



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: January 12, 2023

Re: Site Response Action Report
Period December 11, 2022 through December 24, 2022
Former Tidewater Facility
Pawtucket, Rhode Island
RIDEM Case No. 95-022 / Site Remediation File No. SR-26-0934

SITE ACTIVITIES PERFORMED

- During the reporting period covered by this report, Site activities were associated with the following:
 - Completion of certain demobilization activities by Charter Contracting;
 - On-going work associated with relocation of the existing combined sewer outfall (CSO) by the Narragansett Bay Commission (NBC); and,
 - On-going installation of electrical equipment in the newly constructed control house by Rhode Island Energy (RI Energy).
- Perimeter air monitoring was performed during this reporting period with 4 electrically powered air monitoring stations located around the work activities with the potential to disturb impacted Site materials which were limited to NBC's work area. 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:
 - The electrical power to the 4 air monitoring stations was temporarily out-of-service on the morning of December 23, 2022 due to the weather conditions. Electrical power was restored around 10:33 am on the same day.
- 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.
- GZA collected ambient air samples from upwind and downwind locations on December 15 and 22, 2022 for laboratory analysis for benzene, toluene, ethylbenzene, xylenes, and naphthalene. The analytical results 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

- On-going CSO relocation work by NBC's contractor.
- On-going installation of electrical equipment within the new control house building by RI Energy.



Please contact Kenneth Lento at 401-784-4250 if you have any questions or comments.

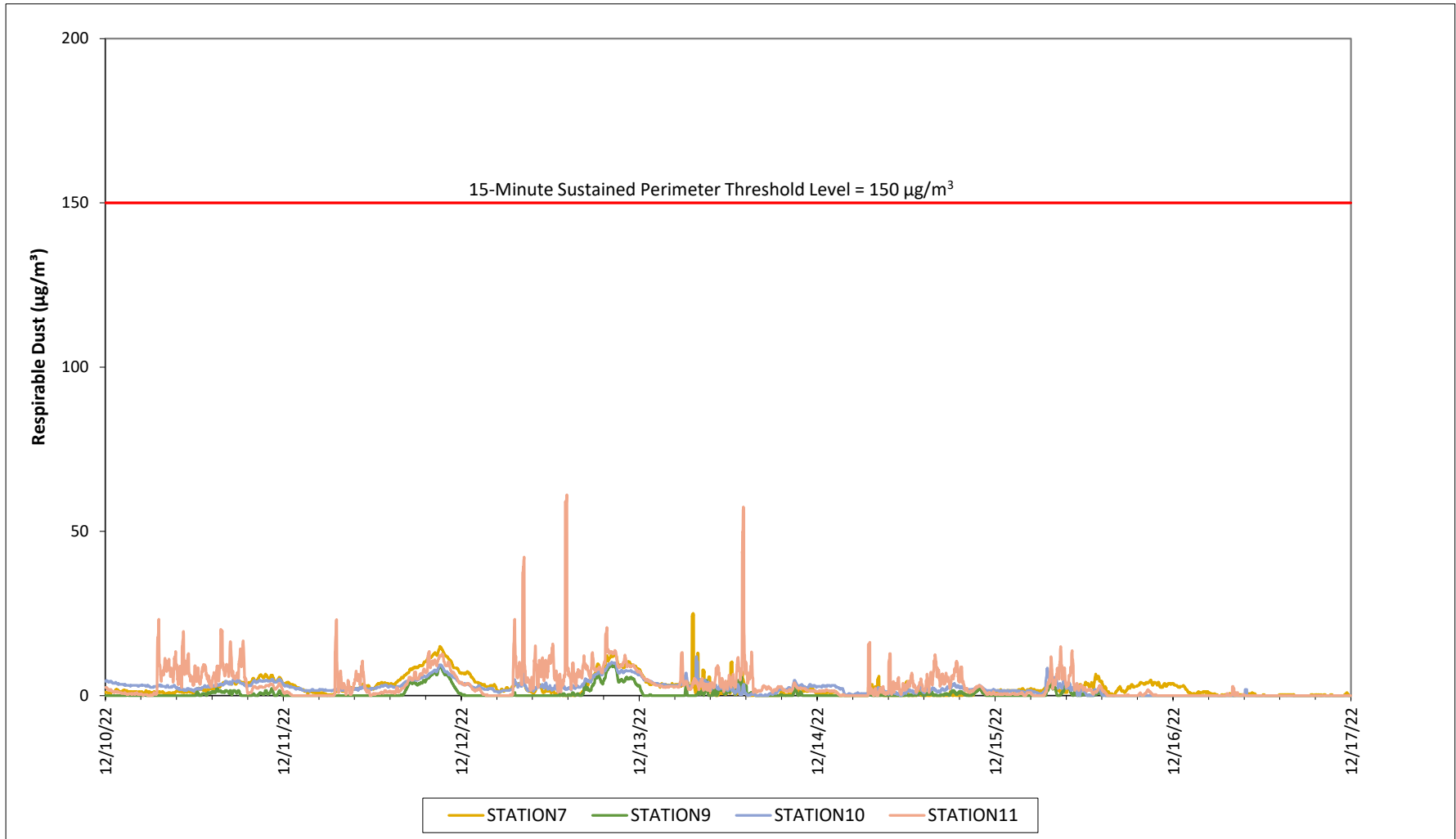
Attachments:

