



Proactive by Design

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION
MANAGEMENT



MEMORANDUM

To: Joseph Martella, RIDEM

From: Dave Rusczyk, GZA

Cc: Kenneth Lento, Rhode Island Energy

Date: June 29, 2022

Re: Site Response Action Report
Period June 12, 2022 through June 25, 2022
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 regrading of the ground surface south of the proposed stadium in preparation for installation of the engineered cap.
 - Completion of the underdrain system within the footprint of the stadium area.
 - Continued installation of the engineered cap across the field portion of the stadium.
 - Continued installation of the engineered cap in the northwestern and western portions of the Site.
 - Continued placement of the topsoil engineered cap between the east side of the porous pavement maintenance path and the top of the revetment cap.
- Perimeter air monitoring was performed during the period covered by this report with 9 air monitoring stations (4 solar powered units located proximate to the river and 5 electrically powered units). The 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, no exceedances of the total volatile organic compound (0.5 ppmv) and respirable dust ($150 \mu\text{g}/\text{m}^3$) perimeter threshold levels were observed during the monitoring period covered by this report with the exception of the following:
 - Isolated elevated TVOC concentrations were observed at Station 10 on June 16, 2022. The elevated TVOC concentrations were attributed to the exhaust from construction equipment working proximate to the station. Once the construction equipment moved away from the station, TVOC concentrations decreased to normal background concentrations.
- GZA collected ambient air samples from upwind and downwind locations on June 16 and 23, 2022 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

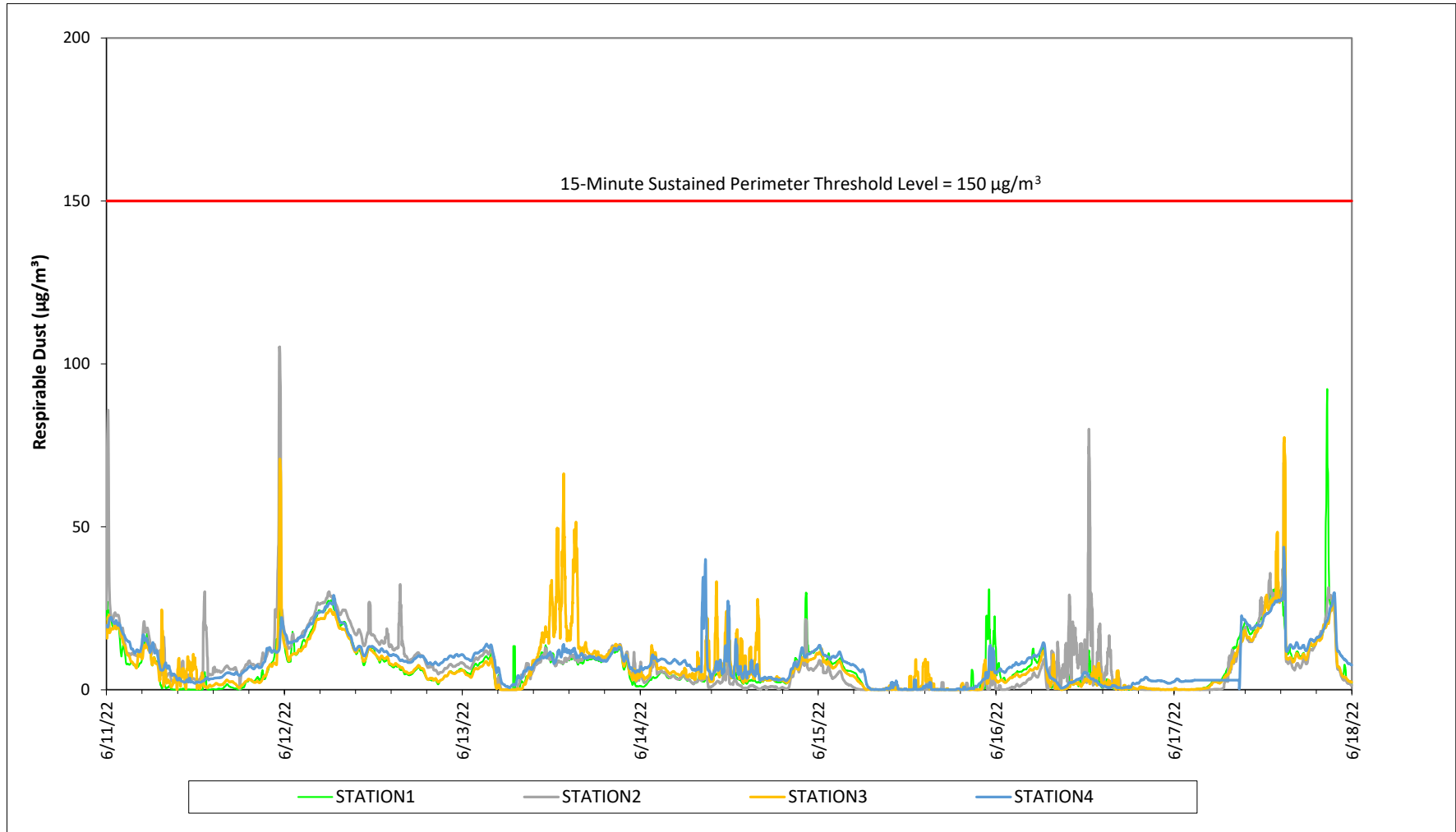
- Continued regrading south of the proposed stadium to the subgrade elevations for the engineered cap.
- Completion of the installation of the engineered cap in the field portion of the stadium.
- Completion of the installation of the engineered cap in the northwestern portion of the Site.
- Continued installation of the engineered cap in the western portion of the Site.
- Completion of the installation of the topsoil engineered cap between the east side of the porous pavement maintenance path and the top of the revetment cap.

