NORTHROP GRUMMAN

ISTR Operations Monthly Progress Report

Reporting Period: December 2020

Operable Unit 3 VOC Source Area Remedy
Former Grumman Settling Ponds, Bethpage, NY
NYSDEC Site No. 130003A
January 20, 2021

In-Situ Thermal Remediation (ISTR) Operations Monthly Progress Report

NORTHROP GRUMMAN

Prepared per Section 8.2 of the OU3 Remedial Action Work Plan (RAWP) and DER-10, Section 5.7(b):

1. Remedy Progress / Performance Monitoring
2. Ambient Air
3. Significant Activities
4. Schedule / Proposed Modifications
5. Pending RAWP Modifications
6. Data Tables

Remedy Progress / Performance Monitoring December 2020

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ISTR Operations Summary

- Air emissions comply with effluent concentration limits specified in the RAWP
- No exceedances of NYSDEC Community Air Monitoring Plan (CAMP) PID action levels
- No validated ambient air monitoring results above target screening levels
- Liquid discharges comply with criteria specified in the RAWP with one minor exception on 12/29 (see slide 13)

Reporting Period: December 2020

System Startup	8/26/2020
Days of Operation Since Startup	127
Cumulative Mass Removed, lbs	649

Remedy Progress / Performance Monitoring
December 2020

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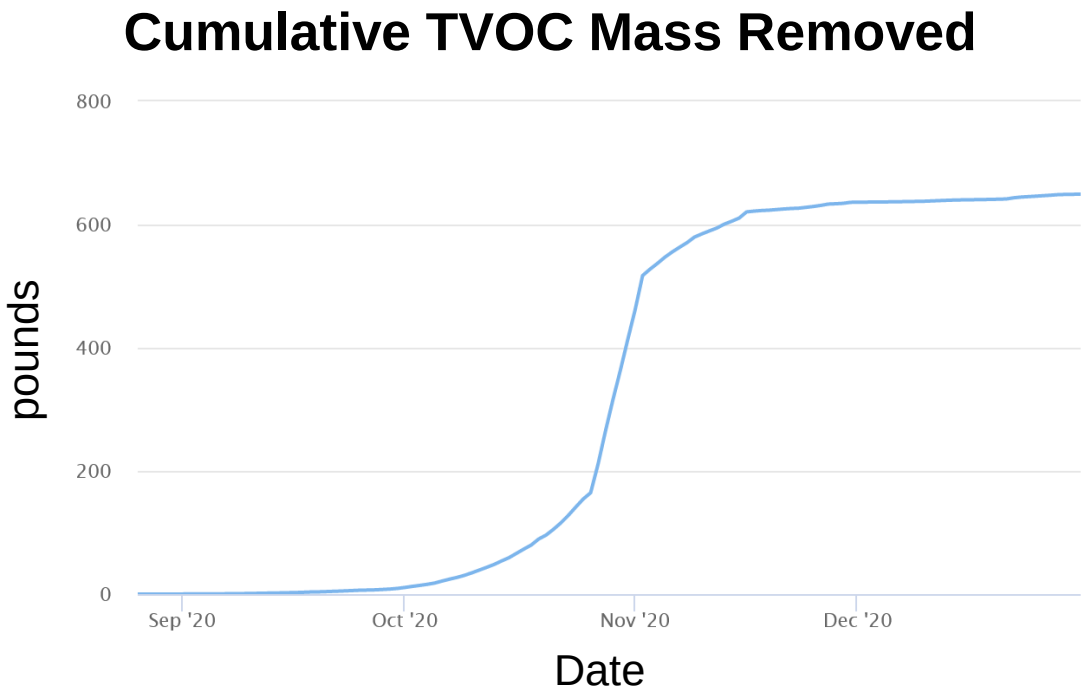

Estimated 649 lbs of total volatile organic compounds (TVOCs) removed through 12/29

Cumulative TVOC mass is the sum of the following:

- Photoionization detector (PID) TVOC vapor mass
- Liquid TVOC mass
- Condensed non-aqueous phase liquid (NAPL) mass (NAPL accumulated through 12/31 not included in the estimate, pending speciation)

Remedy Progress / Performance Monitoring December 2020

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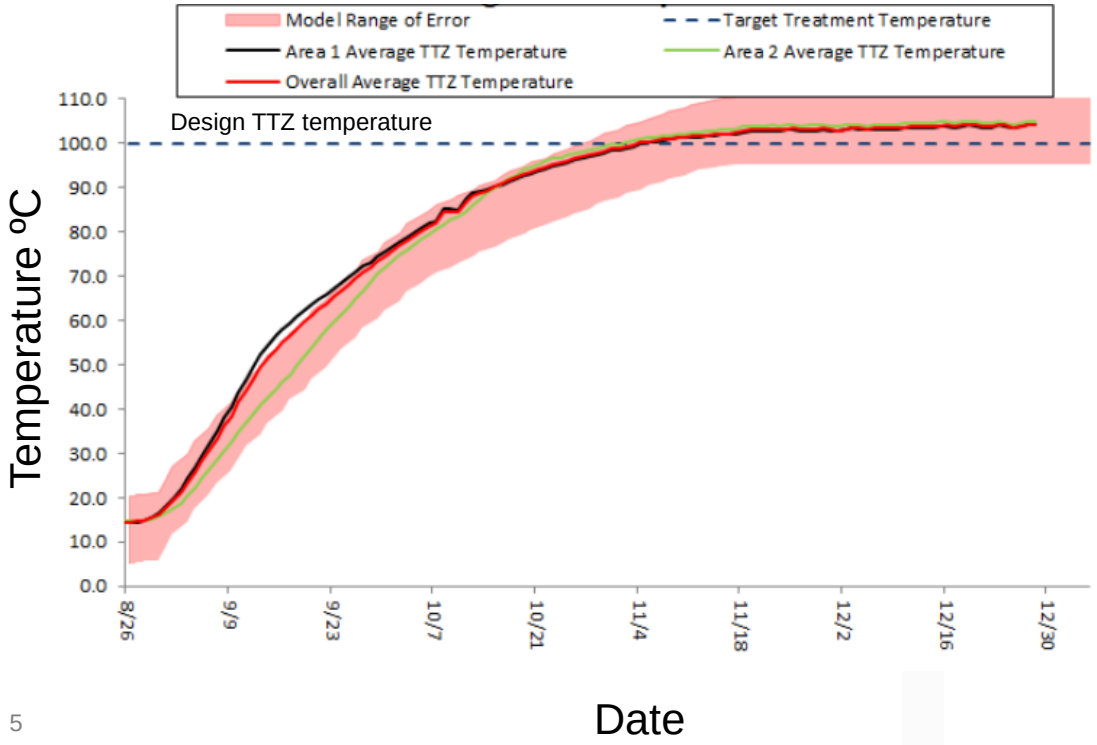
Cumulative Temperature Progression

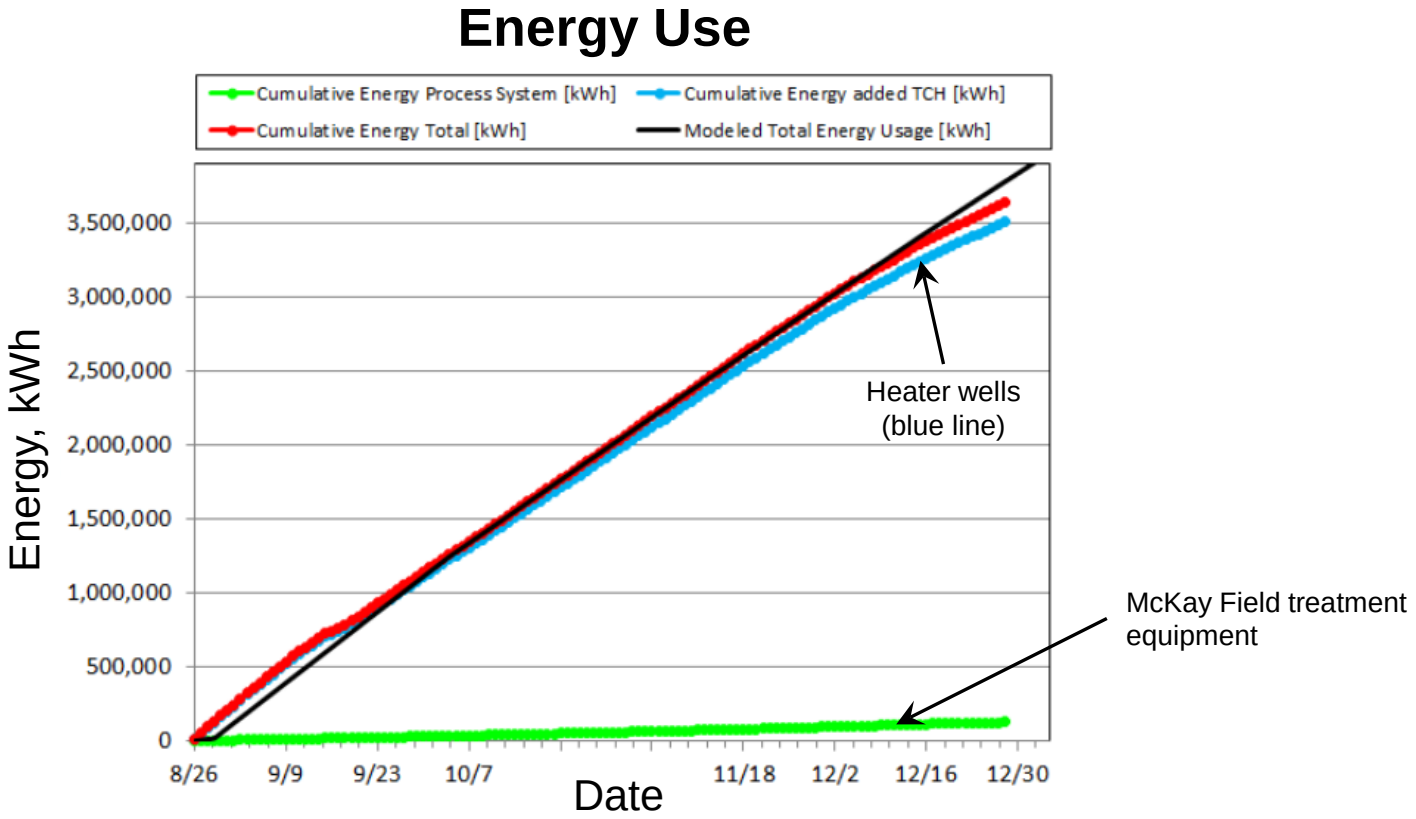


Target treatment zone (TTZ) design temperature is 100ºC

Days of treatment at 100°C through December 31:

- Area 1 = 57 days
- Area 2 = 59 days

Remedy Progress / Performance Monitoring
December 2020



Remedy Progress / Performance Monitoring
December 2020

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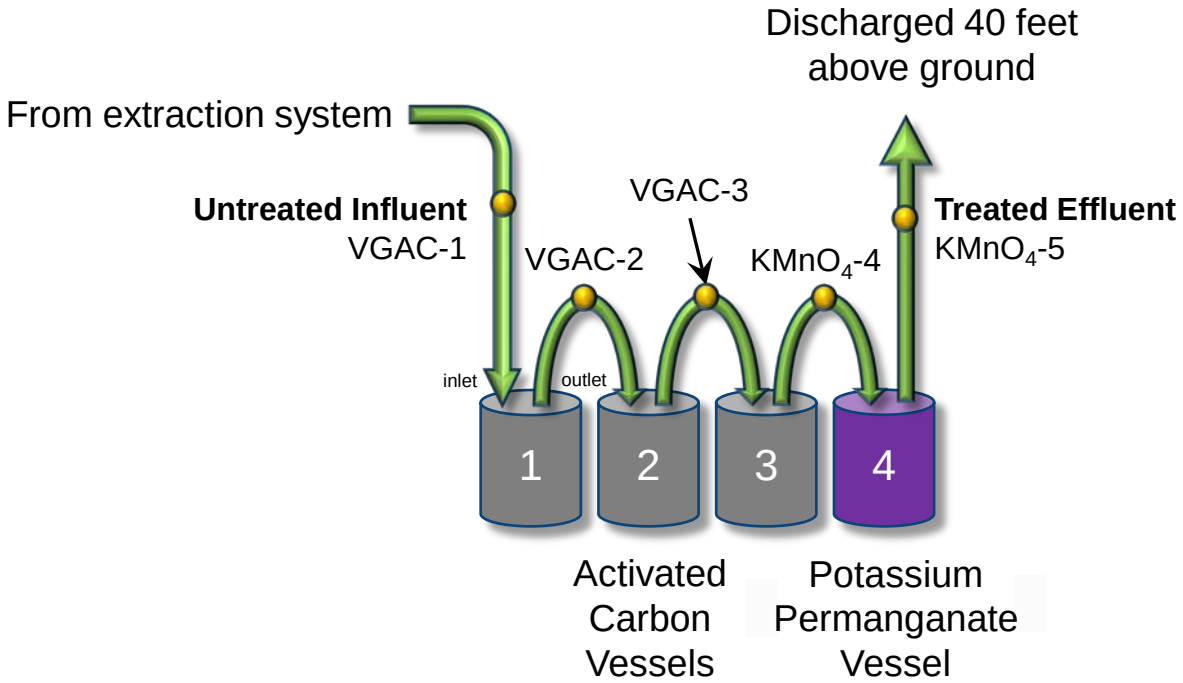
Vapor Treatment System



Vapor Treatment System Sampling Locations

Remedy Progress / Performance Monitoring December 2020

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Vapor Treatment System

Air emissions meet treatment criteria in the RAWP:

- Stack concentrations less than 7.6 mg/m^3 for TCE and 1.9 mg/m^3 design limits for vinyl chloride throughout December.
- TCE and vinyl chloride concentrations in ambient air samples collected in December were all below target screening levels.

Routine operations analytical results provided in Table 1

Remedy Progress / Performance Monitoring December 2020

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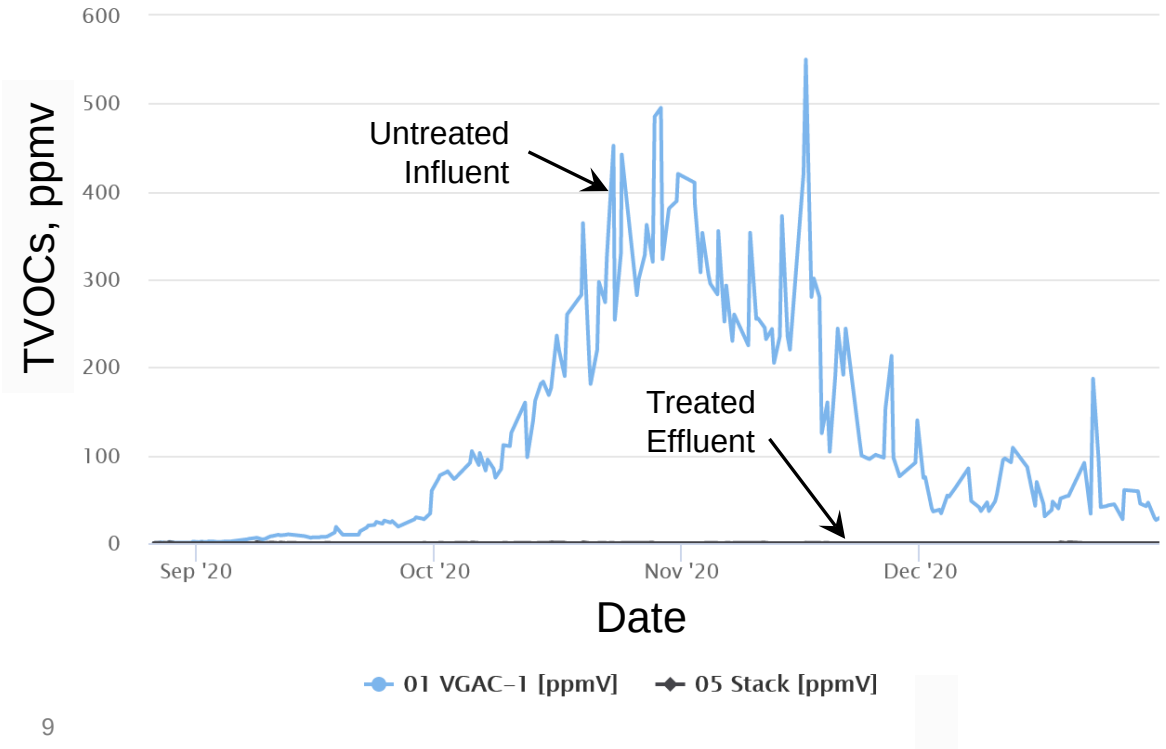
Vapor Treatment System (PID)



TVOC concentrations (PID) on December 31:

- Influent = 31 ppmv
- Effluent = 0.1 ppmv

Max TVOC concentrations (PID) during reporting period:

- Influent = 187 ppmv
- Effluent = max 0.9 ppmv

Remedy Progress / Performance Monitoring December 2020

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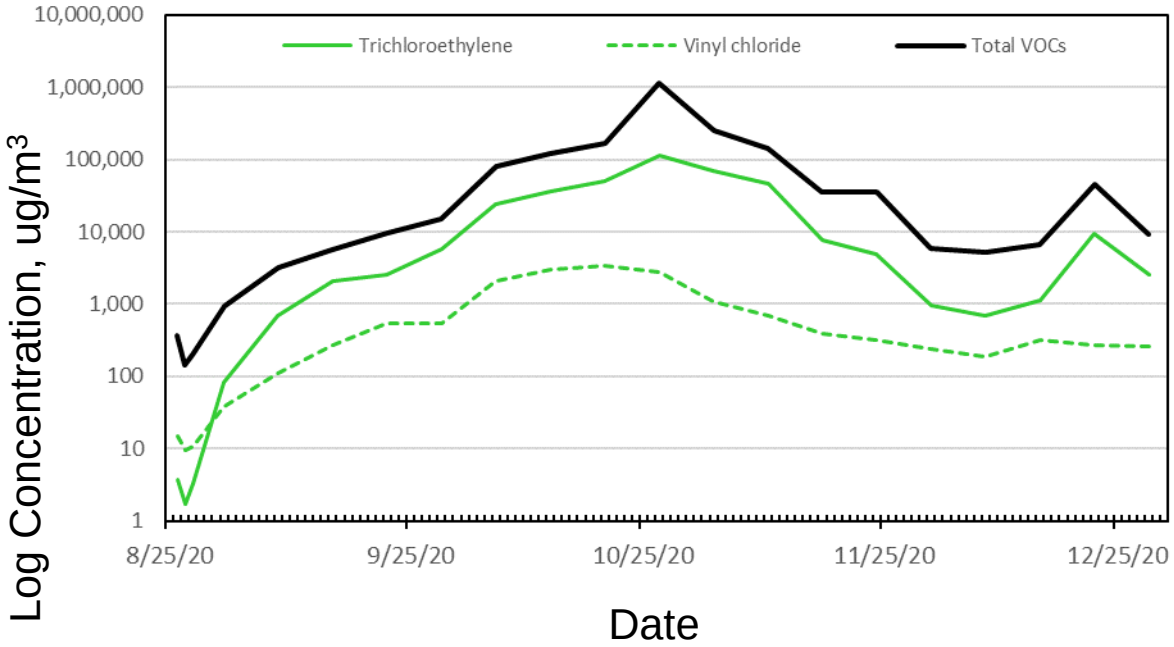
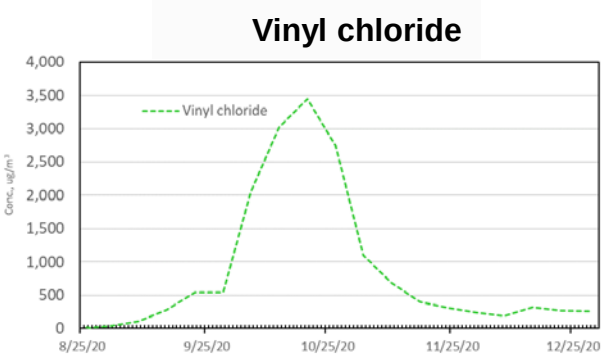
Vapor Treatment System Influent



