



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 30, 2021

Re: Site Response Action Report
Period July 11, 2021 through July 24, 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 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.
 - Continued excavation/removal of deep obstructions on the north end of the containment wall.
 - Initial excavation and installation of sleeves for the fence posts east and south of the substation area and placement of excavated Site materials as fill beneath engineered cap in the southern 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. 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.
 - Exceedances of the respirable dust perimeter threshold level were noted between July 20 and July 21, 2021 at the majority of the air monitoring stations at the Site. These exceedances were similar in the upgradient stations when compared to those stations in the downgradient locations. As such, these elevated respirable dust levels were attributed to an off-Site source rather than work related activities or Site conditions. The off-Site source was likely smoke from the wildfires in the western portion of the country and Canada as these exceedances occurred during the same timeframe as the Air Quality Alert issued by the Rhode Island Department of Environmental Management on July 20, 2021. The levels lessened on July 21, 2021 but were still elevated until a weather front



moved through the area later that day. There were no Site related exceedances during the reporting period for dust.

- Elevated TVOC perimeter threshold exceedances were detected at two stations during the reporting period. Exceedances occurred at Station 3 on July 22, 2021 during the loading of soils from the Source Area 2 and 3 excavations for off-Site disposal. Upon detecting the elevated TVOC concentrations, the Contractor was notified and odor suppressing foam was applied to the remaining stockpiled Source Area 2 and 3 soils. After applying the odor suppressing foam, TVOC concentrations at Station 3 decreased to background levels. Exceedances were also detected on July 20 and 22, 2021 at Station 10 in the northwestern corner of the Site. These elevated TVOC concentrations were attributed to the exhaust from a drill rig working proximate to this station on behalf of the Narragansett Bay Commission rather than Site materials. No other work was ongoing in the vicinity of this monitoring station and the wind direction was generally out of the north, which supports the source of TVOC concentrations was the drill rig operation rather than other Site activities. No other exceedances were detected during the reporting period.
- GZA collected ambient air samples from upwind and downwind locations on July 15, 2021 and July 22, 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 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.
- Completion of the regrading east of the substation area.

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

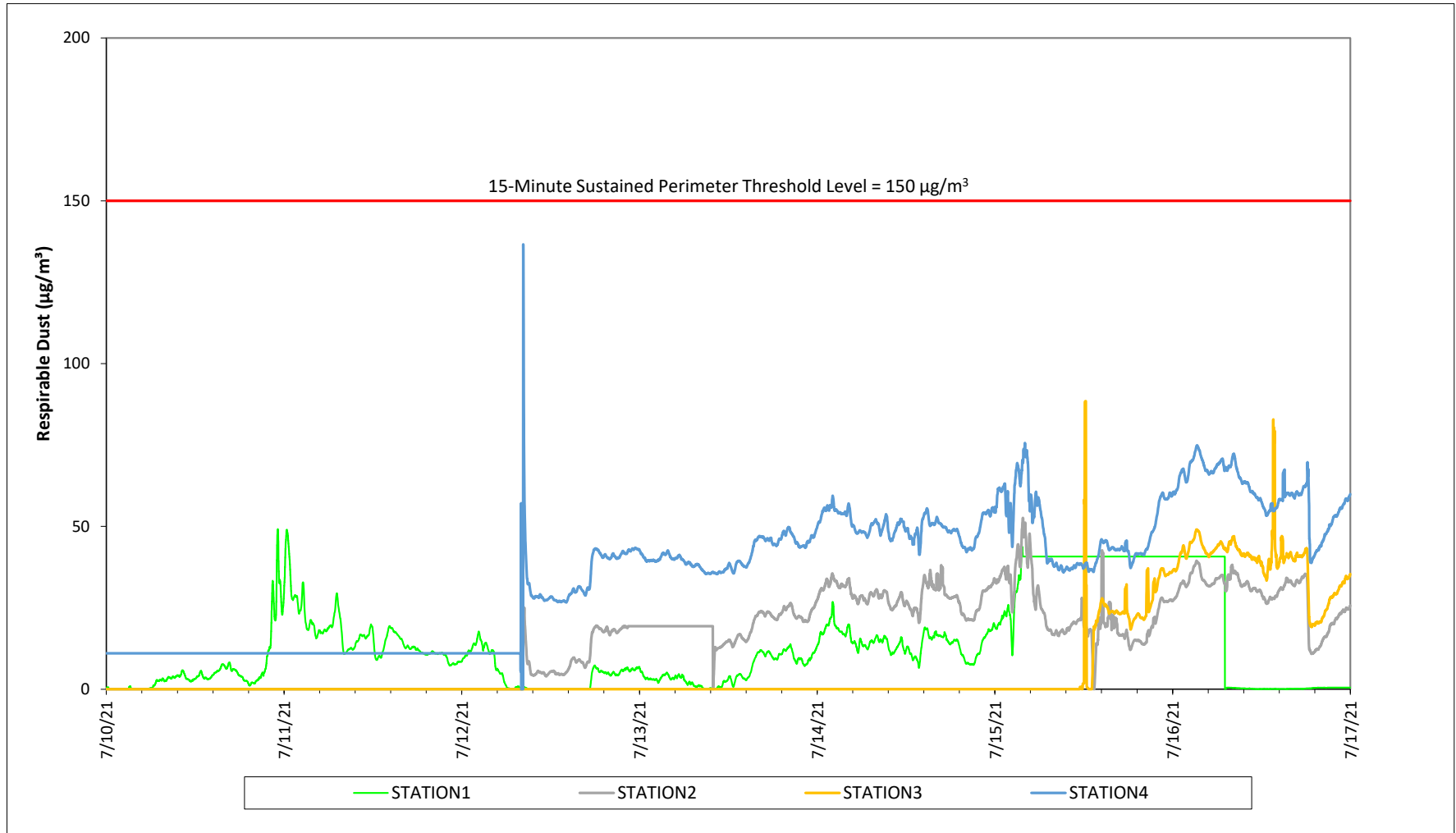
Attachments:

Weekly Perimeter Air Monitoring Results

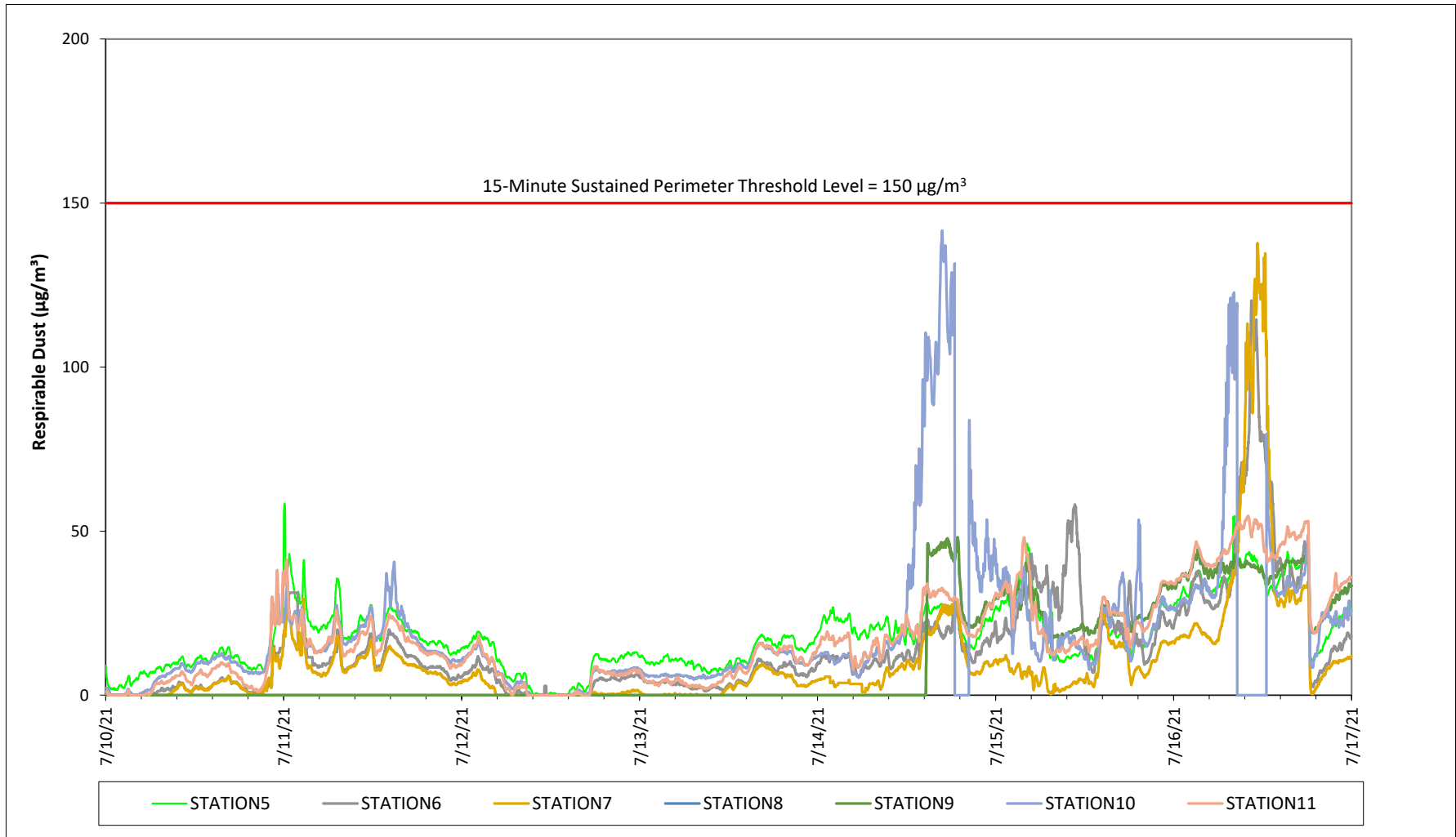
Air Monitoring Station Locations

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

