



Proactive by Design

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION
MANAGEMENT



MEMORANDUM

To: Joseph Martella, RIDEM

From: Dave Rusczyk, GZA

Cc: Kenneth Lento, National Grid

Date: December 28, 2021

Re: Site Response Action Report
Period November 14, 2021 through November 27, 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 topsoil for the engineered cap in the southern portion of the Site.
 - Continued installation of the perimeter chain link fencing in the southern portion of the Site.
 - Continued processing of demolition debris generated in the northern portion of the Site to 6-inch minus for reuse as fill beneath the engineered cap.
 - Continued regrading of the ground surface in the northern portion of the Site in preparation for installation of the engineered cap.
 - Continued regrading of the riverbank in the northern portion of the Site in preparation for installation of the revetment.
 - Initial installation of the revetment in the northern portion of the Site.
- 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:
 - An equipment calibration issue occurred at Station 7 on November 19, 2021. The issue was resolved the same day.
 - The gas chromatographs (GCs) within Stations 6 and 11 were malfunctioning between Saturday, November 20, 2021 and Monday morning on November 22, 2021. The GCs were repaired on Monday, November 22, 2021.
 - The GC within Station 11 malfunctioned on Friday, November 26, 2021. A replacement GC was ordered and will be installed upon receipt.

As indicated in the attached weekly perimeter air monitoring graphs, isolated exceedances of the total volatile organic compound (0.5 ppmv) and respirable dust ($150 \mu\text{g}/\text{m}^3$) perimeter threshold levels were noted during the period covered by this report as follows:



- Sporadic exceedances of the TVOC perimeter threshold level (0.5 parts per million) were noted during the period covered by this report at solar powered Stations 1 and 2. The air samples screened by the solar powered stations 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 solar power air monitoring stations, the humidity levels as measured by the on-Site weather station ranged from approximately 20% to 90% and the sporadic elevated TVOC levels observed at these two solar powered stations during this period were attributed to these elevated humidity levels and rapid changes in humidity levels rather than Site work activities.
 - On November 13, 2021, an isolated TVOC exceedance was observed at Station 2 during the performance of demolition activities in the northwestern portion of the Site. The isolated elevated TVOC levels however dissipated prior to the implementation of engineered controls.
 - On November 22, 2011, an isolated respirable dust exceedance was observed at Station 3 during loading of clean imported stone from an on-Site stockpile into a truck for use as backfill. The contractor was notified of the elevated respirable dust level and the contractor wetted the stone with water prior to continuing loading operations.
 - On November 24, 2021, an isolated TVOC exceedance was observed at Station 10. The elevated TVOC concentration was attributed to the exhaust of a piece of equipment working proximate to the station.
- GZA collected ambient air samples from upwind and downwind locations on November 18, 2021 and November 23, 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

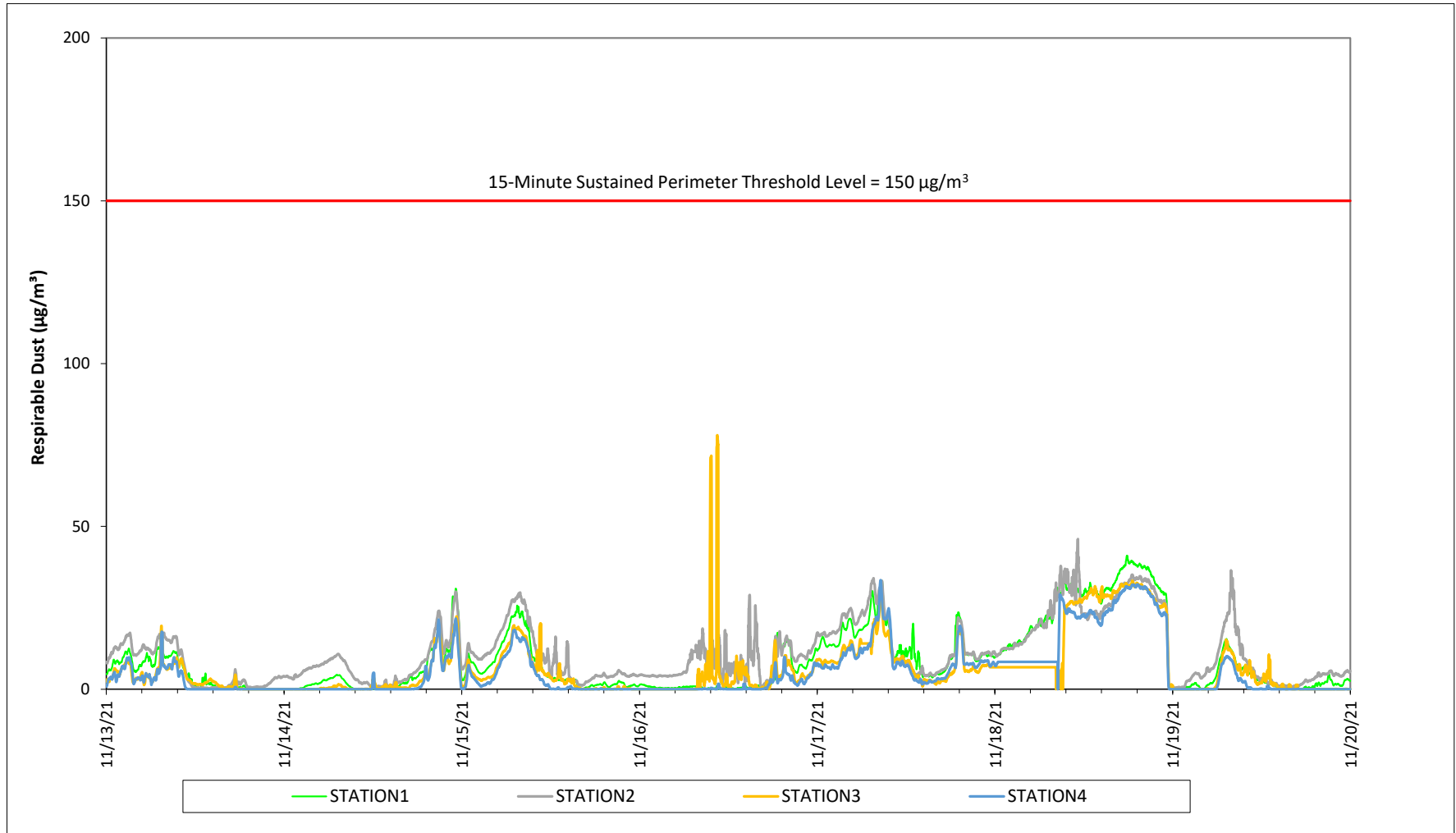
- Completion of the installation of the perimeter chain link fencing in the southern portion of the Site.
- Continued import of clean topsoil to construct the engineered caps in the southern portion of the Site.
- Continued regrading in the northern portion of the Site to the subgrade elevations for the engineered cap.
- Continued construction of the revetment in the northern portion of the Site.
- Seeding within the CRMC buffer and in the southern portion of the Site.