Influent concentrations (Summa) on 12/29:

- TVOCs = 9,200 ug/m^3
- TCE = 2,500 ug/m^3
- Vinyl chloride = 258 ug/m^3



Remedy Progress / Performance Monitoring
December 2020

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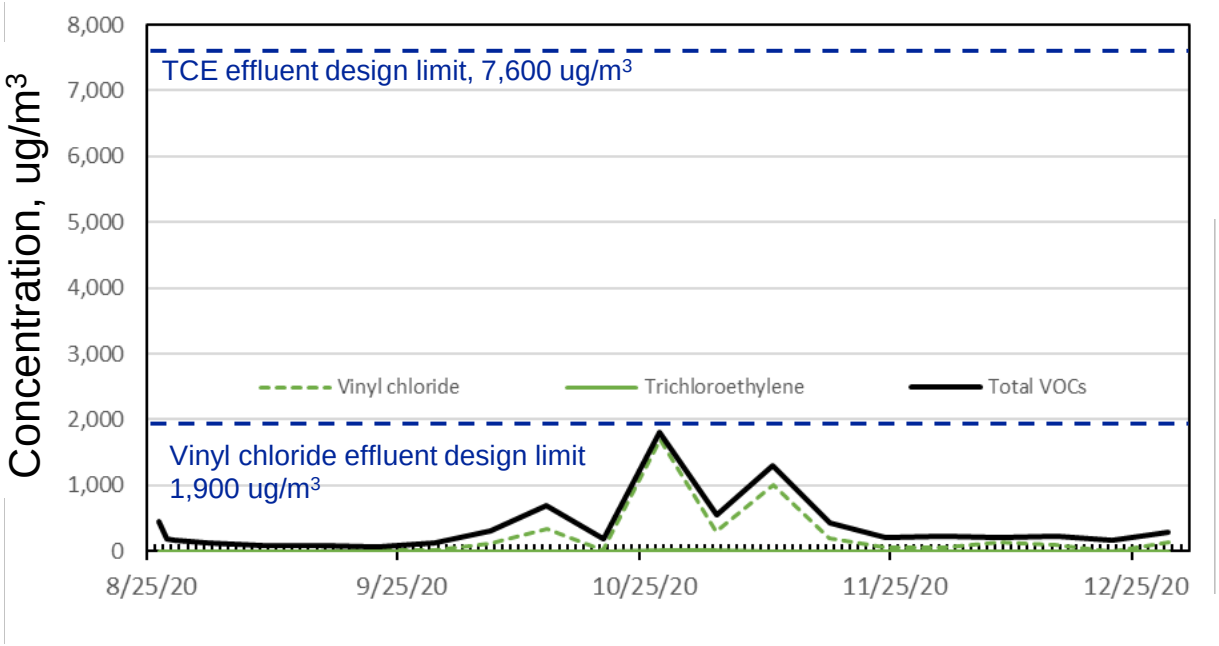
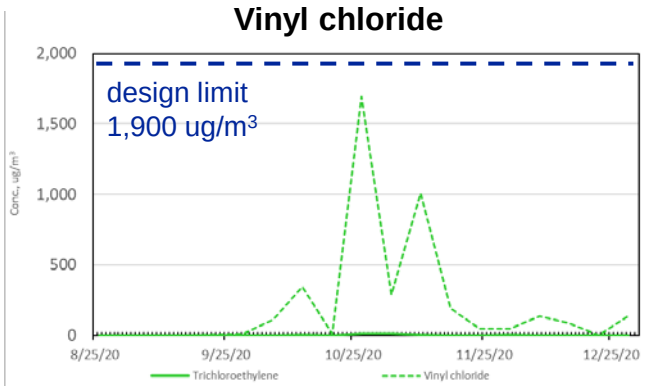
Vapor Treatment System Effluent



Effluent concentrations (Summa) on 12/29:

- TVOCs = 282 ug/m^3
- TCE = <1 ug/m^3
- Vinyl chloride = 138 ug/m^3



Remedy Progress / Performance Monitoring December 2020

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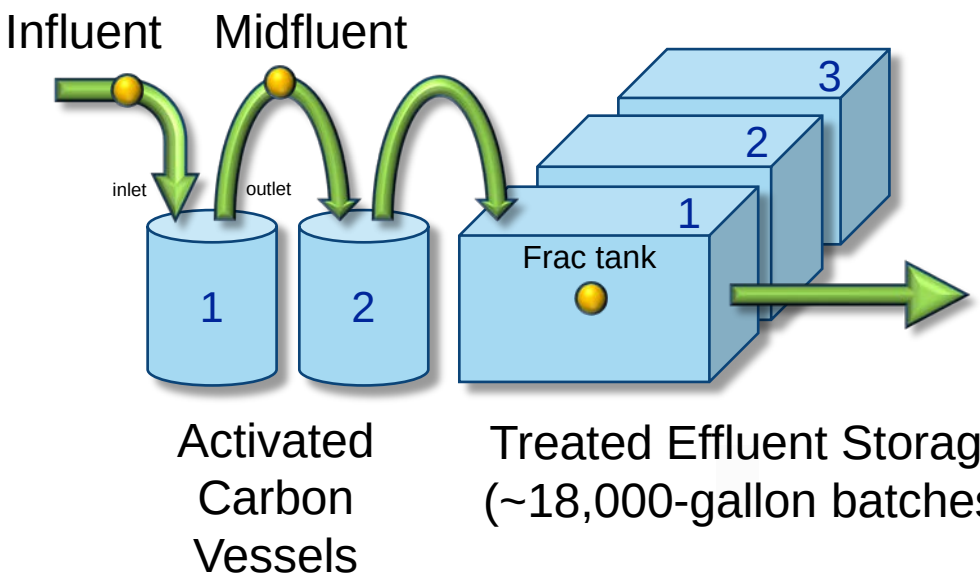
Liquid Treatment System



- Liquid Treatment System Sampling Locations

Treated liquid pumped to OU3 Groundwater Treatment System

Remedy Progress / Performance Monitoring
December 2020

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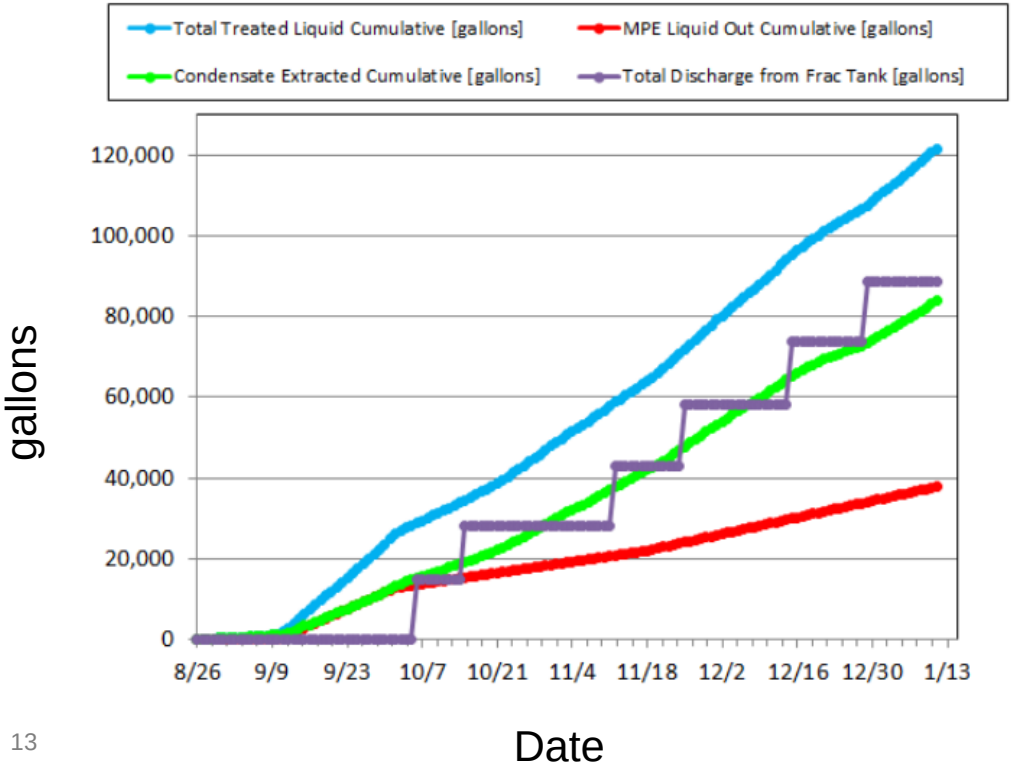
Cumulative Liquid Produced