Weekly Perimeter Air Monitoring Results

Air Monitoring Station Locations

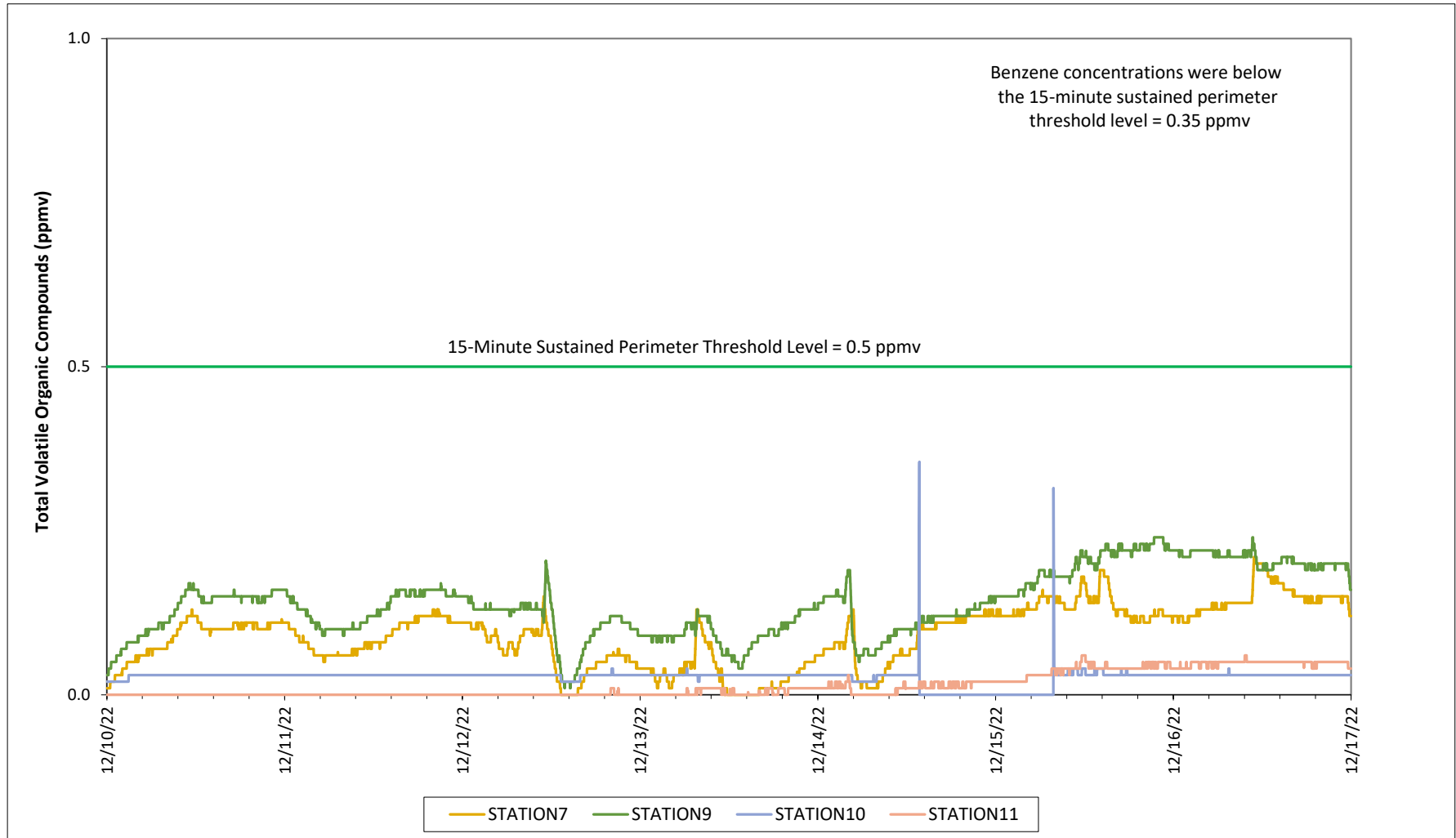
Weekly Ambient Air Sampling Results