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

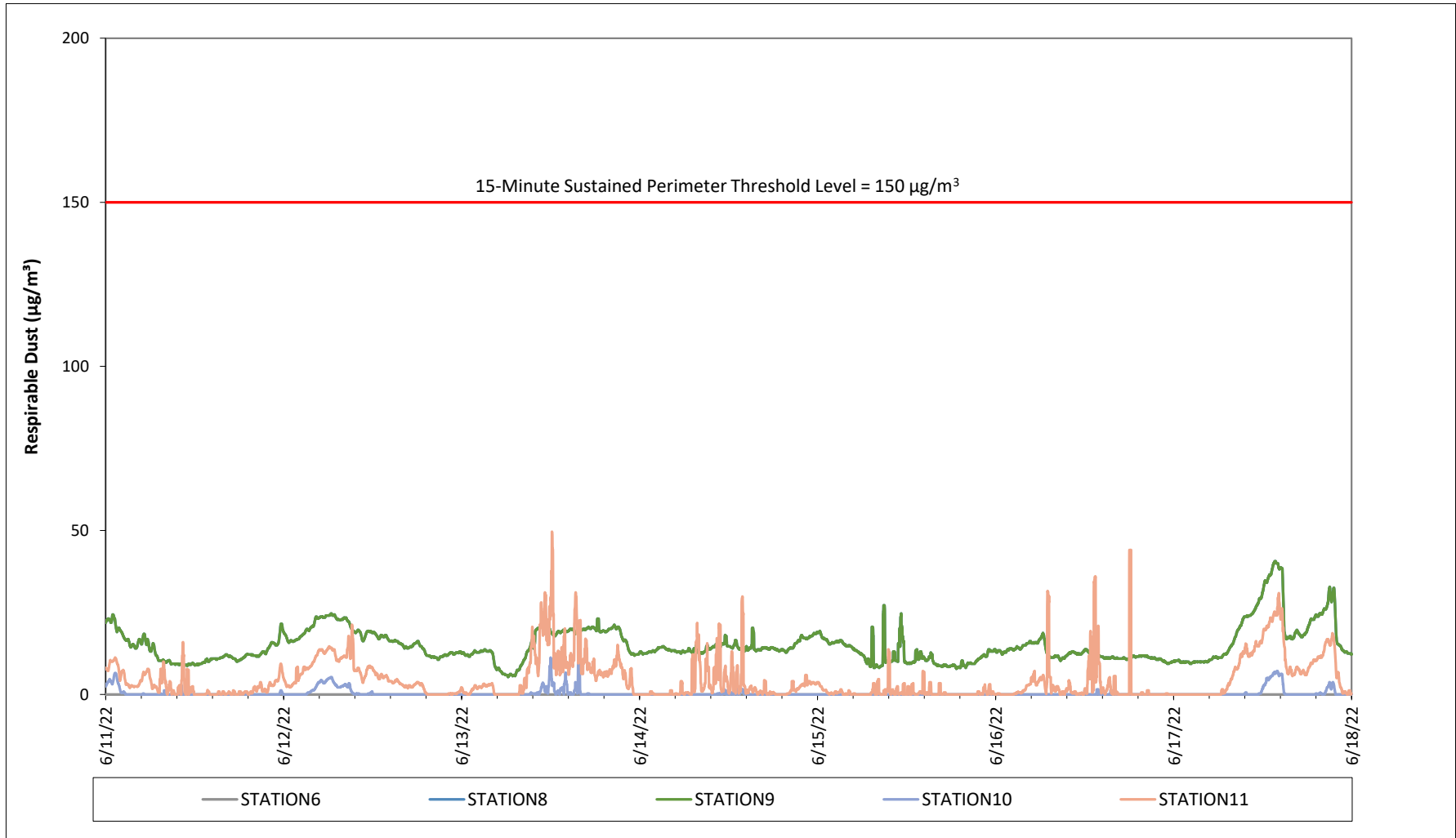
Attachments:

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

Prepared by Rhode Island Energy for the Businesses and Residents Located Near the Former
Tidewater Facility
Air Quality Monitoring - Respirable Dust