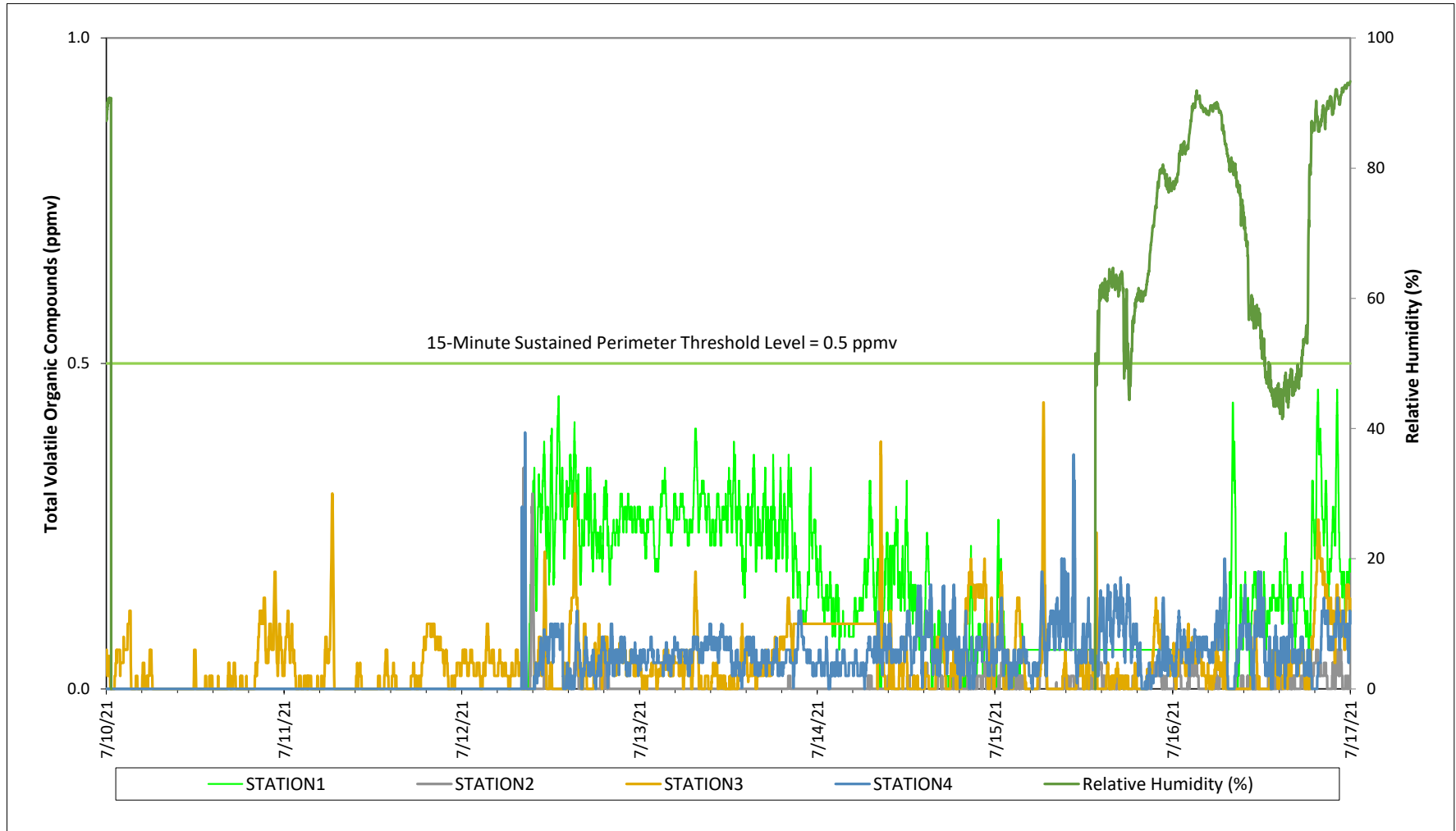


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Air Quality Monitoring - Respirable Dust