88,556 gallons treated water discharged to OU3 groundwater treatment system

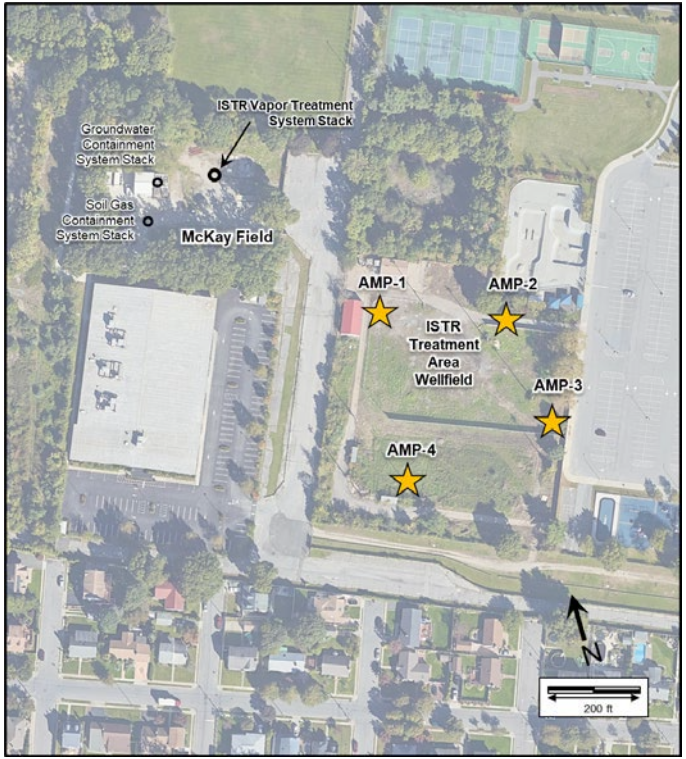
- Frac tank 1 - sampled 12/2, discharged 12/15
- Frac tank 2 - sampled 12/15, discharged 12/29 *(during tank discharge, the iron concentration observed in the OU3 effluent was slightly above the SPDES equivalency limit, which will be addressed in the next monthly SPDES discharge monitoring report)*

Analytical results provided in Table 2

Ambient Air PID Monitoring

PID levels comply with Community Air Monitoring Plan (CAMP) criteria in the RAWP:

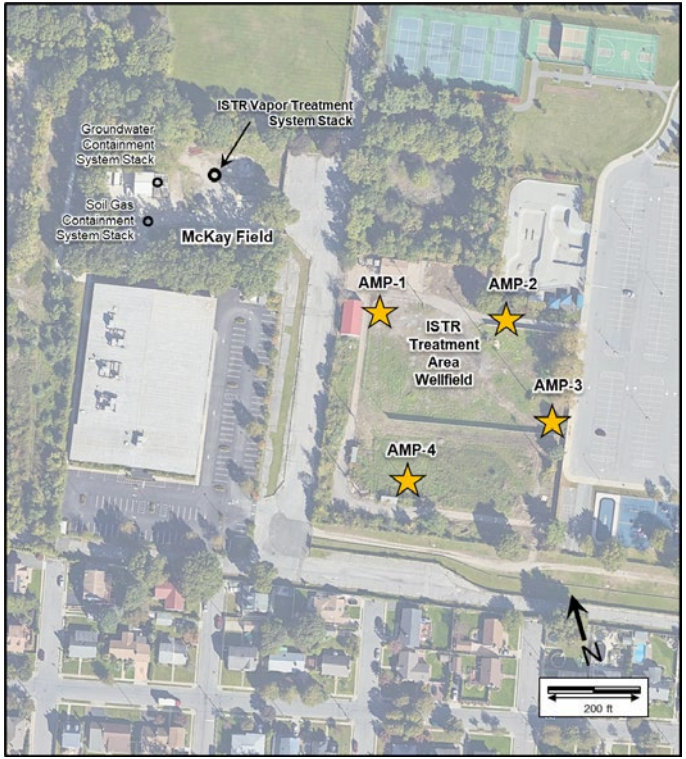
- PID readings recorded continuously at locations AMP-1 through 4
- Results emailed daily to the State and Town of Oyster Bay (Monday through Saturday)
- PID monitoring results did not exceed NYSDEC's CAMP action level (5 ppm TVOCs for a 15-minute average)



Ambient Air Summa Canister Monitoring

Summa canister levels comply with ambient air criteria in the RAWP:

- Summa canister samples collected 12/1, 12/7, 12/12, 12/18, 12/23, and 12/29
- Results emailed to the State and Town of Oyster Bay
- Summa canister validated results for compounds of interest (COIs) lower than target screening levels in the CAMP
- Summa canister validated results for non-COIs also lower than target screening levels calculated using CAMP-specified protocol



Analytical results provided in Table 3

Significant Activities

Major equipment repairs and significant downtime:

- Heater well H-149 malfunctioned on 11/23. Replacement heater drilled 12/19 and H-149 brought back online 1/4

Other significant Activities:

- Carbon changed out in all 3 vapor-phase carbon vessels and the primary liquid-phase carbon 12/21

Planned Significant Activities During Next Two Months

Continue routine system operations, monitoring, and maintenance

Evaluate ISTR performance indicators and plan confirmation sampling event

Schedule

Activity	RAWP Schedule	Current Status
Remedial System Operation	Q3/20 – Q1/21	On schedule
Post-Treatment Confirmation Sampling	Q1/21	On schedule
Remedy Cool-down	Q1/21-Q2-21	On schedule
Equipment Removal & Site Restoration	Q2/21	On schedule

No significant delays or corrective actions required

No schedule modifications anticipated

Pending RAWP Modifications

None

Pending RAWP Clarifications

Switch type of flow controller for ambient air monitoring

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Table 1. Vapor Treatment System Air Sampling Results
Routine Monitoring - December 2020

Compound (ug/m^3)	Sample ID: / Lab Sample ID: / Date Sampled:	VGAC-1 JD16935-1 12/1/2020	VGAC-3 JD16935-2 12/1/2020	KMNO4-5 JD16935-3 12/1/2020	Percent Removed
1,1,1-Trichloroethane		< 4.6	< 0.71	< 0.71	
1,1-Dichloroethane		< 1.2	< 0.19	< 0.19	
1,1-Dichloroethylene		**34**	< 0.27	< 0.27	
1,2,4-Trimethylbenzene		**35**	< 0.64	< 0.64	
1,3,5-Trimethylbenzene		**17 J**	< 0.64	< 0.64	
1,4-Dioxane*		< 4.7	< 0.76	< 0.76	
2,2,4-Trimethylpentane		**24**	< 0.41	< 0.41	
2-Hexanone		< 0.93	< 0.15	< 0.15	
4-Ethyltoluene		< 3.7	< 0.59	< 0.59	
Acetone*		**691**	**24.7**	**35.2**	
Benzene		**113**	< 0.15	< 0.15	
Bromoform		< 9.9	< 1.6	**57**	
Carbon disulfide		**19**	< 0.29	< 0.29	
Carbon tetrachloride		< 3.8	< 0.59	< 0.59	
Chloroethane		< 3.2	**1.6 J**	< 0.50	
Chloroform		< 2.5	< 0.39	< 0.39	
Chloromethane*		**21.1**	**21.3**	**24.4**	
cis-1,2-Dichloroethylene		**1,780**	< 0.19	**1.8 J**	
Cyclohexane		< 1.9	< 0.30	< 0.30	
Dichlorodifluoromethane		< 2.1	**2.6 J**	**2.7 J**	
Ethanol		**43.3**	**18**	**22.4**	
Ethyl acetate		< 3.5	< 0.54	< 0.54	
Ethylbenzene		**62.1**	< 0.26	< 0.26	
Heptane		**39**	< 0.29	< 0.29	
Hexane		**19**	< 0.15	< 0.15	
Isopropyl alcohol*		**16**	**4.2**	**11**	
m,p-Xylene		**219**	**1.7 J**	**1.9 J**	
m-Dichlorobenzene		< 2.9	< 0.46	< 0.46	
Methyl ethyl ketone		**56.3**	**2.0 J**	**3.2**	
Methyl isobutyl ketone		< 3.8	< 0.57	< 0.57	
Methylene chloride*		< 1.3	**6.3**	< 0.20	
o-Xylene		**83.8**	< 0.30	< 0.30	
Propylene*		**447**	**417**	< 0.11	
Styrene		< 2.0	< 0.32	< 0.32	
Tertiary butyl alcohol		**15 J**	**3.6**	**4.2**	
Tetrachloroethylene		< 5.4	< 0.81	< 0.81	
Tetrahydrofuran		< 3.8	**2.9**	**4.4**	
Toluene		**886**	**2.3 J**	**3.0 J**	
trans-1,2-Dichloroethylene		**92.4**	< 0.11	< 0.11	
Trichloroethylene		**962**	**0.91**	**2.3**	100%
Trichlorofluoromethane		< 4.0	< 0.62	< 0.62	
Vinyl acetate		< 3.1	< 0.49	< 0.49	
Vinyl chloride*		**239**	**565**	**48.6**	
Xylenes (total)		**302**	**1.7 J**	**1.9 J**	
TVOCs		**5,913**	**1,074**	**222**	

Footnotes:

ug/mg^3 micrograms per cubic meter

* Compound is poorly adsorbed by activated carbon.

< Compound was not detected at or above the indicated value.

J Detected concentration is less than the quantitation limit.