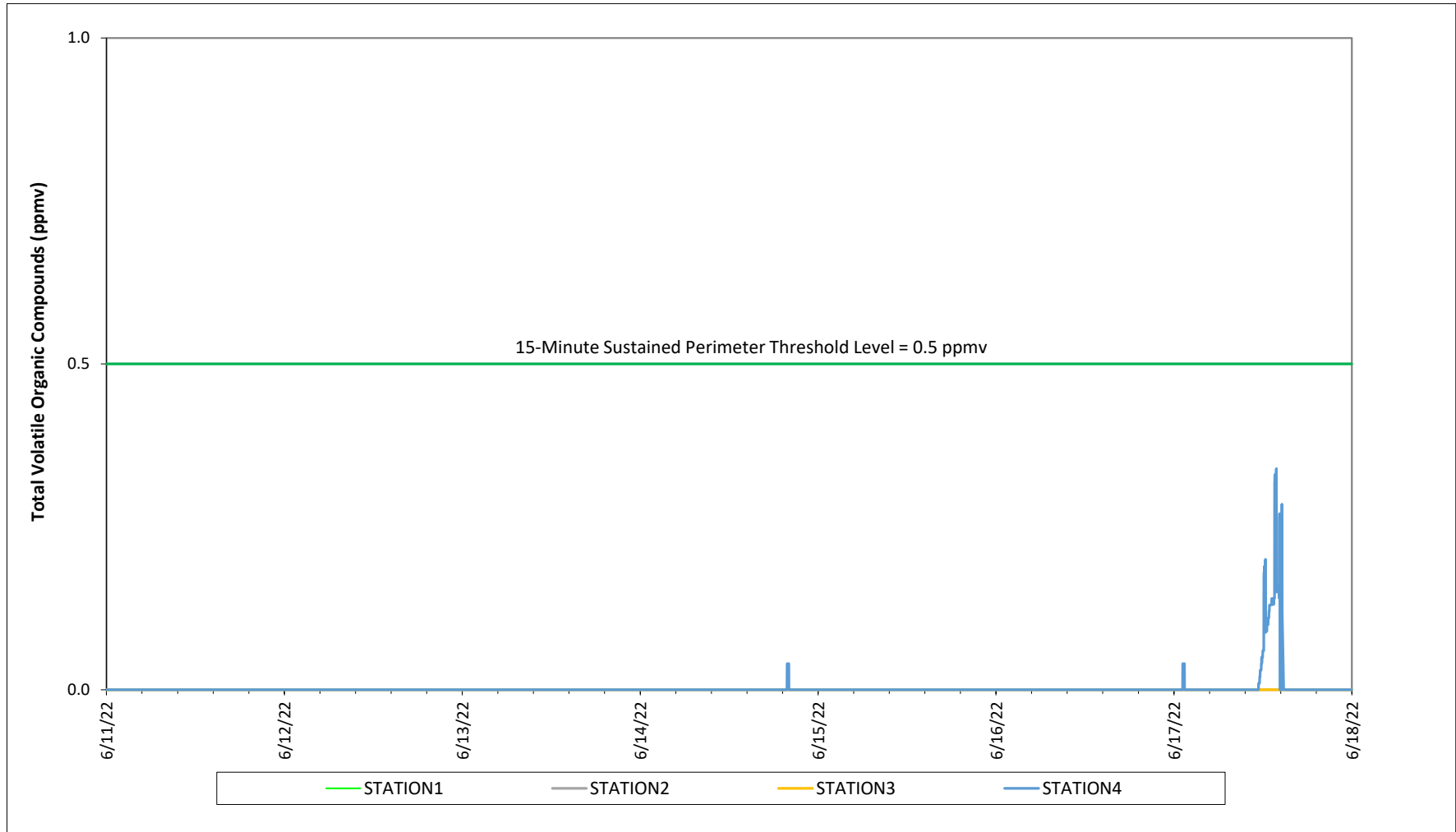


Prepared by Rhode Island Energy for the Businesses and Residents Located Near the Former
Tidewater Facility
Air Quality Monitoring - Respirable Dust



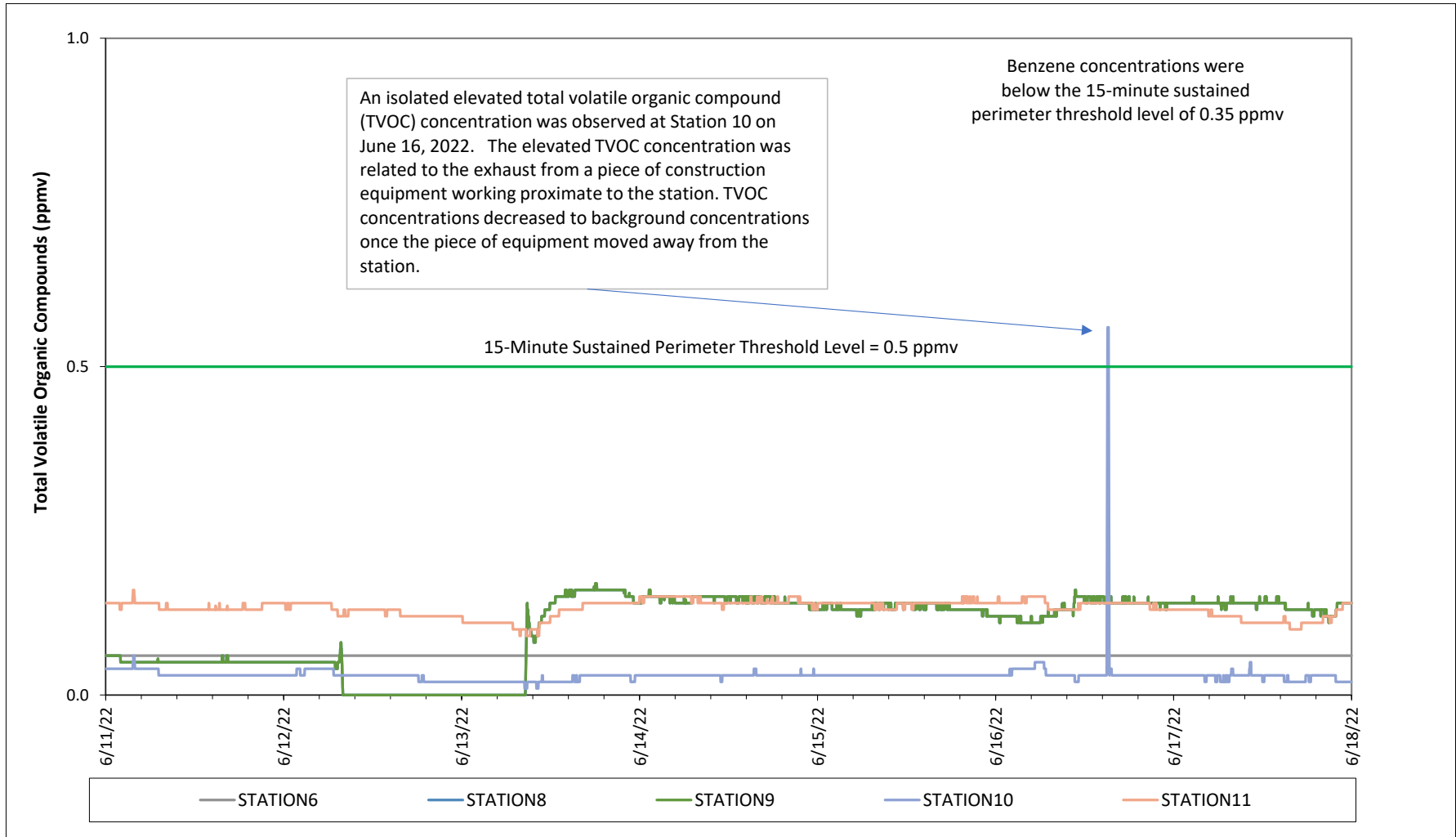
Prepared by Rhode Island Energy for the Businesses and Residents Located Near the Former
Tidewater Facility