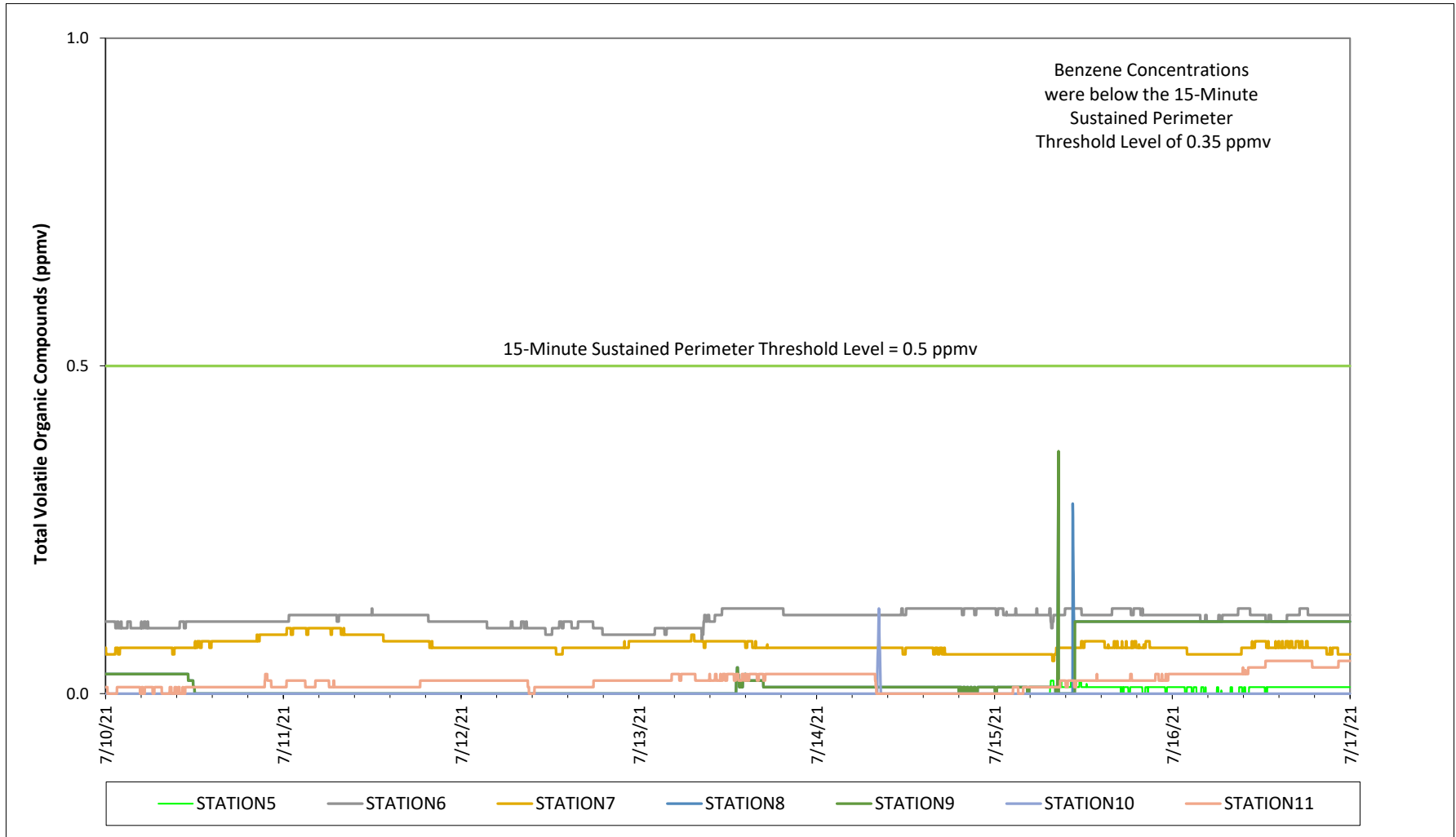
Prepared by National Grid for the Businesses and Residents Located Near the Former
Tidewater Facility