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

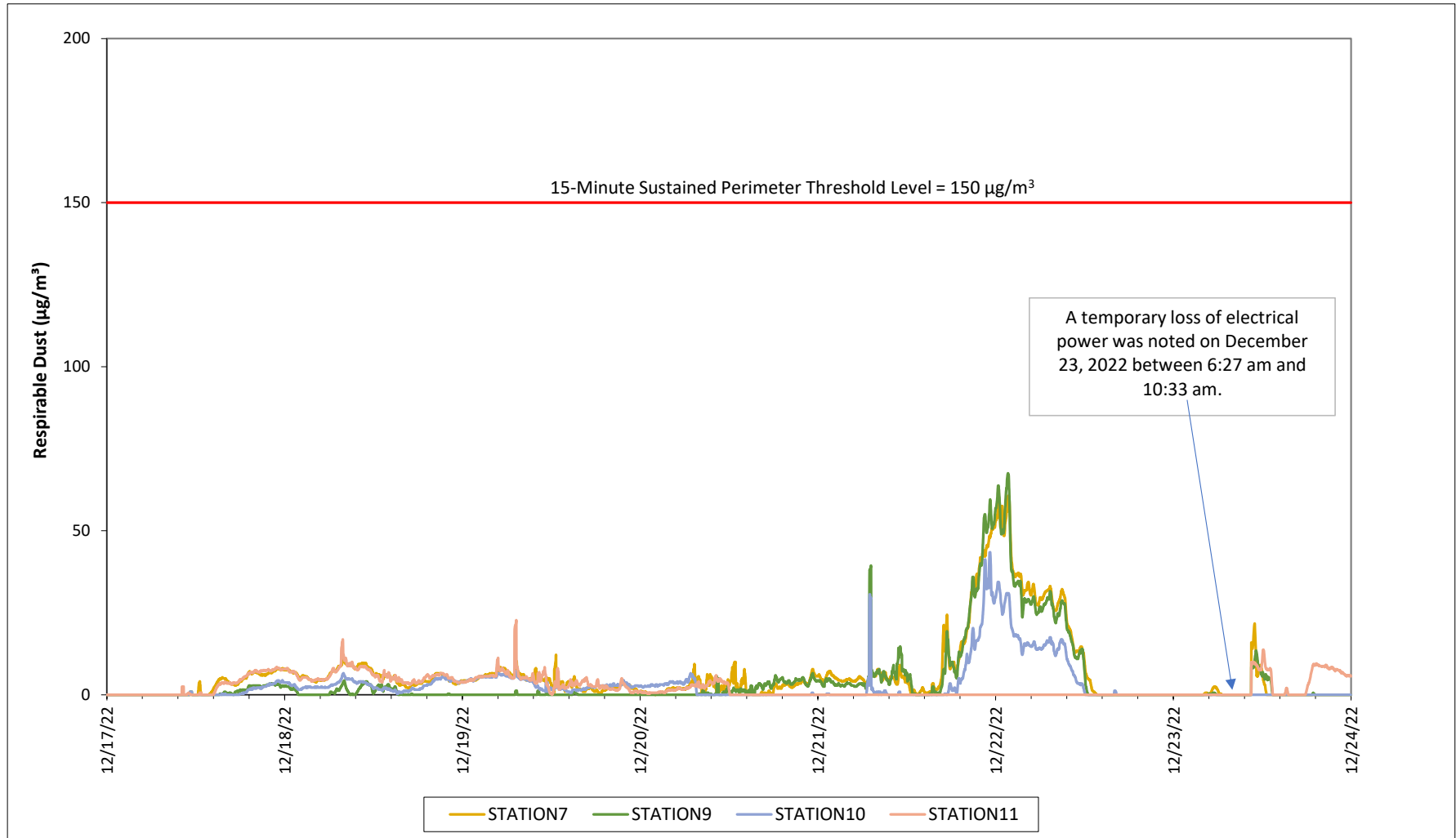


Prepared for the Businesses and Residents Located Near the Former
Tidewater Facility

