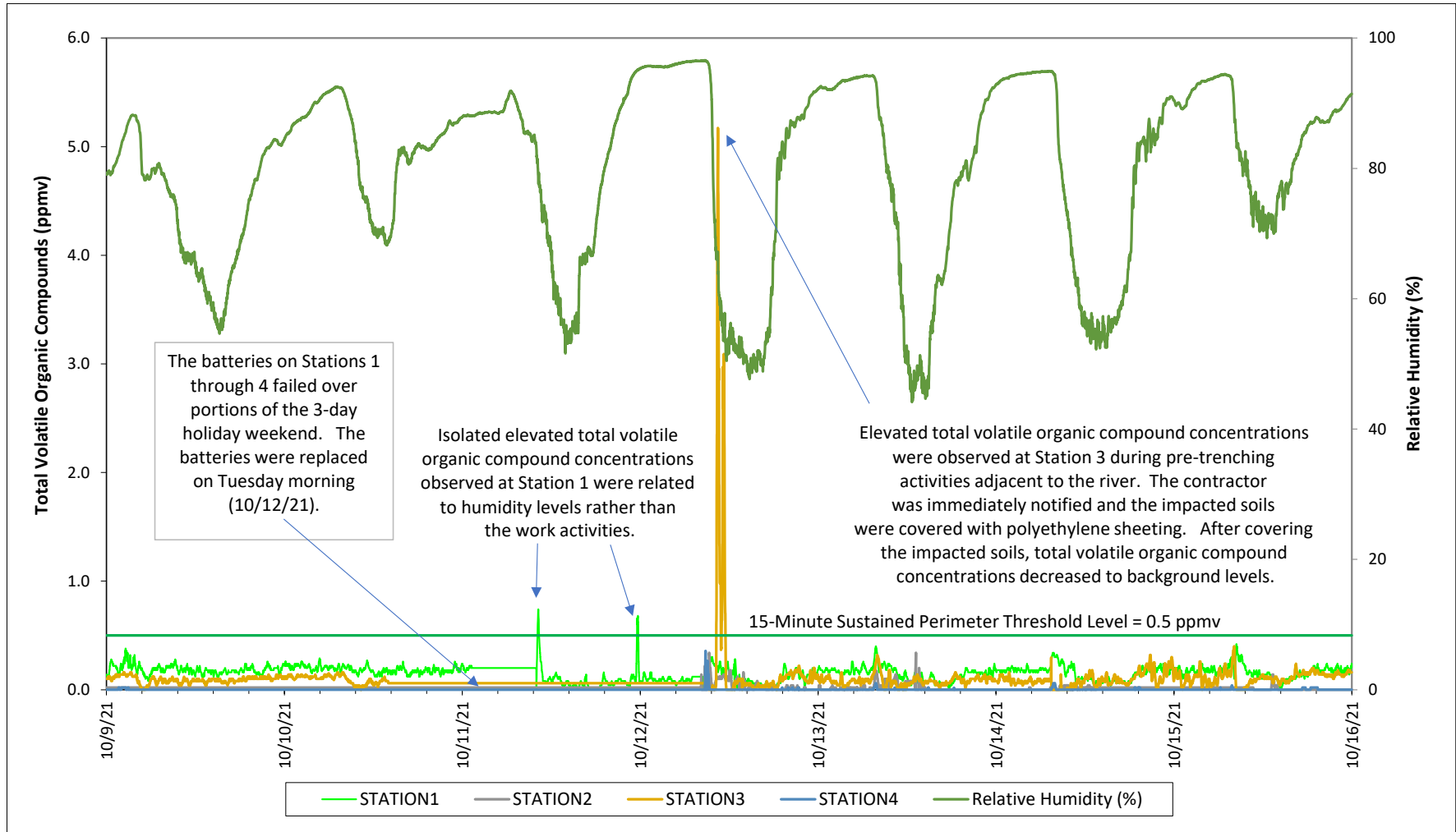


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Air Quality Monitoring - Respirable Dust