Air Quality Monitoring - Total Volatile Organic Compounds

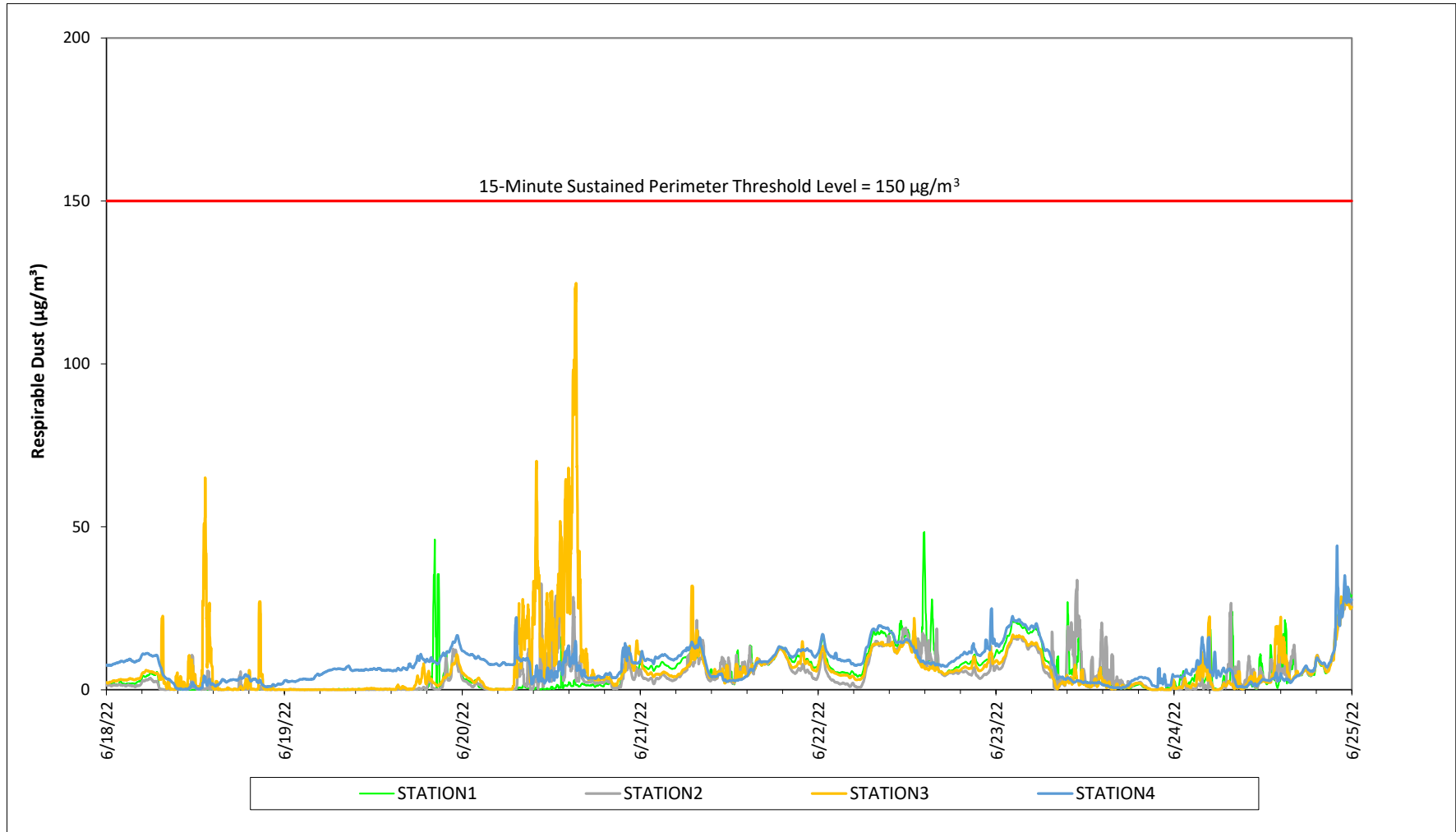


Prepared by Rhode Island Energy for the Businesses and Residents Located Near the Former Tidewater Facility