Air Quality Monitoring - Total Volatile Organic Compounds

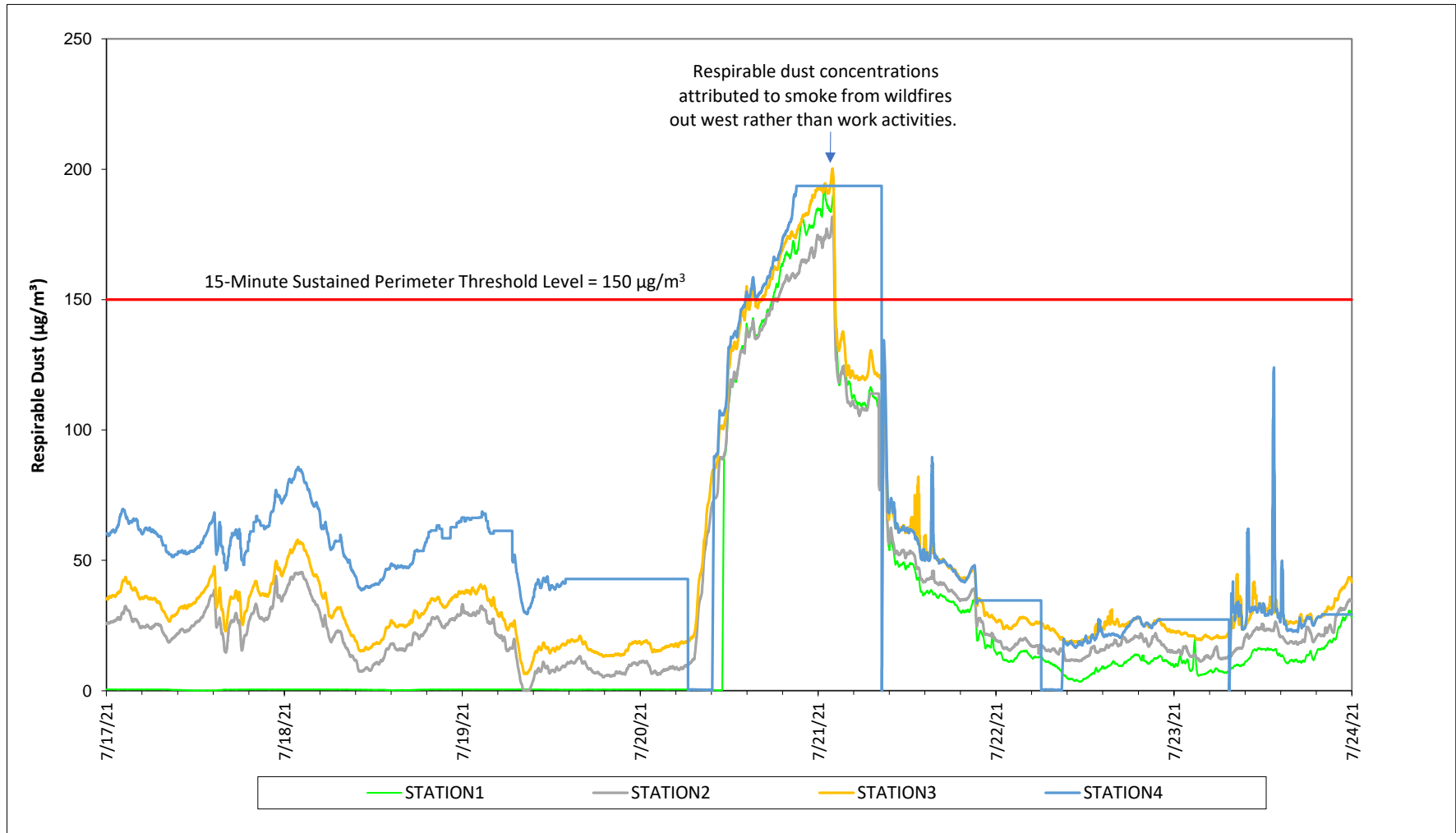


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Air Quality Monitoring - Total Volatile Organic Compounds