TVOCs Total volatile organic compounds

Detections are **bolded.**

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Table 1. Vapor Treatment System Air Sampling Results
Routine Monitoring - December 2020

Compound (ug/m^3) / Sample ID: / Lab Sample ID: / Date Sampled:	VGAC-1 JD17385-1 12/8/2020	VGAC-3 JD17385-2 12/8/2020	KMNO4-5 JD17385-3 12/8/2020	DUPLICATE JD17385-4 12/8/2020	Percent Removed
1,1,1-Trichloroethane	< 1.8	< 0.71	< 0.71	< 0.71	
1,1-Dichloroethane	< 0.49	< 0.19	< 0.19	< 0.19	
1,1-Dichloroethylene	**33**	< 0.27	< 0.27	< 0.27	
1,2,4-Trimethylbenzene	**59.5**	< 0.64	< 0.64	< 0.64	
1,3,5-Trimethylbenzene	**31**	< 0.64	< 0.64	< 0.64	
1,4-Dioxane*	< 1.9	< 0.76	< 0.76	< 0.76	
2,2,4-Trimethylpentane	**19**	< 0.41	< 0.41	< 0.41	
2-Hexanone	< 1.5	< 0.61	< 0.61	**3.3**	
4-Ethyltoluene	**12**	< 0.59	< 0.59	< 0.59	
Acetone*	**651**	**64.1**	**38.2**	**41.8**	
Benzene	**43.8**	**0.58** J	< 0.15	< 0.15	
Bromoform	< 3.8	< 1.6	< 1.6	< 1.6	
Carbon disulfide	**17**	< 0.29	< 0.29	< 0.29	
Carbon tetrachloride	< 1.5	< 0.59	< 0.59	< 0.59	
Chloroethane	< 1.3	**4.7**	< 0.50	< 0.50	
Chloroform	< 0.98	< 0.39	< 0.39	< 0.39	
Chloromethane*	**12**	**11**	**14**	**16**	
cis-1,2-Dichloroethylene	**1,430**	< 0.19	< 0.19	< 0.19	
Cyclohexane	**4.1** J	< 0.30	< 0.30	< 0.30	
Dichlorodifluoromethane	< 0.84	**2.4** J	**2.5** J	**2.7** J	
Ethanol	**25.2**	**20.3**	**4.3**	**7.9**	
Ethyl acetate	< 1.4	**28**	**2.3** J	< 0.54	
Ethylbenzene	**91.2**	< 0.26	< 0.26	< 0.26	
Heptane	**28**	< 0.29	< 0.29	< 0.29	
Hexane	**9.2**	< 0.15	< 0.15	< 0.15	
Isopropyl alcohol*	**8.8**	**5.4**	**2.5**	**2.9**	
m,p-Xylene	**292**	**2.9** J	< 0.61	**3.4** J	
m-Dichlorobenzene	< 1.1	< 0.46	< 0.46	< 0.46	
Methyl ethyl ketone	**39.8**	**2.2** J	**1.6** J	**1.7** J	
Methyl isobutyl ketone	< 1.5	< 0.57	< 0.57	< 0.57	
Methylene chloride*	**7.6**	< 0.20	< 0.20	< 0.20	
o-Xylene	**149**	< 0.30	< 0.30	< 0.30	
Propylene*	**314**	**323**	< 0.11	< 0.11	
Styrene	< 0.81	< 0.32	< 0.32	< 0.32	
Tertiary butyl alcohol	**10**	**9.4**	**4.9**	**4.9**	
Tetrachloroethylene	**3.5**	< 0.81	< 0.81	< 0.81	
Tetrahydrofuran	< 1.5	< 0.59	< 0.59	< 0.59	
Toluene	**893**	**4.1**	< 0.22	< 0.22	
trans-1,2-Dichloroethylene	**80.1**	< 0.11	< 0.11	< 0.11	
Trichloroethylene	**677**	**2.0**	< 0.41	< 0.41	100%
Trichlorofluoromethane	< 1.6	< 0.62	< 0.62	< 0.62	
Vinyl acetate	< 1.2	< 0.49	< 0.49	< 0.49	
Vinyl chloride*	**188**	**335**	**137**	**148**	
Xylenes (total)	**443**	**2.9** J	< 0.30	**3.4** J	
TVOCs	**5,131**	**815**	**207**	**233**	

Footnotes:

ug/mg^3 micrograms per cubic meter

* Compound is poorly adsorbed by activated carbon.

< Compound was not detected at or above the indicated value.

J Detected concentration is less than the quantitation limit.

TVOCs Total volatile organic compounds

Detections are **bolded.**

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Table 1. Vapor Treatment System Air Sampling Results
Routine Monitoring - December 2020

Compound (ug/m^3)	Sample ID: / Lab Sample ID: / Date Sampled:	VGAC-1 JD17808-1 12/15/2020	VGAC-3 JD17808-2 12/15/2020	KMNO4-5 JD17808-3 12/15/2020	Percent Removed
1,1,1-Trichloroethane		< 3.6	< 0.93	< 0.71	
1,1-Dichloroethane		< 0.93	< 0.23	< 0.19	
1,1-Dichloroethylene		**67.0**	< 0.33	< 0.27	
1,2,4-Trimethylbenzene		**43**	< 0.84	< 0.64	
1,3,5-Trimethylbenzene		**20**	< 0.84	< 0.64	
1,4-Dioxane*		< 3.6	< 0.94	< 0.76	
2,2,4-Trimethylpentane		**78.0**	< 0.51	< 0.41	
2-Hexanone		< 3.0	< 0.74	< 0.61	
4-Ethyltoluene		< 2.9	< 0.74	< 0.59	
Acetone*		**698**	**61.3**	**101**	
Benzene		**69.0**	< 0.19	< 0.15	
Bromoform		< 7.8	< 2.0	< 1.6	
Carbon disulfide		**22**	< 0.37	< 0.29	
Carbon tetrachloride		< 3.0	< 0.75	< 0.59	
Chloroethane		< 2.6	**5.0**	**1.3** J	
Chloroform		< 2.0	< 0.49	< 0.39	
Chloromethane*		**12**	**9.3**	**15**	
cis-1,2-Dichloroethylene		**2,320**	**2.9** J	< 0.19	
Cyclohexane		**21**	< 0.38	< 0.30	
Dichlorodifluoromethane		< 1.6	< 0.41	< 0.33	
Ethanol		**33.4**	**14**	**9.6**	
Ethyl acetate		< 2.7	< 0.68	< 0.54	
Ethylbenzene		**54.3**	< 0.33	< 0.26	
Heptane		**141**	< 0.36	< 0.29	
Hexane		**20**	< 0.19	< 0.15	
Isopropyl alcohol*		**22**	**5.2**	**5.4**	
m,p-Xylene		**162**	< 0.74	**2.2** J	
m-Dichlorobenzene		< 2.3	< 0.57	< 0.46	
Methyl ethyl ketone		**48.7**	**2.5** J	**4.1**	
Methyl isobutyl ketone		< 3.0	< 0.74	< 0.57	
Methylene chloride*		< 1.0	< 0.25	< 0.20	
o-Xylene		**66.9**	< 0.37	< 0.30	
Propylene*		**285**	**147**	< 0.11	
Styrene		< 1.6	< 0.40	< 0.32	
Tertiary butyl alcohol		< 0.85	**6.1**	**8.2**	
Tetrachloroethylene		< 4.2	< 1.0	< 0.81	
Tetrahydrofuran		< 2.9	< 0.74	< 0.59	
Toluene		**1,000**	**6.0**	< 0.22	
trans-1,2-Dichloroethylene		**106**	< 0.15	< 0.11	
Trichloroethylene		**1,140**	**4.7**	**1.2**	100%
Trichlorofluoromethane		< 3.1	< 0.79	< 0.62	
Vinyl acetate		< 2.4	< 0.60	< 0.49	
Vinyl chloride*		**314**	**152**	**88.7**	
Xylenes (total)		**229**	< 0.37	**2.2** J	
TVOCs		**6,743**	**416**	**237**	

Footnotes:

ug/mg^3 micrograms per cubic meter
* Compound is poorly adsorbed by activated carbon.
< Compound was not detected at or above the indicated value.
J Detected concentration is less than the quantitation limit.
TVOCs Total volatile organic compounds
Detections are **bolded.**

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Table 1. Vapor Treatment System Air Sampling Results
Routine Monitoring - December 2020

Compound (ug/m^3)	Sample ID: / Lab Sample ID: / Date Sampled:	VGAC-1 JD18215-1 12/22/2020	VGAC-3 JD18215-2 12/22/2020	KMNO4-5 JD18215-3 12/22/2020	Percent Removed
1,1,1-Trichloroethane		< 7.1	< 0.71	< 0.71	
1,1-Dichloroethane		< 1.9	< 0.19	< 0.19	
1,1-Dichloroethylene		**80.5**	< 0.27	< 0.27	
1,2,4-Trimethylbenzene		**2,310**	< 0.64	< 0.64	
1,3,5-Trimethylbenzene		**865**	< 0.64	< 0.64	
1,4-Dioxane*		< 7.6	< 0.76	< 0.76	
2,2,4-Trimethylpentane		**152**	< 0.41	< 0.41	
2-Hexanone		< 6.1	< 0.61	< 0.61	
4-Ethyltoluene		**341**	< 0.59	< 0.59	
Acetone*		**2,040**	**11**	**29.5**	
Benzene		**186**	< 0.15	< 0.15	
Bromoform		< 16	< 1.6	< 1.6	
Carbon disulfide		**33.9**	< 0.29	< 0.29	
Carbon tetrachloride		< 5.9	< 0.59	< 0.59	
Chloroethane		< 5.0	< 0.50	< 0.50	
Chloroform		< 3.9	< 0.39	< 0.39	
Chloromethane*		**18**	**15**	**14**	
cis-1,2-Dichloroethylene		**6,260**	< 0.19	< 0.19	
Cyclohexane		**38.2**	< 0.30	< 0.30	
Dichlorodifluoromethane		< 3.3	< 0.33	< 0.33	
Ethanol		**84.6**	**249**	**83.1**	
Ethyl acetate		< 5.4	< 0.54	< 0.54	
Ethylbenzene		**2,350**	< 0.26	< 0.26	
Heptane		**594**	< 0.29	< 0.29	
Hexane		**38.4**	< 0.15	< 0.15	
Isopropyl alcohol*		**99.6**	**4.4**	**20**	
m,p-Xylene		**7,340**	**2.2** J	**5.6**	
m-Dichlorobenzene		< 4.6	< 0.46	< 0.46	
Methyl ethyl ketone		**321**	< 0.50	**3.5**	
Methyl isobutyl ketone		**75.0**	< 0.57	**2.3** J	
Methylene chloride*		< 2.0	< 0.20	< 0.20	
o-Xylene		**2,630**	< 0.30	**2.1** J	
Propylene*		**234**	**6.4**	< 0.11	
Styrene		**53.6**	< 0.32	< 0.32	
Tertiary butyl alcohol		< 1.7	< 0.17	**2.5**	
Tetrachloroethylene		**45**	< 0.81	< 0.81	
Tetrahydrofuran		< 5.9	< 0.59	< 0.59	
Toluene		**9,610**	**1.8** J	**1.7** J	
trans-1,2-Dichloroethylene		**247**	< 0.11	< 0.11	
Trichloroethylene		**9,460**	**1.6**	< 0.41	100%
Trichlorofluoromethane		< 6.2	< 0.62	< 0.62	
Vinyl acetate		< 4.9	< 0.49	**3.2**	
Vinyl chloride*		**271**	< 0.23	< 0.23	
Xylenes (total)		**9,950**	**2.2** J	**7.8**	
TVOCs		**45,758**	**291**	**168**	