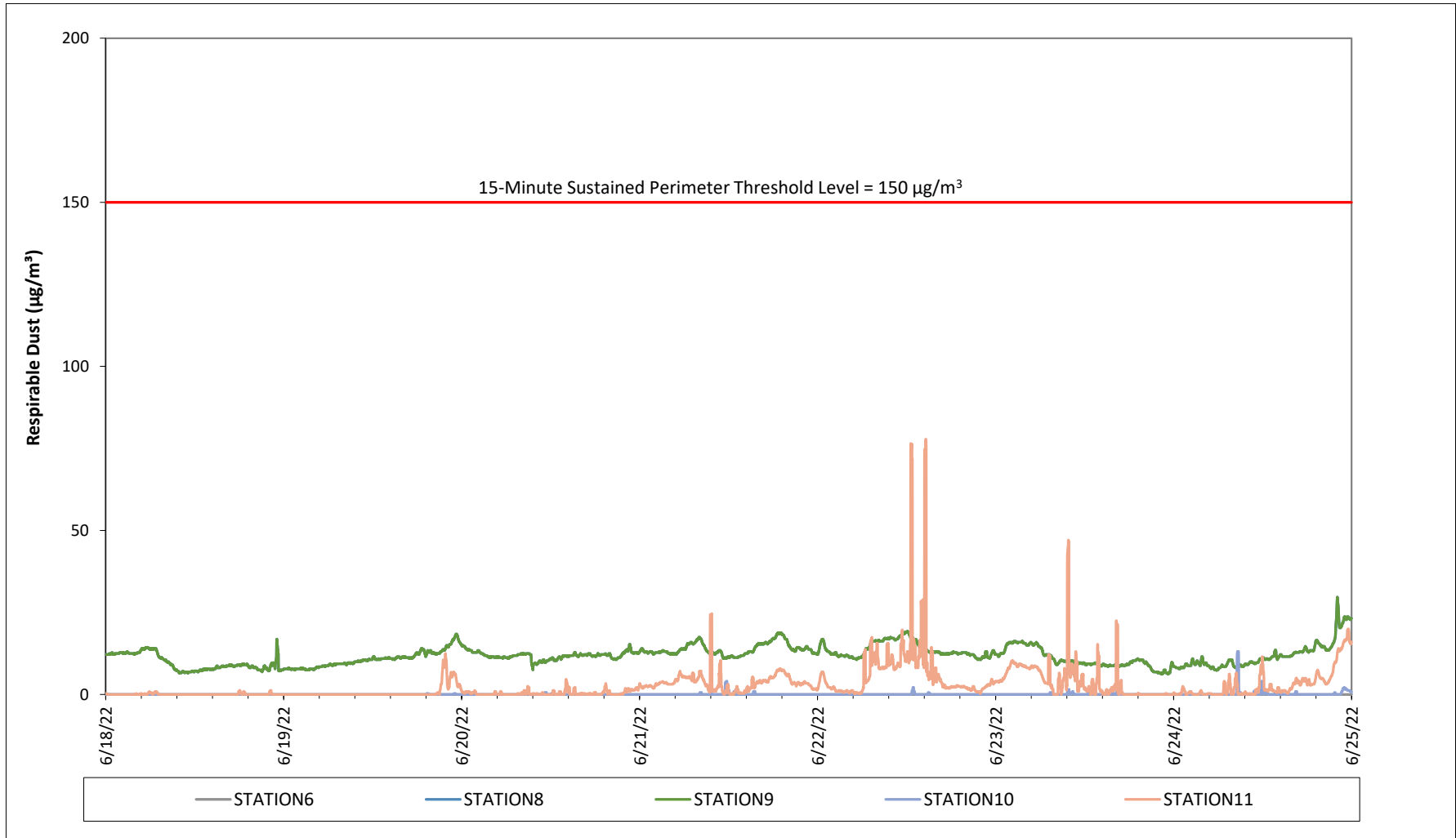
Air Quality Monitoring - Total Volatile Organic Compounds



Prepared by Rhode Island Energy for the Businesses and Residents Located Near the Former
Tidewater Facility
Air Quality Monitoring - Respirable Dust