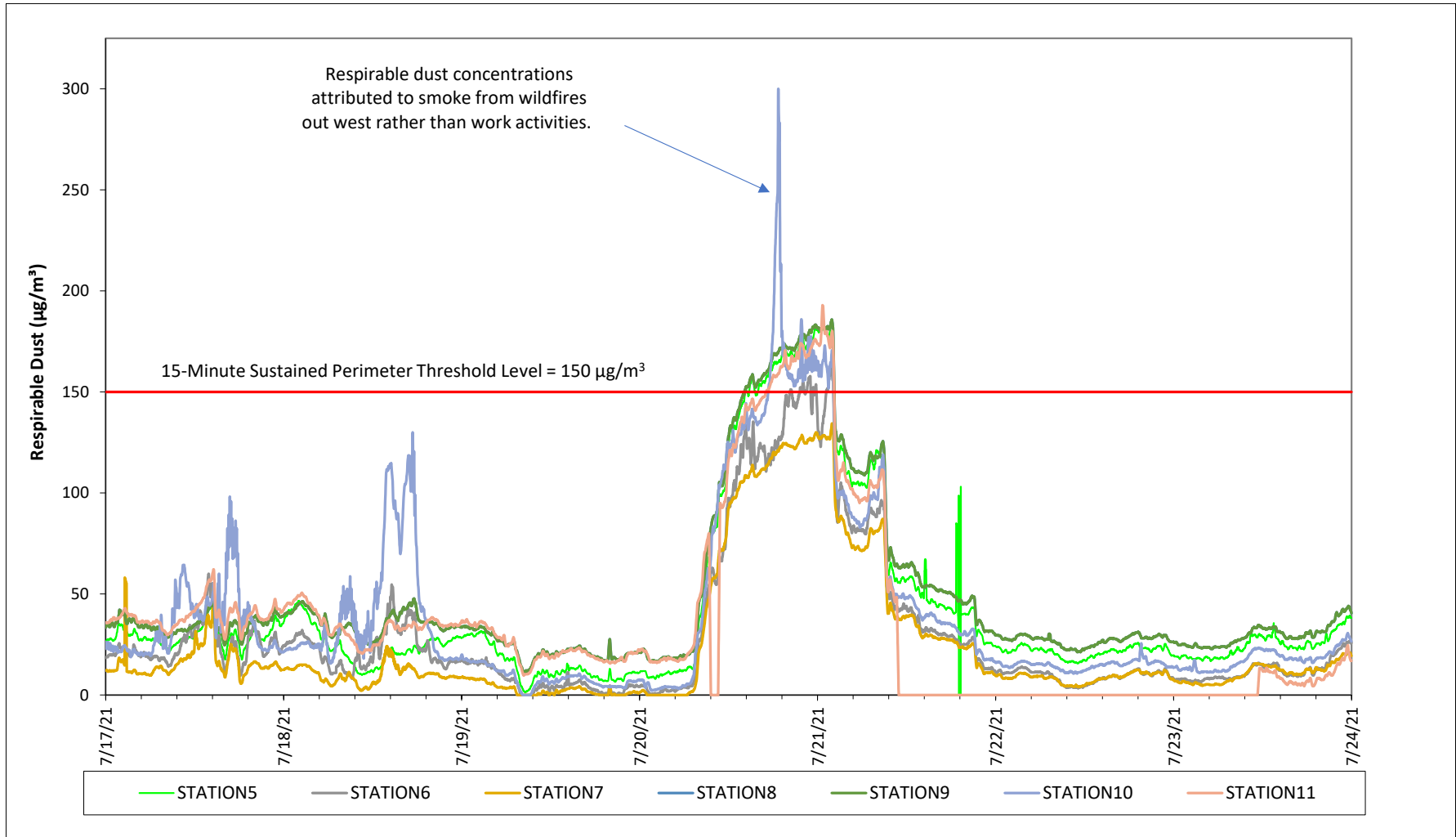


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Air Quality Monitoring - Respirable Dust



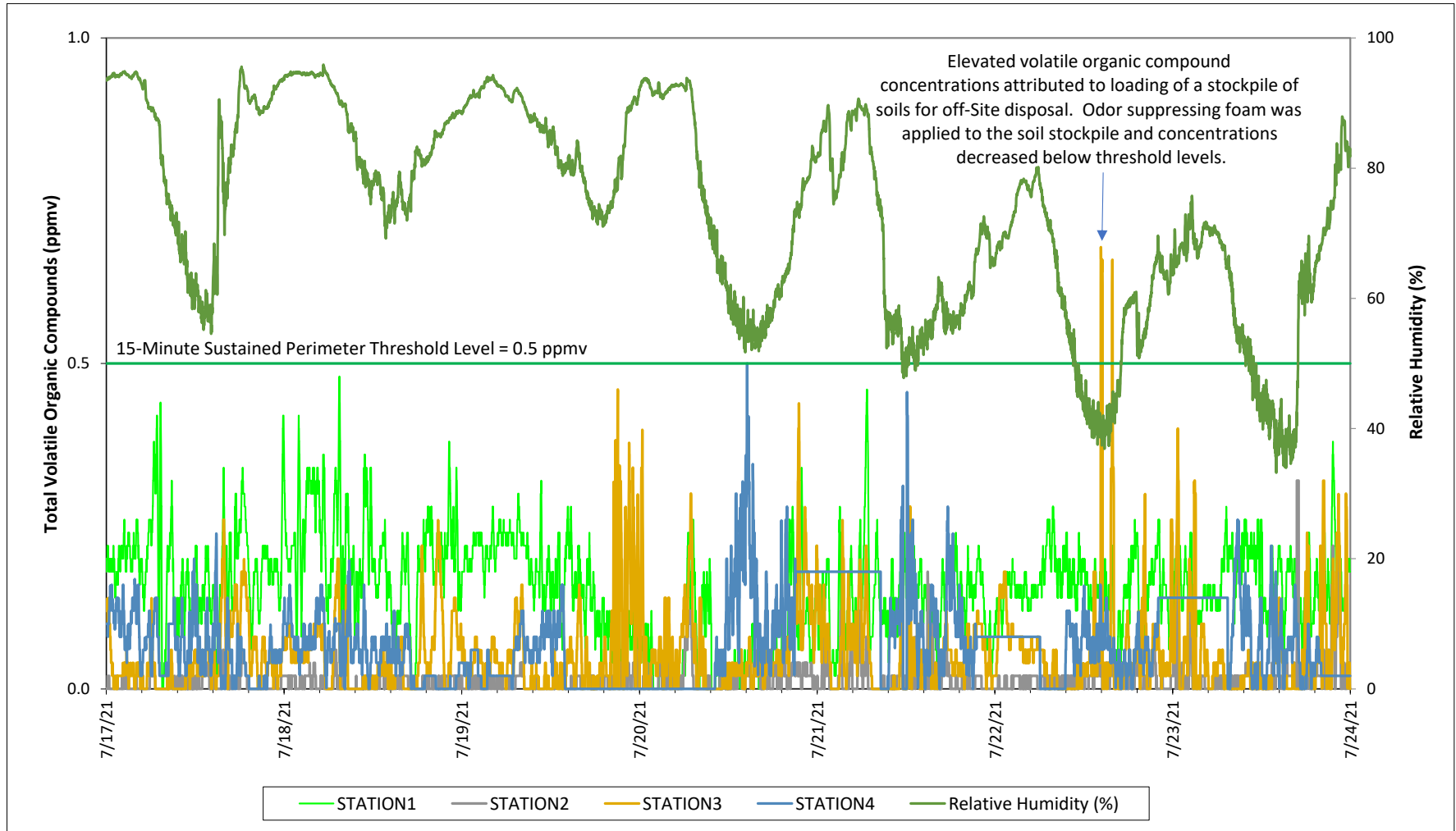
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Air Quality Monitoring - Respirable Dust