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

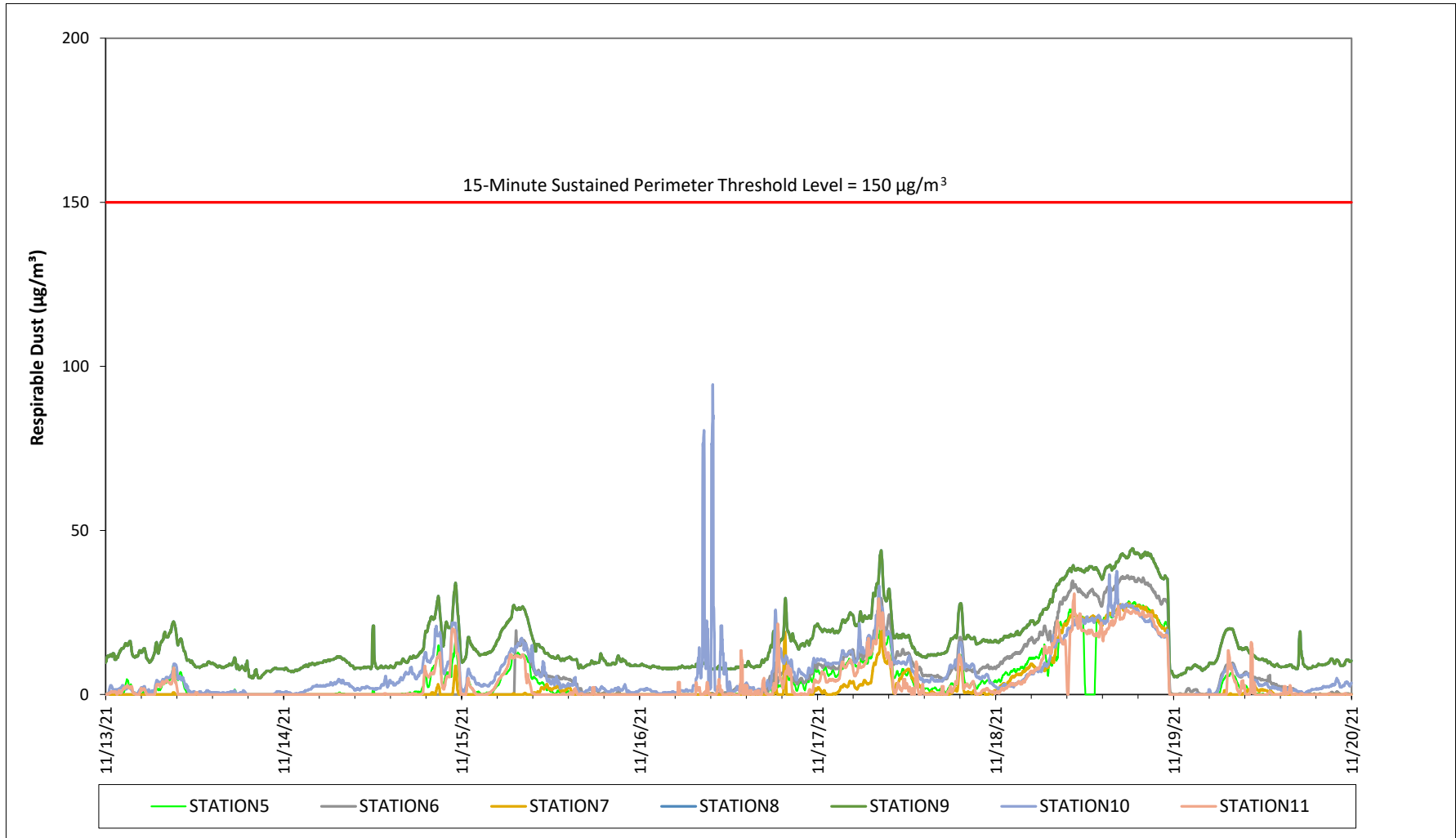
Attachments:

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

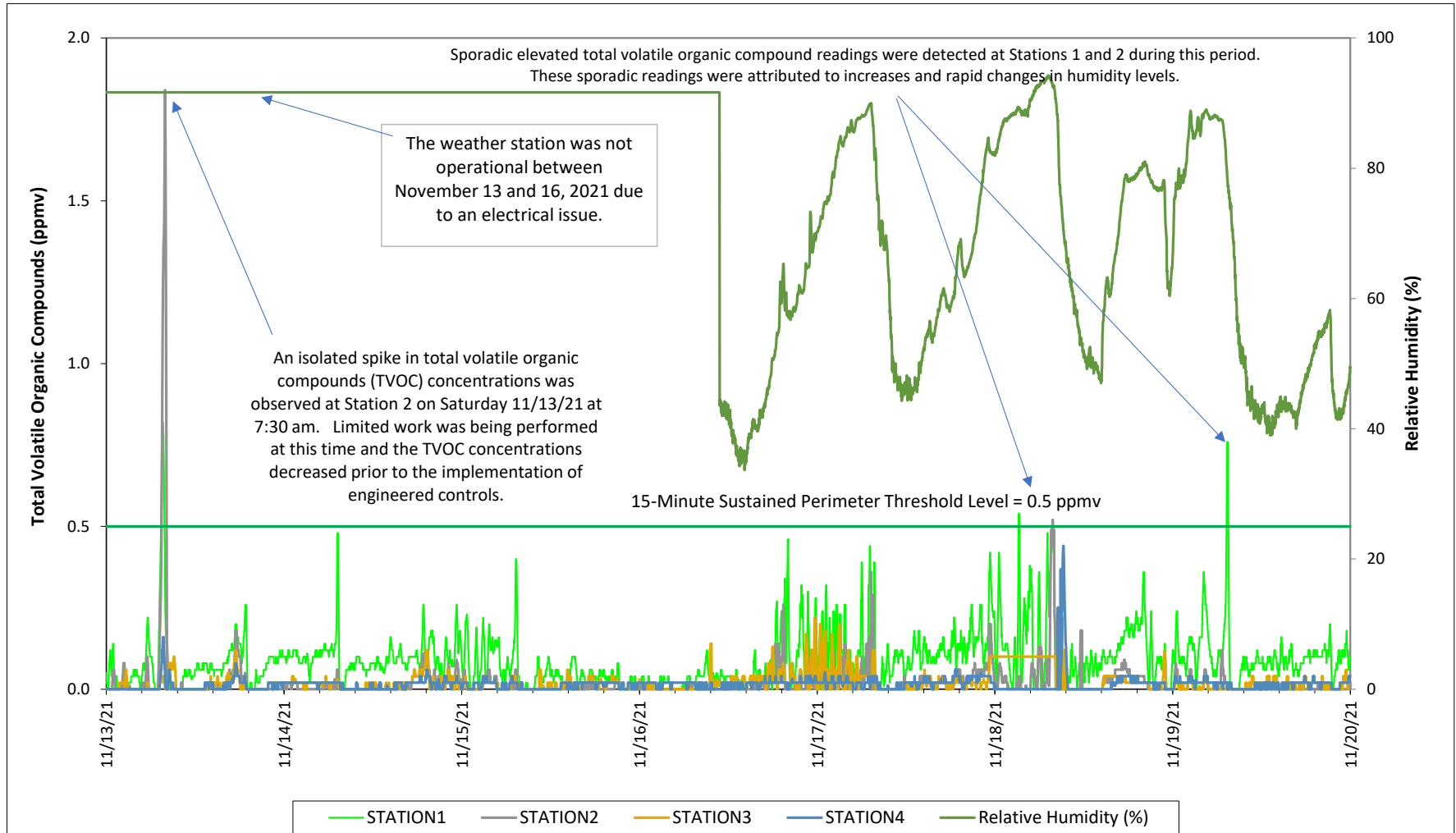


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Air Quality Monitoring - Respirable Dust