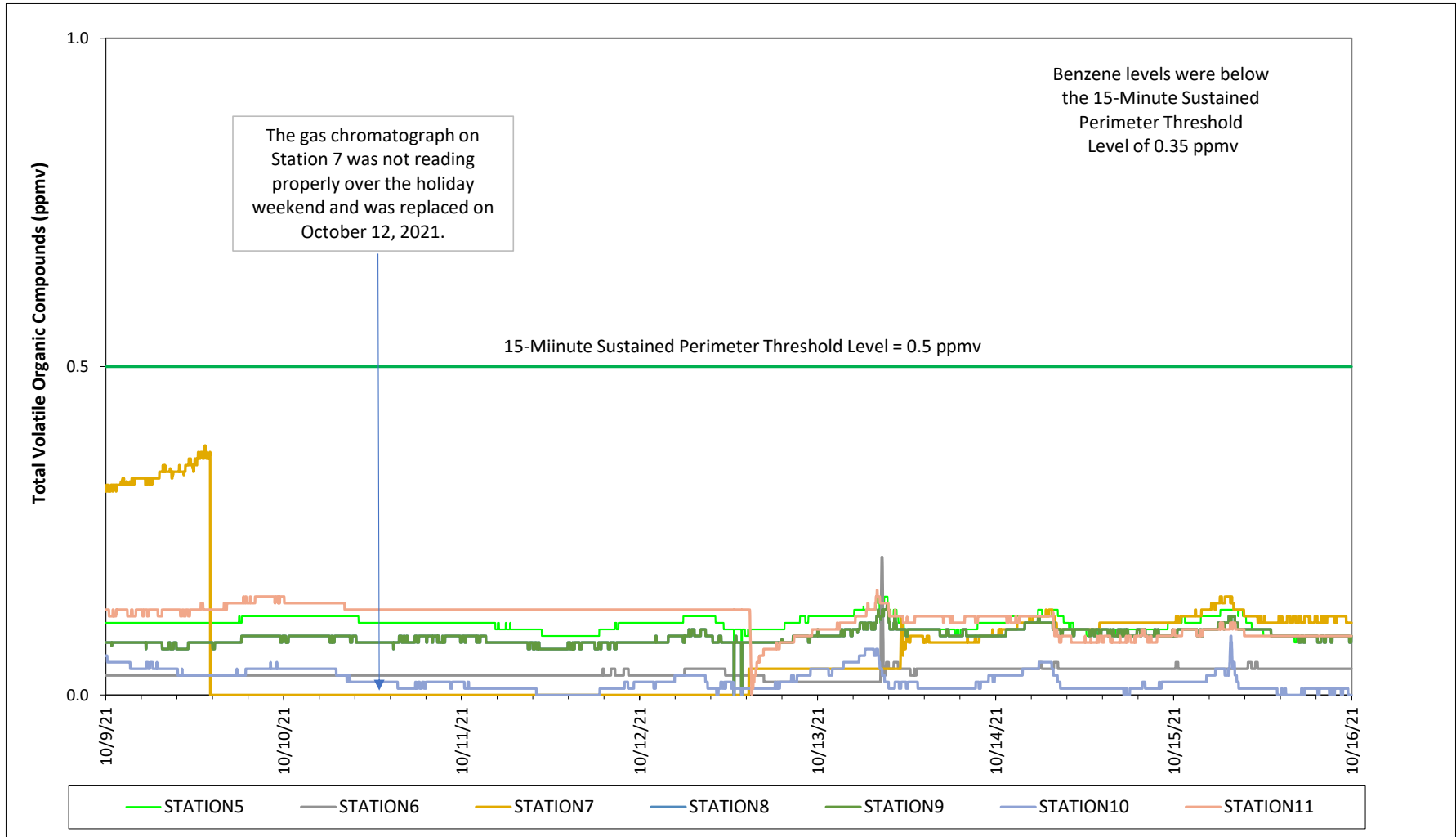
Prepared by National Grid for the Businesses and Residents Located Near the Former
Tidewater Facility