Footnotes:

ug/mg^3 micrograms per cubic meter
* Compound is poorly adsorbed by activated carbon.
< Compound was not detected at or above the indicated value.
J Detected concentration is less than the quantitation limit.
TVOCs Total volatile organic compounds
Detections are **bolded.**

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Table 1. Vapor Treatment System Air Sampling Results
Routine Monitoring - December 2020

Compound (ug/m^3)	Sample ID: / Lab Sample ID: / Date Sampled:	VGAC-1 JD18315-1 12/29/2020		VGAC-3 JD18315-2 12/29/2020		KMNO4-5 JD18315-3 12/29/2020		Percent Removed
1,1,1-Trichloroethane		< 7.1		< 0.71		< 0.71		
1,1-Dichloroethane		< 1.9		< 0.19		< 0.19		
1,1-Dichloroethylene		**60.3**		< 0.27		< 0.27		
1,2,4-Trimethylbenzene		< 6.4		< 0.64		< 0.64		
1,3,5-Trimethylbenzene		< 6.4		< 0.64		< 0.64		
1,4-Dioxane*		< 7.6		< 0.76		< 0.76		
2,2,4-Trimethylpentane		**107**		< 0.41		< 0.41		
2-Hexanone		< 6.1		< 0.61		< 0.61		
4-Ethyltoluene		< 5.9		< 0.59		< 0.59		
Acetone*		**736**		**17**		**19**		
Benzene		**67.7**		< 0.15		< 0.15		
Bromoform		< 16		< 1.6		< 1.6		
Carbon disulfide		**19**	J	< 0.29		< 0.29		
Carbon tetrachloride		< 5.9		< 0.59		< 0.59		
Chloroethane		< 5.0		< 0.50		< 0.50		
Chloroform		< 3.9		< 0.39		< 0.39		
Chloromethane*		**11**	J	**16**		**11**		
cis-1,2-Dichloroethylene		**3,220**		< 0.19		< 0.19		
Cyclohexane		**20**	J	< 0.30		< 0.30		
Dichlorodifluoromethane		< 3.3		**2.5**	J	**2.1**	J	
Ethanol		**49.4**		**30.5**		**49.2**		
Ethyl acetate		< 5.4		**5.4**		**8.6**		
Ethylbenzene		**17**	J	**0.32**	J	< 0.26		
Heptane		**242**		< 0.29		< 0.29		
Hexane		**21**	J	< 0.15		< 0.15		
Isopropyl alcohol*		**121**		**1.0**	J	**7.4**		
m,p-Xylene		**21**	J	**0.65**	J	< 0.61		
m-Dichlorobenzene		< 4.6		< 0.46		< 0.46		
Methyl ethyl ketone		**70.8**		< 0.50		< 0.50		
Methyl isobutyl ketone		< 5.7		< 0.57		< 0.57		
Methylene chloride*		< 2.0		< 0.20		< 0.20		
o-Xylene		< 3.0		**0.32**	J	< 0.30		
Propylene*		**265**		**251**		**46.2**		
Styrene		< 3.2		< 0.32		< 0.32		
Tertiary butyl alcohol		< 1.7		< 0.17		< 0.17		
Tetrachloroethylene		< 8.1		**0.95**	J	< 0.81		
Tetrahydrofuran		< 5.9		< 0.59		< 0.59		
Toluene		**1,270**		**0.83**	J	< 0.22		
trans-1,2-Dichloroethylene		**111**		< 0.11		< 0.11		
Trichloroethylene		**2,500**		**0.81**	J	< 0.41		100%
Trichlorofluoromethane		< 6.2		< 0.62		< 0.62		
Vinyl acetate		< 4.9		< 0.49		< 0.49		
Vinyl chloride*		**258**		**363**		**138**		
Xylenes (total)		**21**	J	**1.0**	J	< 0.30		
TVOCs		**9,187**		**690**		**282**		

Footnotes:

ug/mg^3 micrograms per cubic meter
* Compound is poorly adsorbed by activated carbon.
< Compound was not detected at or above the indicated value.
J Detected concentration is less than the quantitation limit.
TVOCs Total volatile organic compounds
Detections are **bolded.**

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Table 2. Liquid Treatment System Sampling Results - December 2020

EMAGIN

Analyte / Sample ID:	FRAC1-A2949-20201202	LGAC-MID-20201202	LGAC-INF-20201202	FRAC2-A4272-20201215	LGAC-MID-20201215	LGAC-INF-20201215	OU3 AIR STRIPPER FINAL EFF-20201215	OU3 AIR STRIPPER FINAL EFF-20201229
Lab Sample ID:	JD17006-1 / 1A	JD17006-2 / 2A	JD17006-3 / 3A	JD17804-1 / 1A	JD17804-2 / 2A	JD17804-3 / 3A	JD17804-4	JD18326-1
Date Sampled:	12/2/2020	12/2/2020	12/2/2020	12/15/2020	12/15/2020	12/15/2020	12/15/2020	12/29/2020
Volatile Organic Compounds (ug/L, detec								
1,2,3-Trichlorobenzene	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1.2	-	-
2-Butanone (MEK)	< 6.9	< 6.9	**103**	< 6.9	< 6.9	**139**	-	-
2-Hexanone	< 2.0	< 2.0	**4.1 J**	< 2.0	< 2.0	**7.0**	-	-
4-Methyl-2-pentanone (MIBK)	< 1.9	< 1.9	**6.5**	< 1.9	< 1.9	**10.4**	-	-
Acetone*	< 6.0	< 6.0	**532**	< 6.0	< 6.0	**899**	-	-
Benzene	< 0.43	< 0.43	**0.84**	< 0.43	< 0.43	**0.78**	-	-
cis-1,2-Dichloroethene	< 0.51	< 0.51	**95.9**	< 0.51	< 0.51	**89.7**	-	-
Ethylbenzene	< 0.60	< 0.60	**4.9**	< 0.60	< 0.60	**4.4**	-	-
Isopropylbenzene	< 0.65	< 0.65	< 0.65	< 0.65	< 0.65	0.66 J	-	-
m,p-Xylene	< 0.78	< 0.78	**21.2**	< 0.78	< 0.78	**22.1**	-	-
o-Xylene	< 0.59	< 0.59	**15.8**	< 0.59	< 0.59	**13.7**	-	-
Styrene	< 0.49	< 0.49	< 0.49	< 0.49	< 0.49	**1.4**	-	-
Toluene	< 0.53	< 0.53	**52.5**	< 0.53	< 0.53	**44.1**	-	-
trans-1,2-Dichloroethene	< 0.54	< 0.54	0.67 J	< 0.54	< 0.54	0.98 J	-	-
Trichloroethene	< 0.53	< 0.53	**15.7**	< 0.53	< 0.53	**25.6**	-	-
Xylene (total)	< 0.59	< 0.59	**37.0**	< 0.59	< 0.59	**35.8**	-	-
TVOCs	0.0	0.0	**853**	0.0	0.0	**1,260**		
Semivolatile Organic Compounds (ug/L, c								
1,1'-Biphenyl	< 0.21	< 0.21	2.6	< 0.21	< 0.21	0.70 J	-	-
1,4-Dioxane	< 0.66	< 0.66	**26.4**	< 0.66	< 0.66	**9.5**	-	-
2,4-Dimethylphenol	< 2.4	< 2.4	**386**	< 2.4	< 2.4	**11.2**	-	-
2-Methylnaphthalene	< 0.21	< 0.21	**5.8**	< 0.21	< 0.21	**1.1**	-	-
2-Methylphenol	< 0.89	< 0.89	**183**	< 0.89	< 0.89	**5.9**	-	-
3&4-Methylphenol	< 0.88	< 0.88	**683**	< 0.88	< 0.88	**5.0**	-	-
Acenaphthene	< 0.19	< 0.19	1.5	< 0.19	< 0.19	0.30 J	-	-
Acetophenone	< 0.21	< 0.21	**33.5**	< 0.21	**0.22 J**	**0.94 J**	-	-
Anthracene	< 0.21	< 0.21	**0.49 J**	< 0.21	< 0.21	**0.25 J**	-	-
Carbazole	< 0.23	< 0.23	**0.51 J**	< 0.23	< 0.23	< 0.23	-	-
Dibenzofuran	< 0.22	< 0.22	0.76 J	< 0.22	< 0.22	0.31 J	-	-
Dimethyl phthalate	< 0.22	< 0.22	**3.2**	< 0.22	< 0.22	< 0.22	-	-
Fluoranthene	< 0.17	< 0.17	**0.34 J**	< 0.17	< 0.17	**0.62 J**	-	-
Fluorene	< 0.17	< 0.17	1.8	< 0.17	< 0.17	0.67 J	-	-
Naphthalene	< 0.23	< 0.23	**10.1**	< 0.23	< 0.23	**0.89** J	-	-
Phenanthrene	< 0.18	< 0.18	**2.6**	< 0.18	< 0.18	**1.9**	-	-
Phenol	< 0.39	< 0.39	**210**	< 0.39	< 0.39	< 0.39	-	-
Pyrene	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	**0.47 J**	-	-
Semivolatile Organic Compounds (SIM) (								
1,4-Dioxane	< 0.050	< 0.050	**25.0**	< 0.050	< 0.050	**7.02**	-	-
Polychlorinated Biphenyls (ug/L):								
Aroclor 1016	< 0.13	< 0.13	< 0.13	< 0.098	< 0.098	< 0.098	-	-
Aroclor 1221	< 0.28	< 0.28	< 0.28	< 0.21	< 0.21	< 0.21	-	-
Aroclor 1232	< 0.17	< 0.17	< 0.17	< 0.13	< 0.13	< 0.13	-	-
Aroclor 1242	< 0.15	< 0.15	< 0.15	< 0.11	< 0.11	< 0.11	-	-
Aroclor 1248	< 0.084	< 0.084	< 0.084	< 0.063	< 0.063	< 0.063	-	-
Aroclor 1254	< 0.28	< 0.28	< 0.28	< 0.21	< 0.21	< 0.21	-	-
Aroclor 1260	< 0.10	< 0.10	< 0.10	< 0.076	< 0.076	< 0.076	-	-
Aroclor 1262	< 0.13	< 0.13	< 0.13	< 0.097	< 0.097	< 0.097	-	-
Aroclor 1268	< 0.12	< 0.12	< 0.12	< 0.087	< 0.087	< 0.087	-	-
Metals (mg/L):								
Cadmium	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 15	-	-
Chromium	< 10	< 10	< 10	< 10	< 10	< 50	-	-
Iron	**779**	**749**	**2,250**	**906**	**404**	**4,800**	**234**	**754**
Manganese	**497**	**270**	**246**	**230**	**243**	**206**	**172**	**100**
Mercury	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	2.3	-	-
General Chemistry (mg/L):								
Nitrogen, Nitrate	**0.84**	< 0.11	**0.18**	< 0.11	< 0.11	< 0.11	-	-
Nitrogen, Nitrate + Nitrite	**1.0**	< 0.10	**0.20**	< 0.10	< 0.10	< 0.10	-	-
Nitrogen, Nitrite	**0.16**	< 0.010	**0.024**	**0.018**	< 0.010	< 0.010	-	-
Nitrogen, Total Kjeldahl	**1.5**	**2.5**	**3.0**	**3.0**	**2.5**	**1.7**	-	-