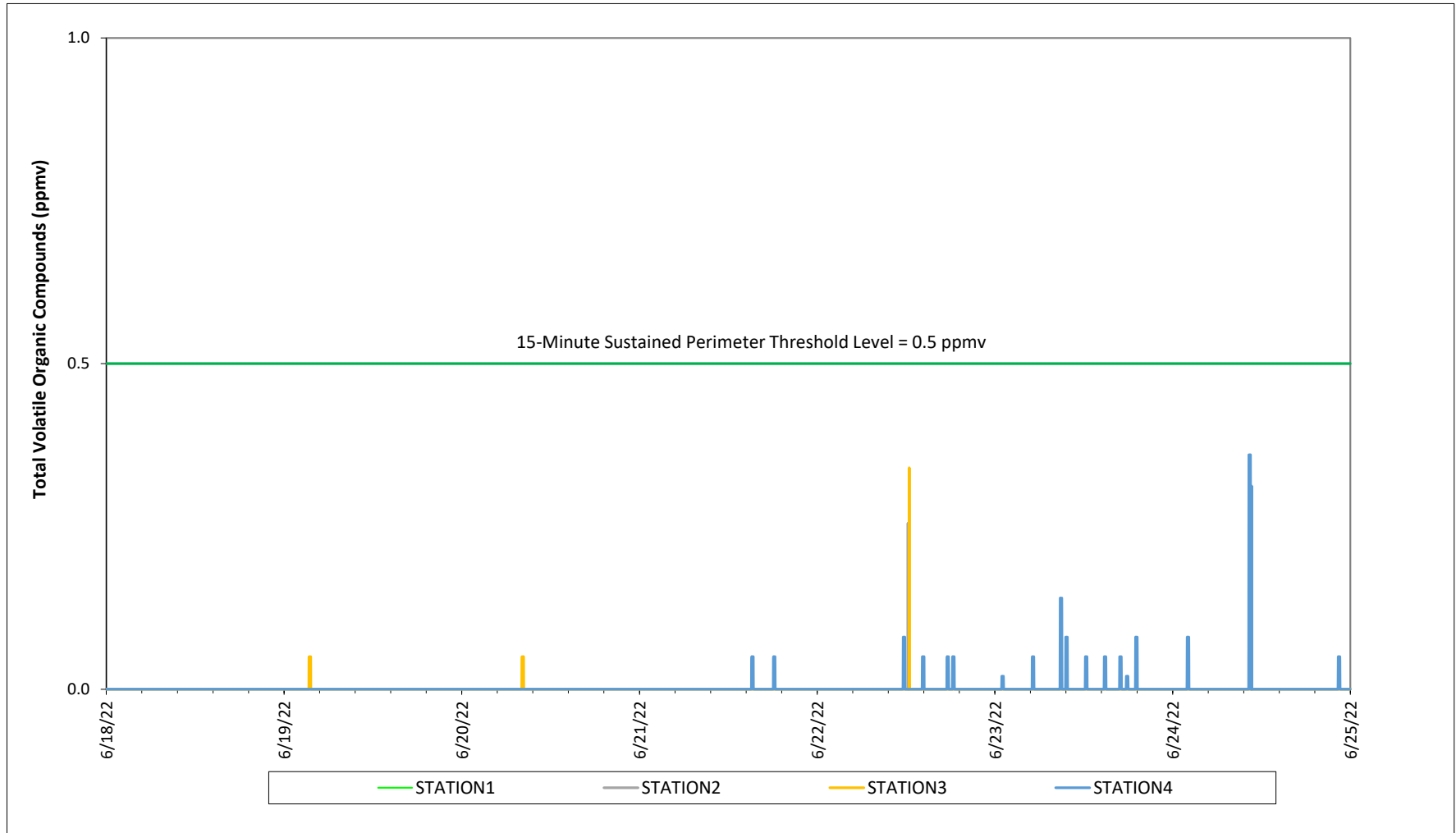


Prepared by Rhode Island Energy for the Businesses and Residents Located Near the Former
Tidewater Facility
Air Quality Monitoring - Respirable Dust



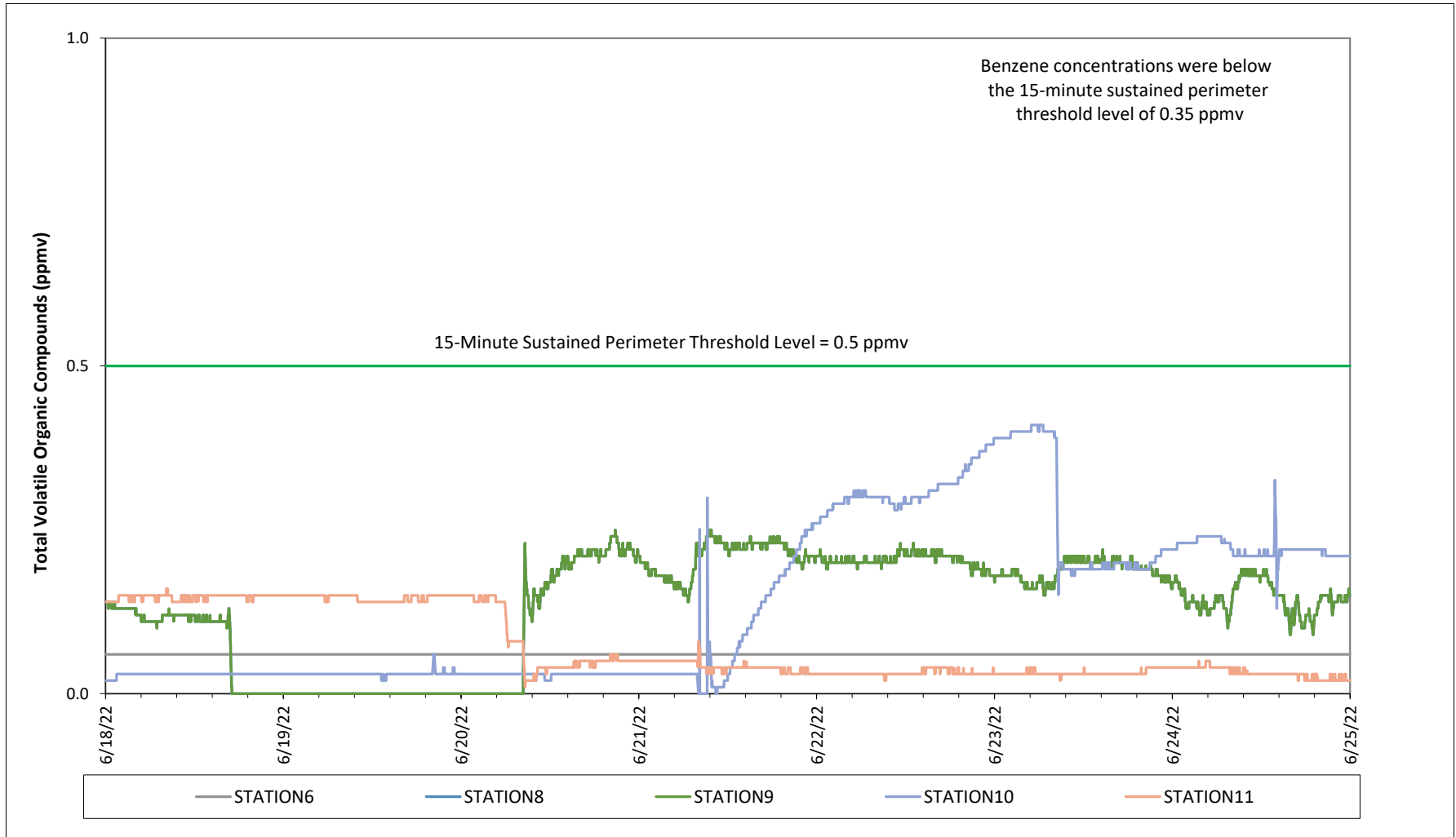
Prepared by Rhode Island Energy for the Businesses and Residents Located Near the Former
Tidewater Facility