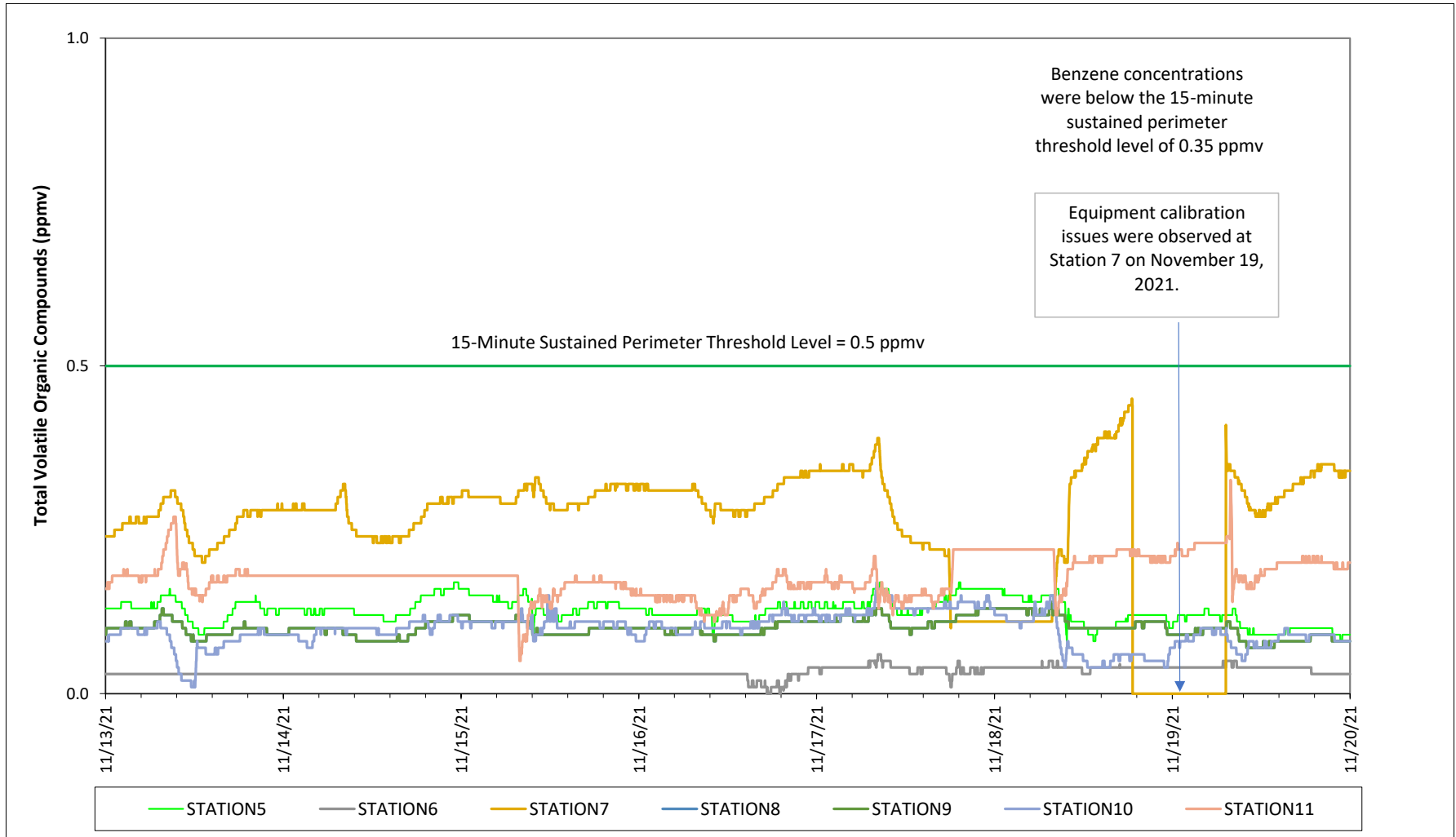
Prepared by National Grid for the Businesses and Residents Located Near the Former Tidewater Facility