Footnotes:

ug/L	micrograms per liter
mg/L	milligrams per liter
*	Poorly adsorbed on activated carbon.
**	Generated by Method 6010D; all other metals results generated by Method 200.7.
<	Analyte was not detected at or above the indicated value.
J	Detected concentration is less than the laboratory quantitation limit.
TVOCs	Total volatile organic compounds

Detections are **bolded**.

Table 3: Ambient Air Laboratory Results (2020-11-25 through 2020-12-01)

Analyte	Target Screening Level (µg/m³)[1,3]	95% of Concentration Distribution NYSDOH Background Air (µg/m³)[2]	Ambient Air Concentration (µg/m³)				
			Sample Location				
			AMP-01	AMP-02	AMP-03	AMP-04	AMP-04-DUP
Site-specific Compounds of Interest[1]							
1,1,1-Trichloroethane	520	0.7	< 0.46	< 0.27	< 0.26	< 0.22	< 0.22
1,1-Dichloroethane	45	< 0.25	< 0.34	< 0.2	< 0.19	< 0.16	< 0.16
1,1-Dichloroethene	8	<0.25	< 0.17	< 0.1	< 0.094	< 0.08	< 0.08
1,2-Dichloroethane	3	< 0.25	< 0.34	< 0.2	< 0.19	< 0.16	< 0.16
Benzene	8	5.8	**1.0**	**0.88**	**0.80**	**0.81**	**0.82**
Ethyl-benzene	29	1.9	**0.38**	**0.30**	**0.26**	**0.33**	**0.47**
m,p-Xylene	10	3.1	**1.2 J**	**0.98 J**	**0.78 J**	**1.6 J**	**2.7 J**
o-Xylene	10	2.3	**0.59 J**	**0.41 J**	**0.33 J**	**0.75 J**	**1.3 J**
Tetrachloroethene	30	1.6	< 0.57	< 0.34	< 0.32	< 0.27	< 0.27
Toluene	521	21	**2.7**	**2.1**	**2.0**	**1.7**	**2.0**
trans-1,2-Dichloroethene	82	NA2	< 1.7	< 1.0	< 0.94	< 0.80	< 0.80
Trichloroethene	2	0.5	< 0.45	< 0.27	< 0.25	< 0.22	< 0.22
Vinyl Chloride	8	< 0.25	< 0.11	< 0.064	< 0.06	< 0.051	< 0.051
Other Compounds[3]							
1,1,2,2-Tetrachloroethane	1.3	< 0.25	< 0.58	< 0.34	< 0.32	< 0.28	< 0.28
1,1,2-Trichloroethane	0.21	< 0.25	< 0.46	< 0.27	< 0.26	< 0.22	< 0.22
1,2-Dibromoethane (EDB)	0.12	< 0.25	< 0.65	< 0.38	< 0.36	< 0.31	< 0.31
1,4-Dichlorobenzene	7	0.8	< 0.51	< 0.30	< 0.28	< 0.24	< 0.24
Carbon Tetrachloride	12	1	< 0.53	**0.49**	**0.50**	**0.50**	**0.50**
Chloroethane	417	0.4	< 0.56	< 0.33	< 0.31	< 0.26	< 0.26
Chloroform	3	0.5	< 0.41	< 0.24	< 0.23	< 0.2	< 0.2
Chloromethane	310	4.6	< 4.4 J	< 2.6 J	< 2.4 J	< 2.1 J	< 2.1 J
cis-1,2-Dichloroethene	NA1	< 0.25	< 0.34	< 0.2	< 0.19	< 0.16	< 0.16
Freon 114	NA1	1.3	< 0.59	< 0.35	< 0.33	< 0.28	< 0.28
Freon 12	100	11	**2.2**	**2.2**	**2.3**	**2.3**	**2.3**
Methyl tert-butyl ether	260	NA2	< 1.5	< 0.9	< 0.85	< 0.72	< 0.72

Notes:

µg/m³ - micrograms per cubic meter

Bold - indicates detections

R - rejected after data validation

< - indicates not detected at or above the indicated value

NA1 - no criteria given in the EPA RSL Calculator

J - indicates sample result is estimated

NA2 - NYSDOH did not include this compound in the guidance document[2]

[1] Target Screening Levels for site-specific compounds of interest provided in Bethpage Ambient Air Monitoring Plan and are based on a one-year exposure duration (B&B Engineers & Geologists of New York, P.C., May 2020)

[2] NYSDOH Outdoor Air Background Values from Appendix C (Table C1) of Guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006)

[3] Target Screening Levels for other compounds calculated using the EPA RSL calculator with the same inputs as described in the Bethpage Ambient Air Monitoring Plan

Table 3: Ambient Air Laboratory Results (2020-12-01 through 2020-12-07)

Analyte	Target Screening Level (µg/m³)[1,3]	95% of Concentration Distribution NYSDOH Background Air (µg/m³)[2]	Ambient Air Concentration (µg/m³)				
			Sample Location				
			AMP-01*	AMP-02	AMP-03	AMP-04	AMP-02-DUP
Site-specific Compounds of Interest[1]							
1,1,1-Trichloroethane	520	0.7	< 0.16	< 0.2	< 0.16	< 0.2	< 0.2
1,1-Dichloroethane	45	< 0.25	< 0.12	< 0.14	< 0.12	< 0.15	< 0.15
1,1-Dichloroethene	8	<0.25	< 0.057	< 0.071	< 0.057	< 0.072	< 0.072
1,2-Dichloroethane	3	< 0.25	< 0.12	< 0.14	**0.12**	< 0.15	< 0.15
Benzene	8	5.8	**0.6**	**0.53**	**0.85**	**0.55**	**0.54**
Ethyl-benzene	29	1.9	**0.15**	< 0.16	**1.2**	< 0.16	< 0.16
m,p-Xylene	10	3.1	**0.44**	**0.35**	**12**	**0.37**	**0.36**
o-Xylene	10	2.3	**0.17**	< 0.16	**4.5**	**0.16**	< 0.16
Tetrachloroethene	30	1.6	< 0.2	< 0.24	< 0.2	< 0.24	< 0.24
Toluene	521	21	**1.9**	**0.98**	**5.4**	**0.96**	**0.98**
trans-1,2-Dichloroethene	82	NA2	< 0.57	< 0.71	< 0.57	< 0.72	< 0.72
Trichloroethene	2	0.5	< 0.15	< 0.19	< 0.16	< 0.19	< 0.19
Vinyl Chloride	8	< 0.25	< 0.037	< 0.046	< 0.037	< 0.046	< 0.046
Other Compounds[3]							
1,1,2,2-Tetrachloroethane	1.3	< 0.25	< 0.2	< 0.25	< 0.2	< 0.25	< 0.25
1,1,2-Trichloroethane	0.21	< 0.25	< 0.16	< 0.2	< 0.16	< 0.2	< 0.2
1,2-Dibromoethane (EDB)	0.12	< 0.25	< 0.22	< 0.28	< 0.22	< 0.28	< 0.28
1,4-Dichlorobenzene	7	0.8	< 0.17	< 0.22	< 0.17	< 0.22	< 0.22
Carbon Tetrachloride	12	1	**0.66**	**0.55**	**0.54**	**0.54**	**0.55**
Chloroethane	417	0.4	< 0.19 J	< 0.24 J	< 0.19 J	< 0.24 J	< 0.24 J
Chloroform	3	0.5	< 0.14	< 0.18	< 0.14	< 0.18	< 0.18
Chloromethane	310	4.6	< 1.5 J	< 1.8 J	< 1.5 J	< 1.9 J	< 1.9 J
cis-1,2-Dichloroethene	NA1	< 0.25	< 0.11	< 0.14	< 0.11	< 0.14	< 0.14
Freon 114	NA1	1.3	< 0.2	< 0.25	< 0.2	< 0.25	< 0.25
Freon 12	100	11	**2.6**	**2.3**	**2.3**	**2.3**	**2.3**
Methyl tert-butyl ether	260	NA2	< 0.52	< 0.65	< 0.52	< 0.65	< 0.65