Air Quality Monitoring - Total Volatile Organic Compounds

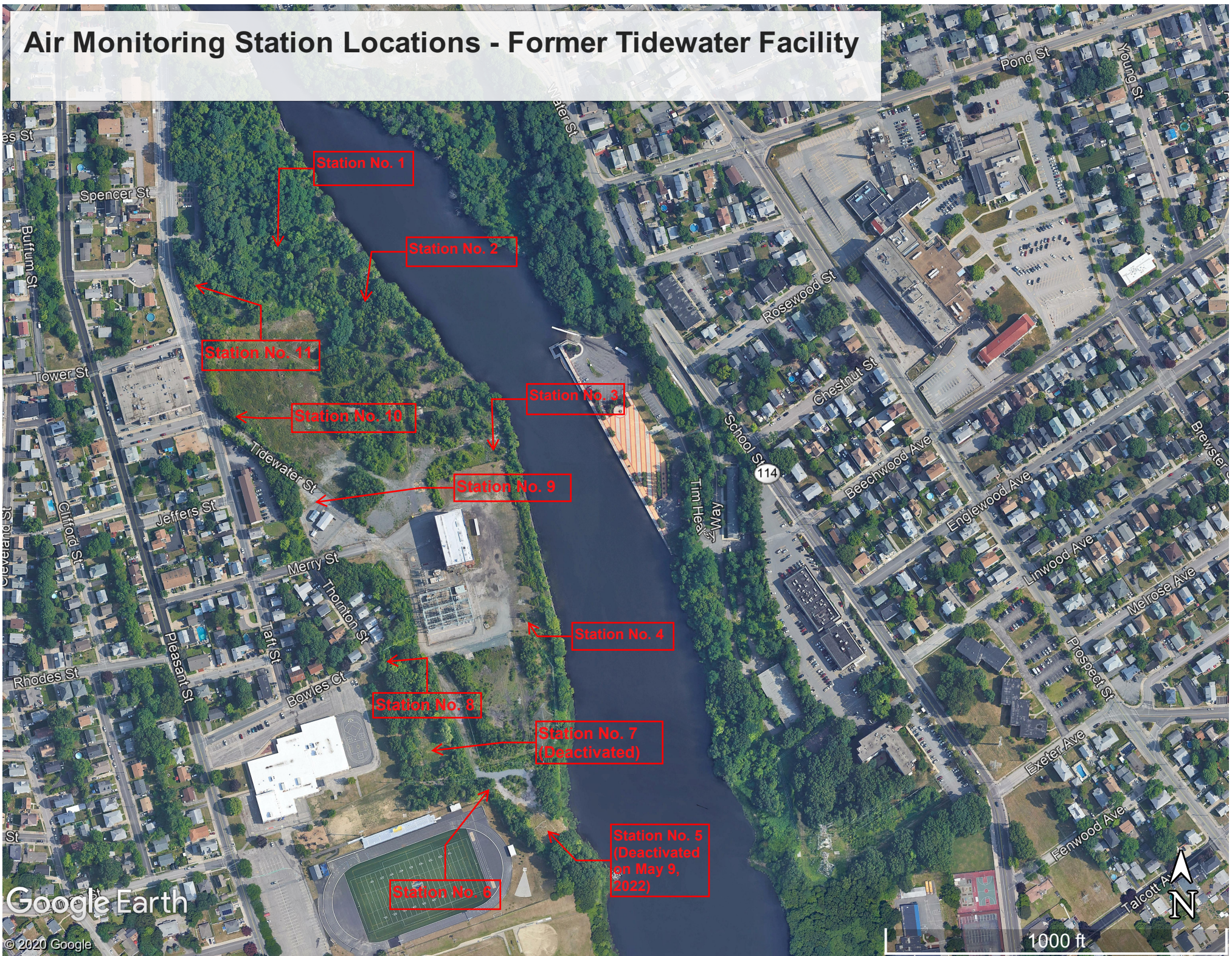


Prepared by Rhode Island Energy for the Businesses and Residents Located Near the Former
Tidewater Facility

Air Quality Monitoring - Total Volatile Organic Compounds



Air Monitoring Station Locations - Former Tidewater Facility



**Prepared by Rhode Island Energy 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 Rhode Island Energy 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
12-02-21 DOWNWIND	0.28	0.82	0.22	1.0	0.95
12-02-21 UPWIND	0.36	0.67	< 0.2	0.42	< 0.5
12-9-21 DOWNWIND	0.17	0.27	< 0.2	< 0.7	< 0.5
12-9-21 UPWIND	0.18	0.39	0.13	0.43	< 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.