Air Quality Monitoring - Total Volatile Organic Compounds

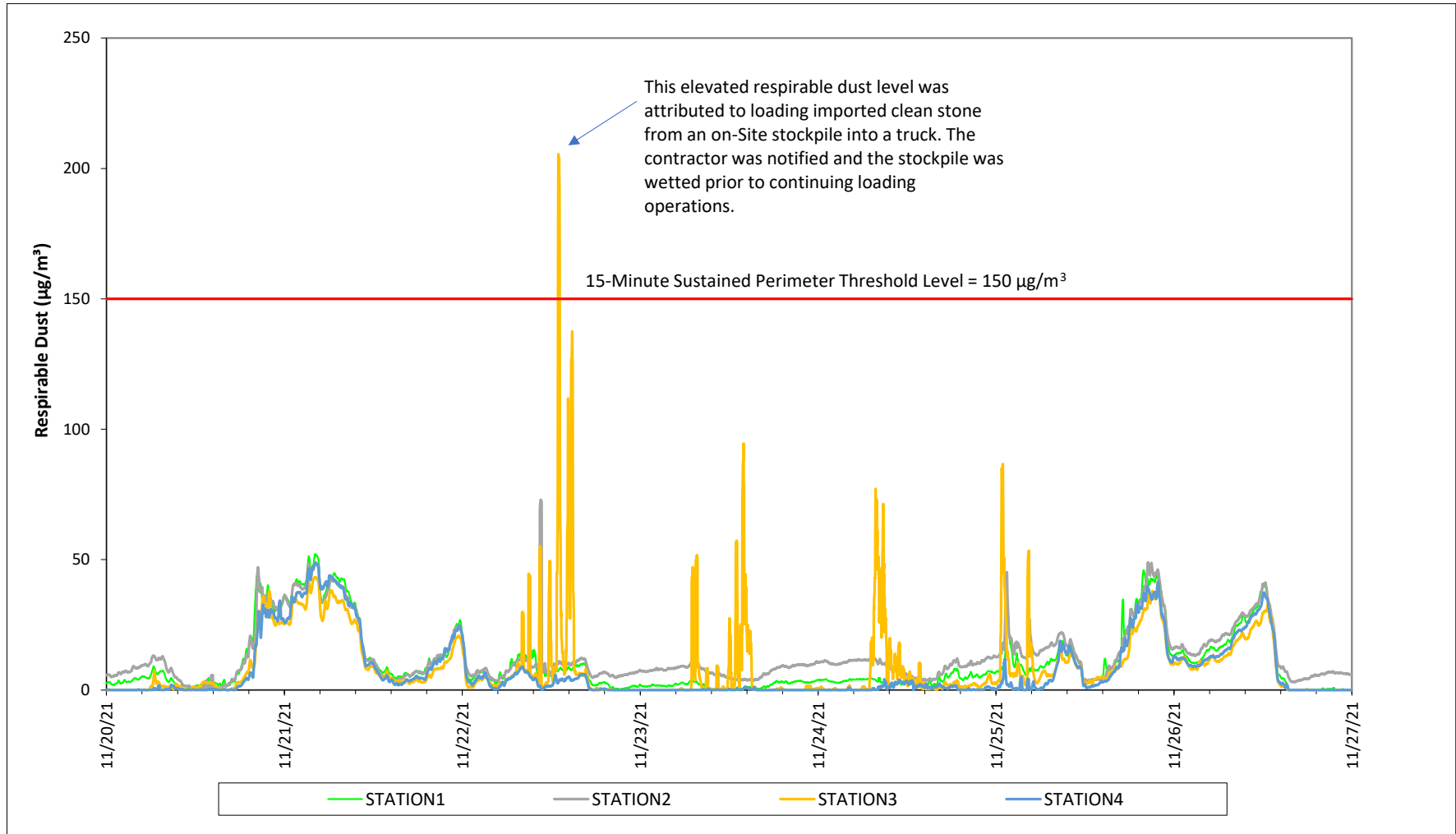


Prepared by National Grid for the Businesses and Residents Located Near the Former
Tidewater Facility

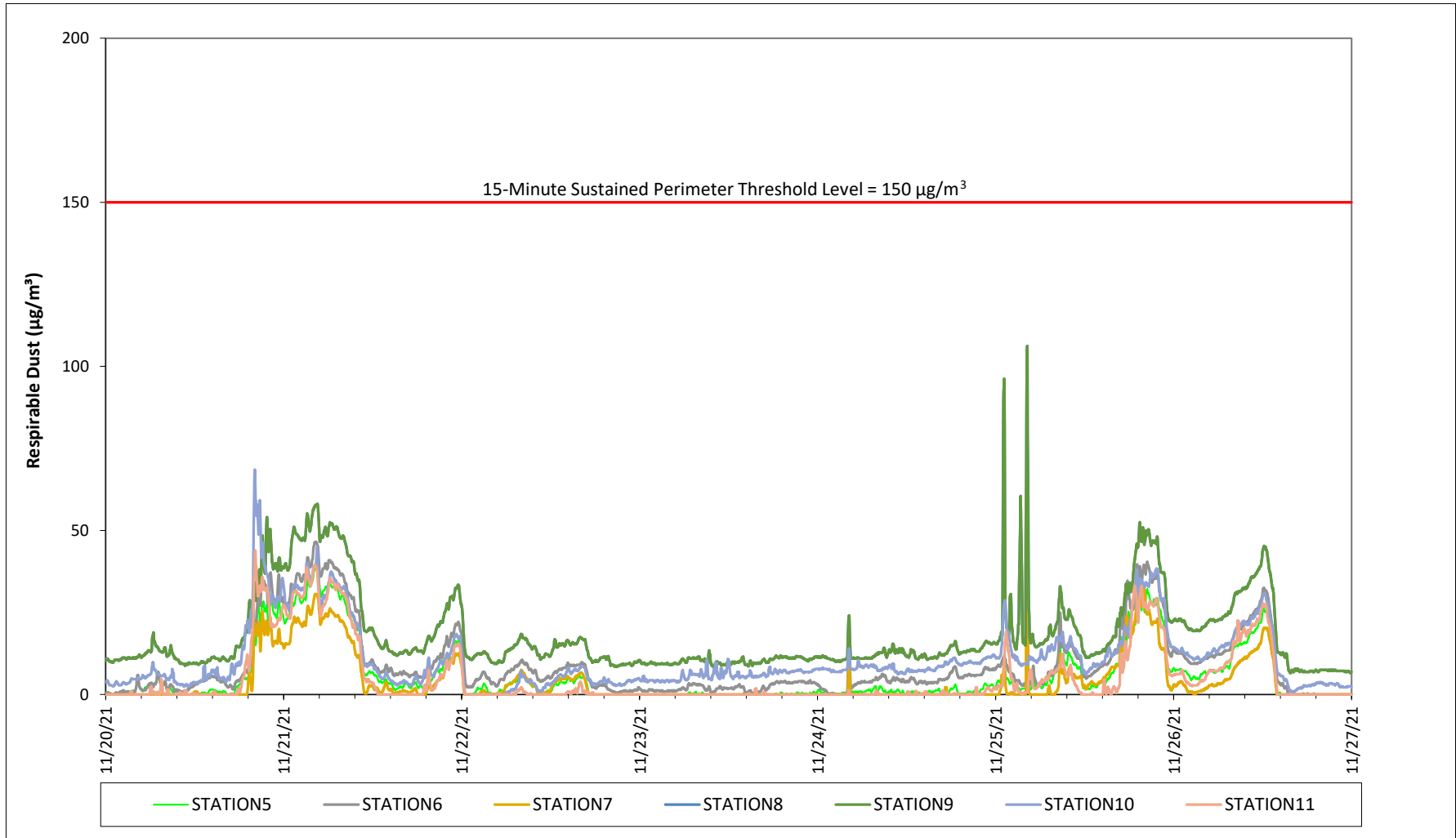
Air Quality Monitoring - Total Volatile Organic Compounds