Air Quality Monitoring - Total Volatile Organic Compounds

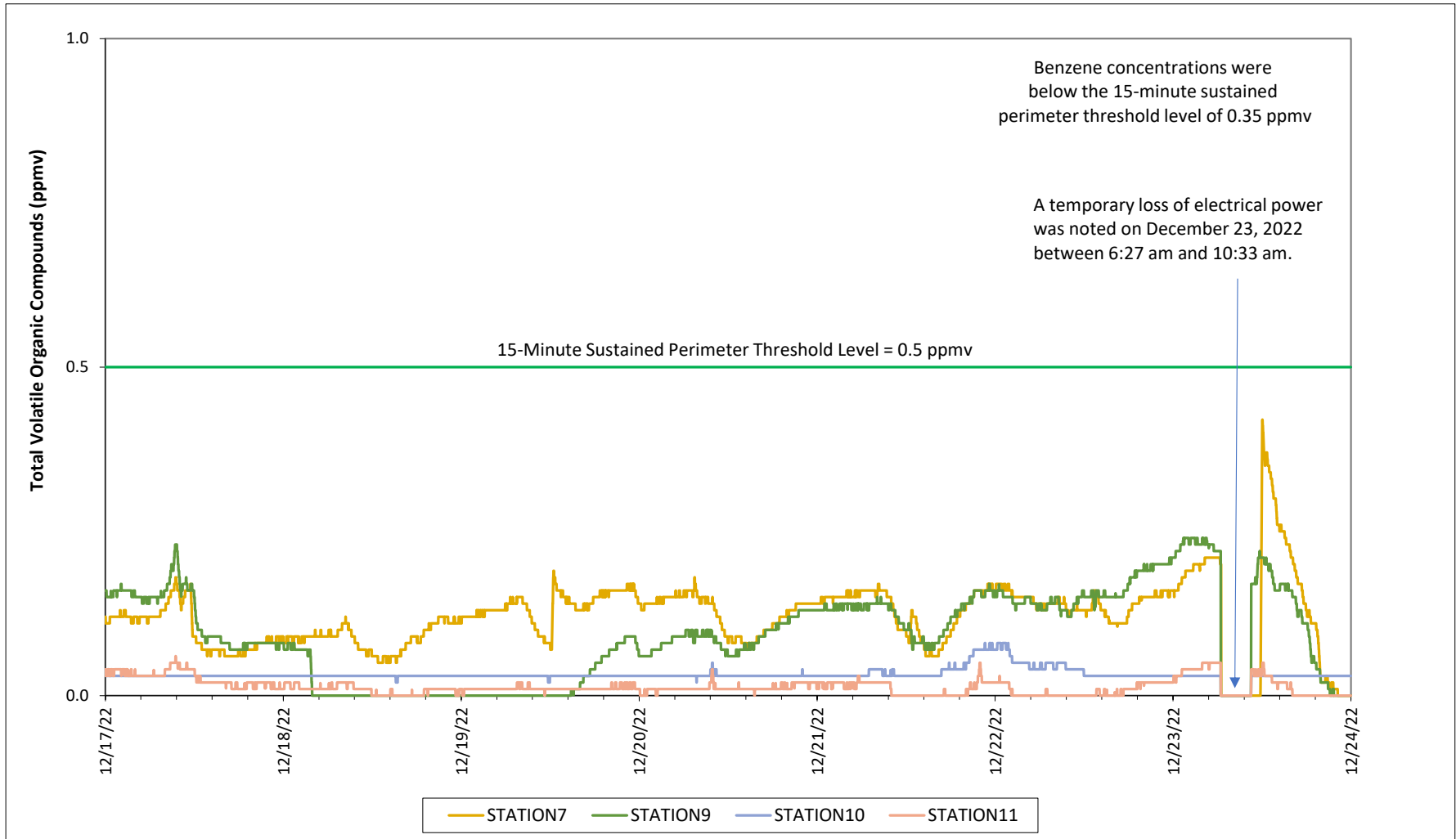


Prepared for the Businesses and Residents Located Near the Former
Tidewater Facility
Air Quality Monitoring - Respirable Dust