Air Quality Monitoring - Total Volatile Organic Compounds

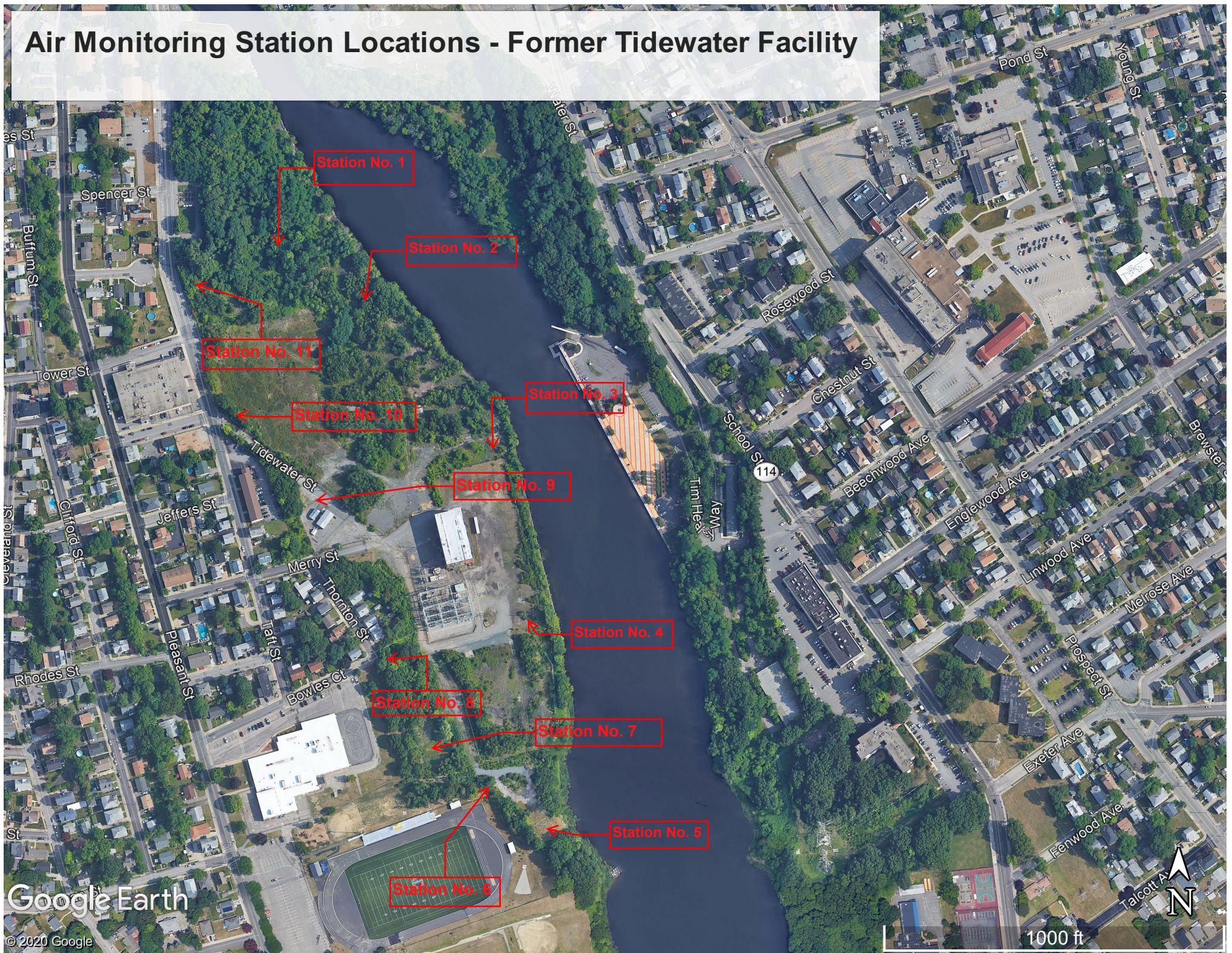


Prepared by National Grid for the Businesses and Residents Located Near the Former Tidewater Facility

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
Project Action Levels	6.2	80	230	23	20

**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)					
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
7-15-21 UPSTREAM	0.10	0.28	< 0.2	0.32	< 0.5
7-15-21 DOWNSTREAM	0.14	0.37	0.31	1.5	< 0.5
7-22-21 UPSTREAM	0.27	0.3	< 0.2	< 0.7	< 0.5
7-22-21 DOWNSTREAM	0.30	0.33	< 0.2	< 0.7	< 0.5
7-29-21 UPSTREAM	0.22	0.26	0.1	0.56	0.19
7-29-21 DOWNSTREAM	0.099	0.23	< 0.2	< 0.7	< 0.5
8-5-21 UPSTREAM	0.70	1.2	< 0.2	0.17	< 0.5
8-5-21 DOWNSTREAM	0.310	0.53	< 0.25	< 0.88	< 0.63
8-12-21 UPSTREAM	0.19	0.18	< 0.2	< 0.7	0.2
8-12-21 DOWNSTREAM	1.2	0.7	< 0.2	0.31	< 0.5
8-19-21 UPSTREAM	0.66	6.2	1.2	3.50	< 1.6
8-19-21 DOWNSTREAM	0.21	0.24	< 0.2	0.11	< 0.5
8-26-21 UPSTREAM	0.34	0.73	0.22	0.90	0.18
8-26-21 DOWNSTREAM	0.34	0.63	0.24	0.87	0.31
9-1-21 UPSTREAM	0.17	0.34	< 0.2	< 0.7	< 0.5
9-1-21 DOWNSTREAM	0.18	0.35	< 0.2	0.19	< 0.5
9-9-21 UPSTREAM	0.12	0.22	< 0.2	0.28	< 0.5
9-9-21 DOWNSTREAM	< 0.2	0.89	< 0.2	< 0.7	0.42
9-16-21 UPSTREAM	0.14	0.26	0.11	0.31	0.3
9-16-21 DOWNSTREAM	0.11	0.26	< 0.2	0.28	< 0.5
9-23-21 UPSTREAM	< 0.2	0.12	< 0.2	< 0.7	< 0.5
9-23-21 DOWNSTREAM	< 0.2	0.12	< 0.2	< 0.7	< 0.5
9-30-21 UPSTREAM	0.17	0.37	0.23	0.66	< 0.51
9-30-21 DOWNSTREAM	0.086	0.21	< 0.2	< 0.7	< 0.5
10-7-21 UPSTREAM	0.24	0.55	0.14	0.41	< 0.5
10-7-21 DOWNSTREAM	< 0.2	0.42	0.11	0.16	< 0.5
10-14-21 UPSTREAM	0.19	0.40	< 0.2	< 0.7	< 0.5
10-14-21 DOWNSTREAM	0.34	0.89	0.23	0.75	< 0.5
Project Action Levels	6.2	80	230	23	20

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.