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

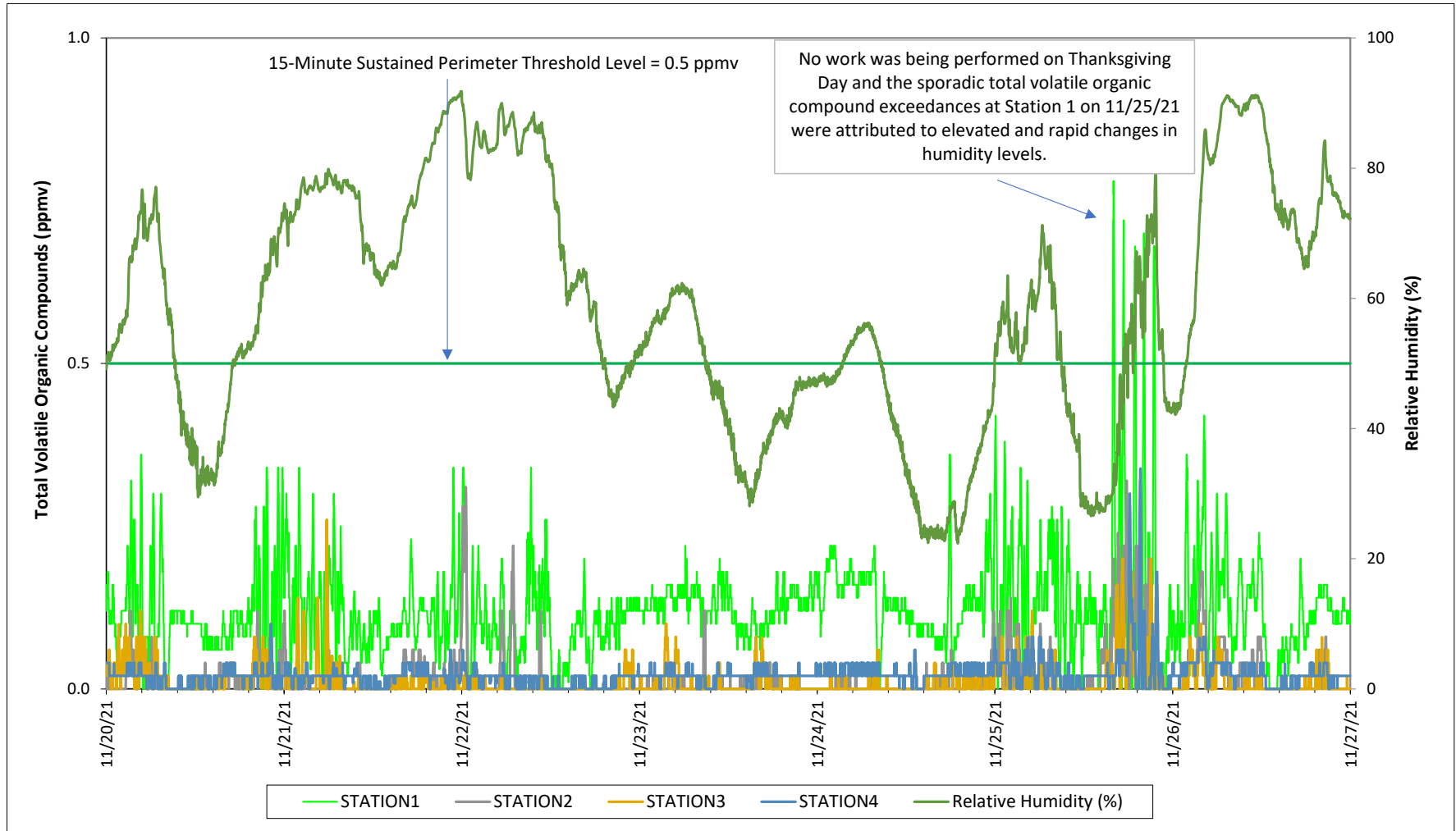


Prepared by National Grid for the Businesses and Residents Located Near the Former
Tidewater Facility