Prepared 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

**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
6-30-22 UPWIND	< 0.2	0.17	< 0.2	< 0.7	0.2
6-30-22 DOWNWIND	0.12	0.24	< 0.2	< 0.7	< 0.5
7-7-22 UPWIND	0.077	0.29	< 0.2	< 0.7	< 0.5
7-7-22 DOWNWIND	0.20	0.87	< 0.2	0.21	< 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)				
7-14-22 UPWIND	< 0.2	0.35	< 0.2	< 0.7	< 0.5
7-14-22 DOWNWIND	0.10	0.22	< 0.2	< 0.7	< 0.5
7-21-22 UPWIND	0.14	0.21	< 0.2	< 0.7	0.33
7-21-22 DOWNWIND	1.0	2.5	0.48	1.9	< 0.3
7-28-22 UPWIND	0.087	0.15	< 0.2	< 0.7	< 0.5
7-28-22 DOWNWIND	0.13	0.23	< 0.2	< 0.7	< 0.5
8-4-22 UPWIND	0.13	0.31	< 0.2	< 0.7	< 0.5
8-4-22 DOWNWIND	0.17	0.26	0.13	< 0.7	0.3
8-11-22 UPWIND	0.22	0.33	0.10	0.34	< 0.5
8-11-22 DOWNWIND	0.37	0.30	0.11	0.17	< 0.5
8-19-22 UPWIND	< 0.20	0.22	< 0.20	0.36	< 0.5
8-19-22 DOWNWIND	0.11	0.45	< 0.20	0.29	< 0.5
8-25-22 Downwind	0.09	0.44	< 0.2	< 0.7	< 0.5
8-25-22 Upwind	0.29	0.47	< 0.2	< 0.7	< 0.5
9-2-22 Upwind	< 0.2	0.15	< 0.2	< 0.7	< 0.5
9-2-22 Downwind	0.35	0.34	< 0.2	< 0.7	< 0.5
9-8-22 Upwind	0.092	0.21	< 0.2	< 0.7	< 0.5
9-8-22 Downwind	1.20	0.44	< 0.2	< 0.7	< 0.5
9-15-22 Upwind	< 0.2	0.15	< 0.2	< 0.7	< 0.5
9-15-22 Downwind	7.1	2.9	2.3	2.0	4.6
9-22-22 Upwind	0.32	0.34	< 0.29	0.4	< 0.73
9-22-22 Downwind	0.18	0.29	< 0.2	0.21	< 0.5
9/29/22 Downwind	0.13	0.22	0.11	< 0.7	0.33
9/29/22 Upwind	< 0.2	0.14	< 0.2	< 0.7	< 0.5
10-6-22 Downwind	0.1	< 0.2	< 0.2	< 0.7	< 0.5
10-6-22 Upwind	< 0.2	< 0.2	< 0.2	< 0.7	< 0.5
10-13-22 Upwind	0.068	0.12	< 0.2	< 0.7	< 0.5
10-13-22 Downwind	0.6	0.17	0.052	< 0.7	< 0.5
10/20/22 Upwind	0.14	0.16	< 0.2	< 0.7	< 0.5
10/20/22 Downwind	0.21	0.28	< 0.2	0.16	< 0.5
10-27-22 Upwind	0.18	0.39	0.12	0.38	< 0.5
10-27-22 Downwind	1.0	0.64	0.19	0.88	0.62
11/3/22 UP	0.31	1.40	0.083	0.37	< 0.5
11/3/22 DOWN	0.38	1.20	0.11	0.82	< 0.5
11/10/22 Upwind	0.091	0.18	0.074	0.17	< 0.5
11/10/22 Downwind	0.085	0.16	0.055	0.061	< 0.5
11/17/22 Upwind	0.14	0.23	< 0.2	< 0.7	< 0.5
11/17/22 Downwind	0.14	0.35	0.057	0.230	< 0.5
11/23/22 Upwind	0.22	0.77	0.066	0.240	< 0.5
11/23/22 Downwind	0.21	0.50	0.062	0.210	< 0.5
12/1/22 Upwind	0.12	0.12	< 0.2	0.11	< 0.5
12/1/22 Downwind	0.15	0.56	0.070	0.38	< 0.5
12/8/22 Upwind	0.15	0.17	< 0.2	0.250	< 0.5
12/8/22 Downwind	0.25	0.26	0.11	0.35	< 0.5
12/15/22 Upwind	0.19	0.24	< 0.2	0.20	< 0.5
12/15/22 Downwind	0.21	0.24	0.068	0.26	< 0.5
12/22/22 Upwind	0.37	0.40	0.10	0.38	< 0.5
12/22/22 Downwind	0.65	0.86	0.18	0.68	< 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.
6. A bold and gray shaded value exceeds the Project Action Levels. The 9/15/2022 Downwind sample was collected directly downwind of NBC's active work area. Volatile organic compound concentrations at the perimeter limit were below the project action levels.