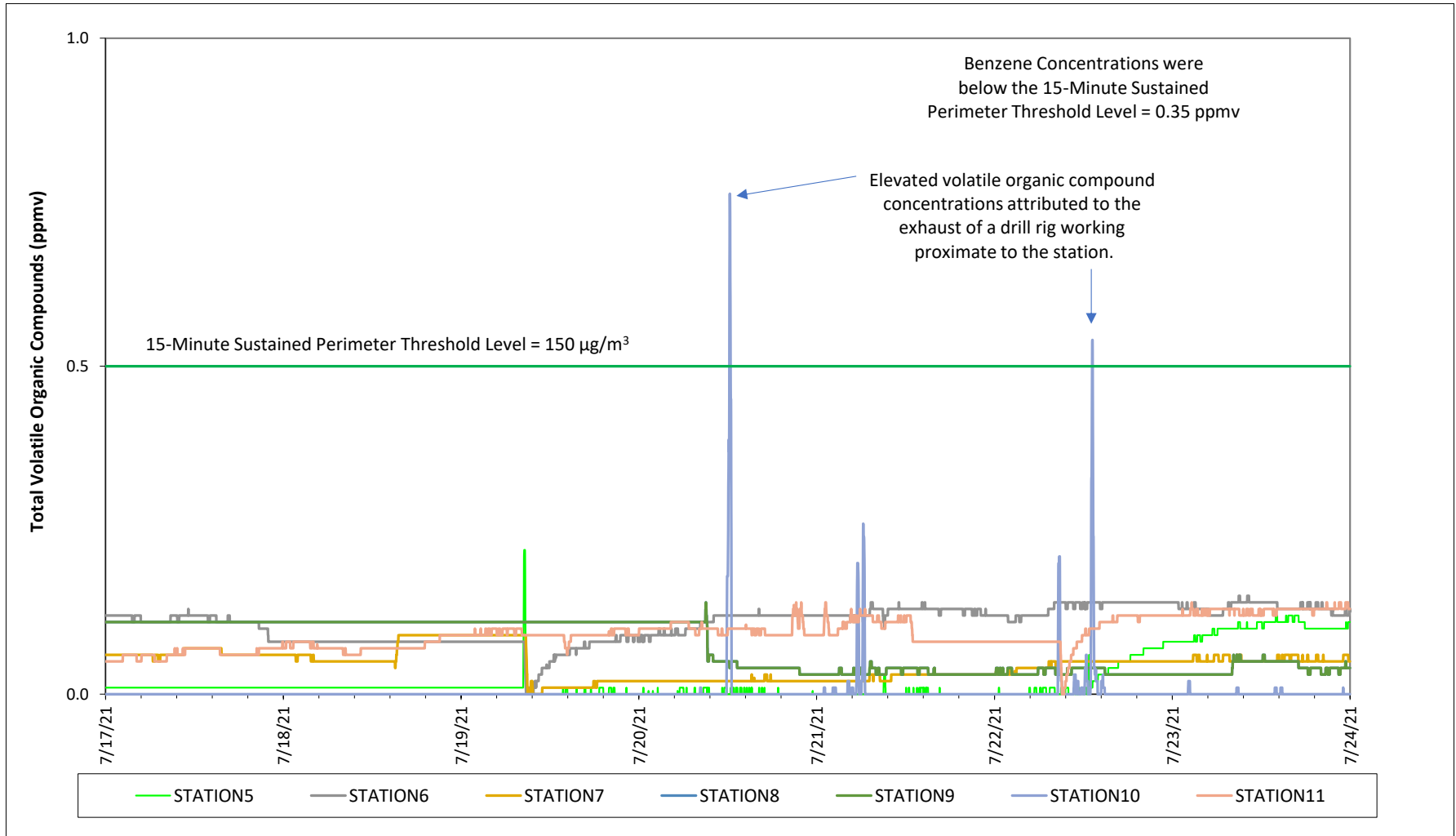
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Air Quality Monitoring - Total Volatile Organic Compounds