Air Quality Monitoring - Respirable Dust



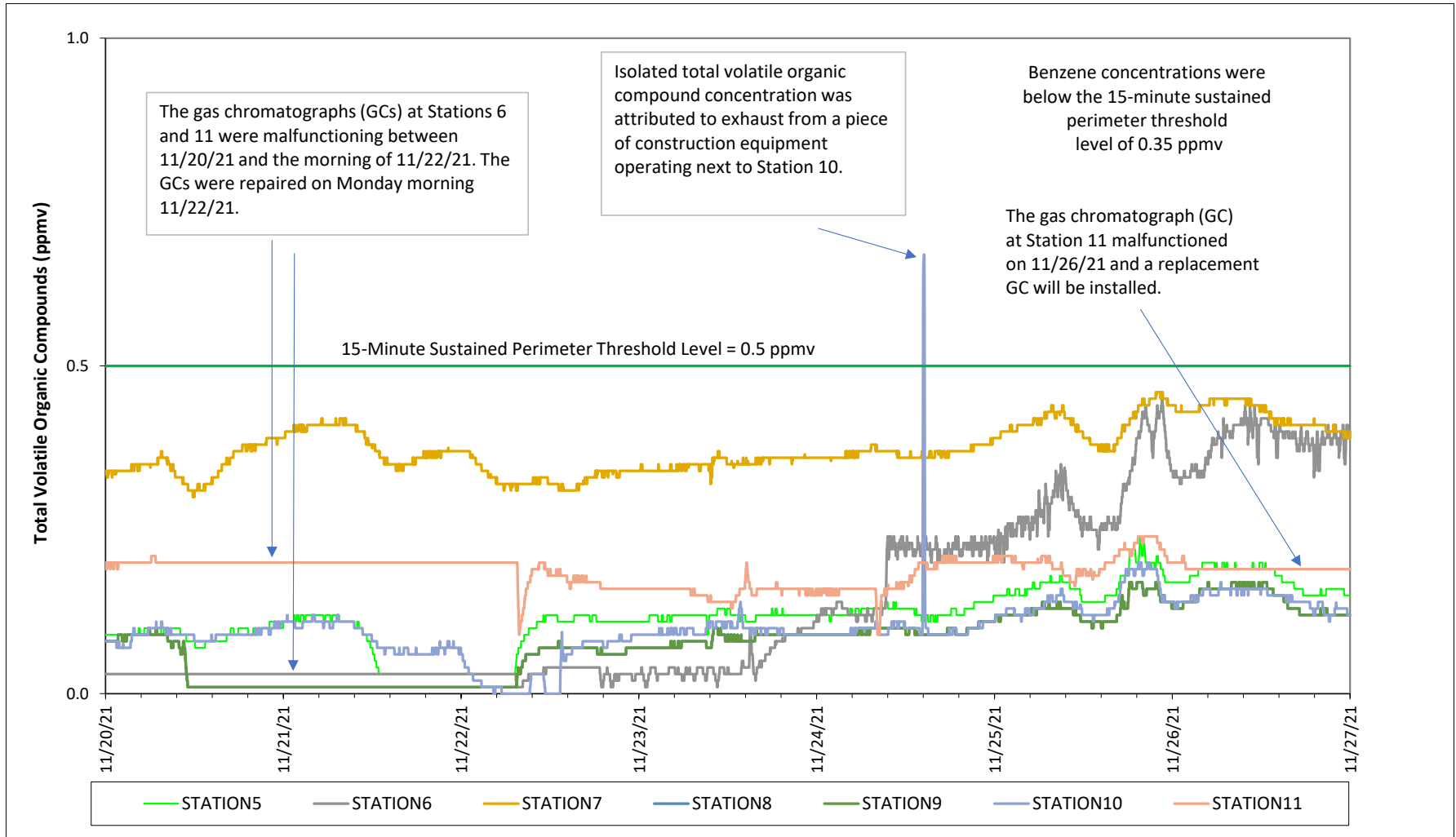
Prepared by National Grid for the Businesses and Residents Located Near the Former
Tidewater Facility