**Prepared by Rhode Island Energy 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)				
12-16-21 DOWNWIND	0.15	0.21	< 0.2	0.38	0.89
12-16-21 UPWIND	0.13	0.16	< 0.2	< 0.7	< 0.5
12-22-21 DOWNWIND	0.27	0.39	< 0.2	< 0.7	< 0.5
12-22-21 UPWIND	0.29	0.47	0.12	< 0.5	< 0.5
12-29-21 UPWIND	0.19	0.28	< 0.2	< 0.7	< 0.5
12-29-21 DOWNWIND	0.26	0.53	0.19	1.0	< 0.5
01-05-2022 UPWIND	0.28	0.38	0.14	0.38	0.2
01-05-2022 DOWNWIND	0.40	1.10	0.16	0.5	0.71
1-13-22 UPWIND	0.49	0.91	0.15	0.59	< 0.5
1-13-22 DOWNWIND	0.83	1.40	0.19	0.79	< 0.5
1-20-22 DOWNWIND	0.18	0.32	0.11	0.34	0.17
1-20-22 UPWIND	0.14	1.40	< 0.2	< 0.7	< 0.5
UPWIND 012722	0.24	0.26	< 0.2	< 0.7	< 0.5
DOWNWIND 012722	0.30	1.0	< 0.2	0.4	< 0.5
2/3/22 UPWIND	0.27	0.50	0.1	0.28	< 0.5
2/3/22 DOWNWIND	0.30	0.49	0.12	0.46	0.22
2-10-22 UPWIND	0.17	0.27	< 0.2	< 0.7	< 0.5
2-10-22 DOWNWIND	0.19	0.22	< 0.2	< 0.7	< 0.5
2-17-22 UPWIND	< 0.2	0.11	< 0.2	< 0.7	< 0.5
2-17-22 DOWNWIND	0.18	0.66	0.26	1.5	1.1
2-24-22 UPWIND	< 0.2	0.11	< 0.2	< 0.7	0.17
2-24-22 DOWNWIND	< 0.2	< 0.2	< 0.2	< 0.7	< 0.5
3-03-22 UPWIND	0.11	< 0.2	< 0.2	< 0.7	< 0.5
3-03-22 DOWNWIND	0.14	< 0.2	< 0.2	< 0.7	< 0.5
3-10-22 UPWIND	0.16	0.31	0.13	0.4	0.26
3-10-22 DOWNWIND	0.14	0.18	< 0.2	< 0.7	< 0.5
3-17-22 UPWIND	0.22	0.61	0.14	0.49	< 0.5
3-17-22 DOWNWIND	0.19	0.25	< 0.2	0.12	< 0.5
3-24-22 UPWIND	0.18	< 0.3	< 0.3	< 1.1	< 0.75
3-24-22 DOWNWIND	< 0.2	< 0.2	< 0.2	< 0.7	< 0.5
3-31-22 UPWIND	0.14	0.22	< 0.2	< 0.7	< 0.5
3-31-22 DOWNWIND	0.17	0.37	0.12	0.40	< 0.5
4-7-22 UPWIND	0.11	0.16	< 0.2	< 0.7	< 0.5
4-7-22 DOWNWIND	0.15	0.24	< 0.2	< 0.7	< 0.5
4-15-22 UPWIND	0.13	0.29	< 0.2	0.095	< 0.5
4-15-22 DOWNWIND	0.095	0.19	0.1	< 0.7	< 0.5
4-20-22 UPWIND	0.19	0.22	0.13	0.42	< 0.5
4-20-22 DOWNWIND	0.13	0.14	< 0.2	< 0.7	0.18
4-26-22 UPWIND	< 0.2	< 0.2	< 0.2	< 0.7	< 0.5
4-26-22 DOWNWIND	0.22	0.13	< 0.2	< 0.7	< 0.5
5-4-22 UPWIND	0.11	0.22	< 0.5	< 0.7	< 0.5
5-4-22 DOWNWIND	0.11	0.24	< 0.5	< 0.7	< 0.5
5-12-22 UPWIND	< 0.2	0.11	< 0.2	< 0.7	< 0.5
5-12-22 DOWNWIND	< 0.21	0.10	< 0.21	< 0.75	< 0.54
5-19-22 UPWIND	0.13	0.63	< 0.2	< 0.7	0.18
5-19-22 DOWNWIND	0.15	0.30	< 0.2	< 0.7	< 0.5
5-26-22 UPWIND	0.14	0.14	< 0.2	< 0.7	< 0.5
5-26-22 DOWNWIND	< 0.2	0.12	< 0.2	< 0.7	< 0.5
6/2/22 DOWNWIND	0.074	0.17	< 0.2	< 0.7	0.26
6/2/22 UPWIND	< 0.2	0.14	< 0.2	< 0.7	< 0.5
6-10-22 UPWIND	0.17	0.31	< 0.2	< 0.7	< 0.5
6-10-22 DOWNWIND	0.25	0.61	< 0.2	< 0.7	< 0.5
6-16-22 UPWIND	0.43	1.20	< 0.2	< 0.7	< 0.5
6-16-22 DOWNWIND	< 0.2	0.13	< 0.2	< 0.7	< 0.5
6-23-22 UPSTREAM	< 0.2	< 0.2	< 0.2	< 0.7	0.19
6-23-22 DOWNSTREAM	0.16	0.72	< 0.2	0.31	< 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.