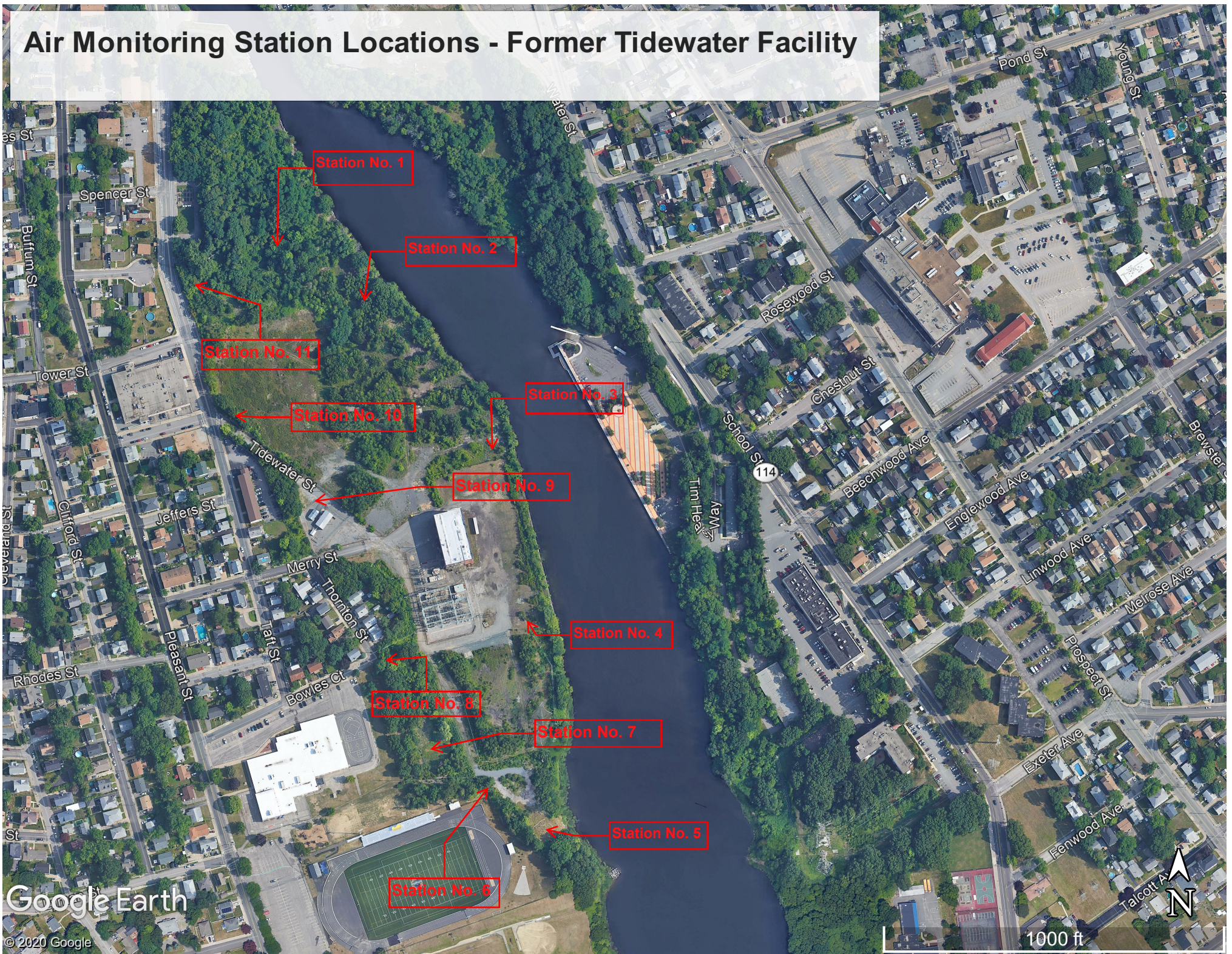


Prepared by National Grid for the Businesses and Residents Located Near the Former
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Air Quality Monitoring - Total Volatile Organic Compounds



Air Monitoring Station Locations - Former Tidewater Facility



Google Earth

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1000 ft



**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
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.