Air Quality Monitoring - Total Volatile Organic Compounds

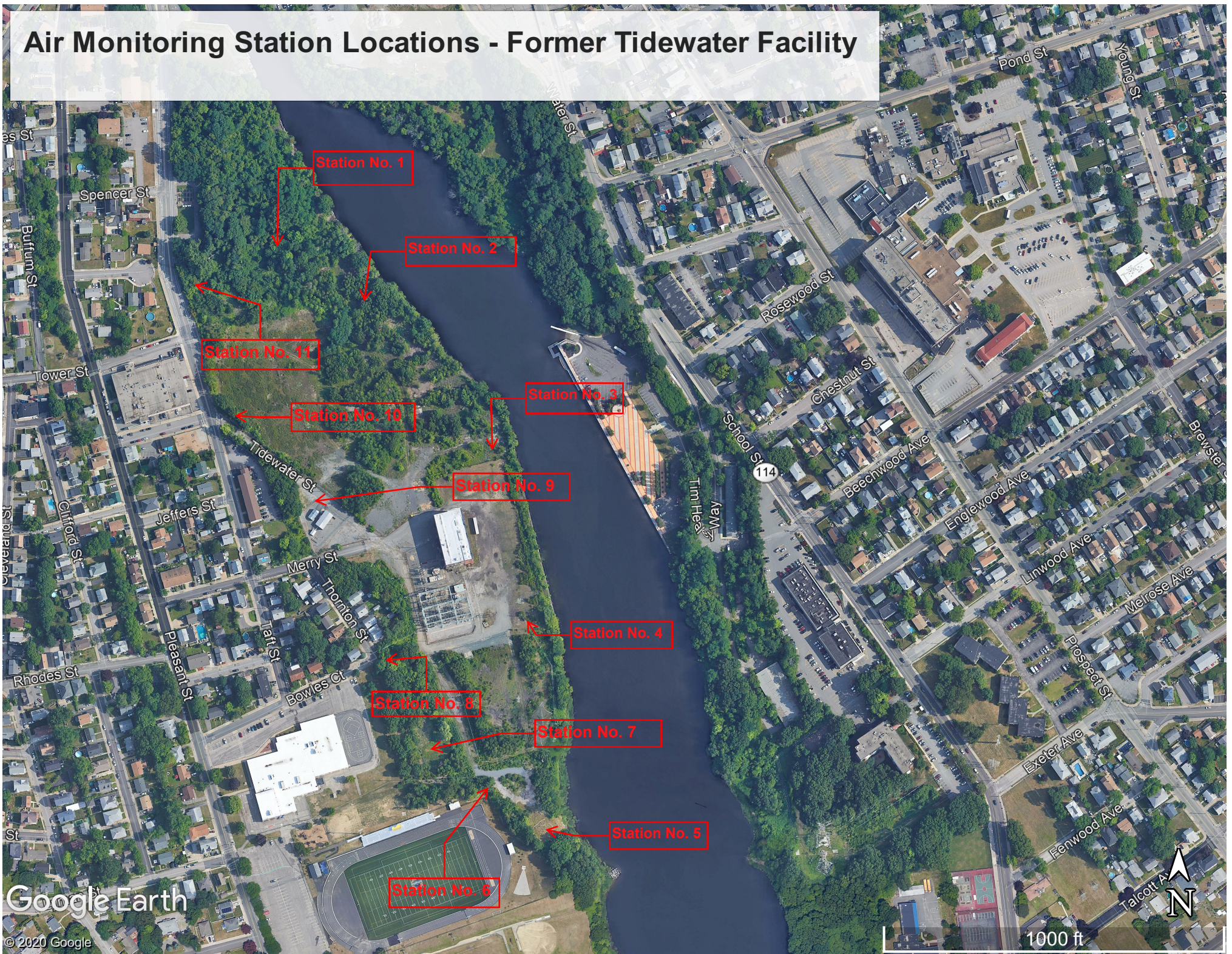


Prepared by National Grid for the Businesses and Residents Located Near the Former Tidewater Facility

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
10-22-21 UPWIND	0.14	0.32	< 0.2	< 0.7	< 0.5
10-22-21 DOWNWIND	0.13	0.39	< 0.2	0.43	< 0.5
10-28-21 UPWIND	0.41	0.14	0.46	0.10	< 0.5
10-28-21 DOWNWIND	0.18	0.43	< 0.2	< 0.70	< 0.5
11-4-2021 UPWIND	0.20	0.31	< 0.2	< 0.70	< 0.5
11-4-2021 DOWNWIND	0.14	0.23	< 0.2	< 0.7	< 0.5
11-11-21 UPWIND	0.23	0.45	0.17	0.51	0.35
11-11-21 DOWNWIND	0.31	0.69	0.18	0.56	< 0.5
11-18-21 DOWNWIND	0.14	0.29	< 0.2	< 0.7	< 0.5
11-18-2021 UPWIND	0.29	0.54	0.32	0.26	2.4
11-23-21 DOWNWIND	0.13	0.24	< 0.2	0.33	< 0.5
11-23-21 UPWIND	0.27	1.0	< 0.2	0.30	0.23
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.