Notes:

µg/m³ - micrograms per cubic meter

< - indicates not detected at or above the indicated

value J - indicates sample result is estimated

Bold - indicates detections

R - rejected after data validation

NA1 - no criteria given in the EPA RSL Calculator

NA2 - NYSDOH did not include this compound in the guidance document[2]

* - Sample collected over a 4-day period because of low vacuum

[1] Target Screening Levels for site-specific compounds of interest provided in Bethpage Ambient Air Monitoring Plan and are based on a one-year exposure duration (B&B Engineers & Geologists of New York, P.C., May 2020)

[2] NYSDOH Outdoor Air Background Values from Appendix C (Table C1) of Guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006)

[3] Target Screening Levels for other compounds calculated using the EPA RSL calculator with the same inputs as described in the Bethpage Ambient Air Monitoring Plan

Table 3: Ambient Air Laboratory Results (2020-12-07 through 2020-12-12)

Analyte	Target Screening Level (µg/m³)[1,3]	95% of Concentration Distribution NYSDOH Background Air (µg/m³)[2]	Ambient Air Concentration (µg/m³)				
			Sample Location				
			AMP-01	AMP-02	AMP-03	AMP-04	AMP-03-DUP
Site-specific Compounds of Interest[1]							
1,1,1-Trichloroethane	520	0.7	< 0.3	< 0.25	< 0.25	< 0.26	< 0.25
1,1-Dichloroethane	45	< 0.25	< 0.22	< 0.19	< 0.19	< 0.19	< 0.19
1,1-Dichloroethene	8	<0.25	< 0.11	< 0.091	< 0.091	< 0.094	< 0.091
1,2-Dichloroethane	3	< 0.25	< 0.22	< 0.19	< 0.19	< 0.19	< 0.19
Benzene	8	5.8	**0.73**	**0.76**	**0.72**	**0.69**	**0.73**
Ethyl-benzene	29	1.9	< 0.24	< 0.2	< 0.2	< 0.2	< 0.2
m,p-Xylene	10	3.1	**0.5**	**0.54**	**0.52**	**0.47**	**0.53**
o-Xylene	10	2.3	< 0.24 J	**0.2 J**	**0.21 J**	< 0.2 J	**0.21 J**
Tetrachloroethene	30	1.6	< 0.38	< 0.31	< 0.31	< 0.32	< 0.31
Toluene	521	21	**1.4**	**1.3**	**1.4**	**1.1**	**1.7**
trans-1,2-Dichloroethene	82	NA2	< 1.1	< 0.91	< 0.91	< 0.94	< 0.91
Trichloroethene	2	0.5	< 0.3	< 0.25	< 0.25	< 0.25	< 0.25
Vinyl Chloride	8	< 0.25	< 0.071	< 0.059	< 0.059	< 0.06	< 0.059
Other Compounds[3]							
1,1,2,2-Tetrachloroethane	1.3	< 0.25	< 0.38	< 0.32	< 0.32	< 0.32	< 0.32
1,1,2-Trichloroethane	0.21	< 0.25	< 0.3	< 0.25	< 0.25	< 0.26	< 0.25
1,2-Dibromoethane (EDB)	0.12	< 0.25	< 0.42	< 0.35	< 0.35	< 0.36	< 0.35
1,4-Dichlorobenzene	7	0.8	< 0.33 J	< 0.28 J	< 0.28 J	< 0.28 J	< 0.28 J
Carbon Tetrachloride	12	1	**0.35**	**0.38**	**0.37**	**0.38**	**1.9**
Chloroethane	417	0.4	< 0.36	< 0.3	< 0.3	< 0.31	< 0.3
Chloroform	3	0.5	< 0.27	< 0.22	< 0.22	< 0.23	< 0.22
Chloromethane	310	4.6	< 2.9	< 2.4	< 2.4	< 2.4	< 2.4
cis-1,2-Dichloroethene	NA1	< 0.25	< 0.22	< 0.18	< 0.18	< 0.19	< 0.18
Freon 114	NA1	1.3	< 0.39	< 0.32	< 0.32	< 0.33	< 0.32
Freon 12	100	11	**2.1**	**2.2**	**2.2**	**2.2**	**2.2**
Methyl tert-butyl ether	260	NA2	< 1	< 0.83	< 0.83	< 0.85	< 0.83

Notes:

µg/m³ - micrograms per cubic meter

< - indicates not detected at or above the indicated value

J - indicates sample result is estimated

R - rejected after data validation

NA1 - no criteria given in the EPA RSL Calculator

NA2 - NYSDOH did not include this compound in the guidance document[2]

Bold - indicates detect

[1] Target Screening Levels for site-specific compounds of interest provided in Bethpage Ambient Air Monitoring Plan and are based on a one-year exposure duration (B&B Engineers & Geologists of New York, P.C., May 2020)

[2] NYSDOH Outdoor Air Background Values from Appendix C (Table C1) of Guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006)

[3] Target Screening Levels for other compounds calculated using the EPA RSL calculator with the same inputs as described in the Bethpage Ambient Air Monitoring Plan

Table 3: Ambient Air Laboratory Results (2020-12-12 through 2020-12-18)

Analyte	Target Screening Level (µg/m³)[1,3]	95% of Concentration Distribution NYSDOH Background Air (µg/m³)[2]	Ambient Air Concentration (µg/m³)				
			Sample Location				
			AMP-01	AMP-02	AMP-03	AMP-04	AMP-04-DUP
Site-specific Compounds of Interest[1]							
1,1,1-Trichloroethane	520	0.7	< 0.22	< 0.18	< 0.30	< 0.19	< 0.19
1,1-Dichloroethane	45	< 0.25	< 0.17	< 0.13	< 0.22	< 0.14	< 0.14
1,1-Dichloroethene	8	<0.25	< 0.082	< 0.065	< 0.11	< 0.068	< 0.068
1,2-Dichloroethane	3	< 0.25	< 0.17	< 0.13	< 0.22	< 0.14	< 0.14
Benzene	8	5.8	**0.36**	**0.36**	< 0.44	**0.35**	**0.35**
Ethyl-benzene	29	1.9	< 0.18	< 0.14	< 0.24	< 0.15	< 0.15
m,p-Xylene	10	3.1	< 0.36	**0.31**	**1.2**	< 0.30	< 0.30
o-Xylene	10	2.3	< 0.18	< 0.14	**0.50**	< 0.15	< 0.15
Tetrachloroethene	30	1.6	< 0.28	< 0.22	< 0.38	< 0.23	< 0.23
Toluene	521	21	**0.46**	**0.50**	**1.3**	**0.47**	**0.50**
trans-1,2-Dichloroethene	82	NA2	< 0.82	< 0.65	< 1.1	< 0.68	< 0.68
Trichloroethene	2	0.5	< 0.22	< 0.18	< 0.30	< 0.18	< 0.18
Vinyl Chloride	8	< 0.25	< 0.053	< 0.042	< 0.071	< 0.044	< 0.044
Other Compounds[3]							
1,1,2,2-Tetrachloroethane	1.3	< 0.25	< 0.28	< 0.22	< 0.38	< 0.23	< 0.23
1,1,2-Trichloroethane	0.21	< 0.25	< 0.22	< 0.18	< 0.30	< 0.19	< 0.19
1,2-Dibromoethane (EDB)	0.12	< 0.25	< 0.32	< 0.25	< 0.42	< 0.26	< 0.26
1,4-Dichlorobenzene	7	0.8	< 0.25	< 0.20	< 0.33	< 0.20	< 0.20
Carbon Tetrachloride	12	1	**0.42**	**0.42**	**0.39**	**0.43**	**0.41**
Chloroethane	417	0.4	< 0.27	< 0.22	< 0.36	< 0.22	< 0.22
Chloroform	3	0.5	< 0.20	< 0.16	< 0.27	< 0.17	< 0.17
Chloromethane	310	4.6	< 2.1	< 1.7	< 2.9	< 1.8	< 1.8
cis-1,2-Dichloroethene	NA1	< 0.25	< 0.16	< 0.13	< 0.22	< 0.14	< 0.14
Freon 114	NA1	1.3	< 0.29	< 0.23	< 0.39	< 0.24	< 0.24
Freon 12	100	11	**2.2**	**2.2**	**2.1**	**2.2**	**2.2**
Methyl tert-butyl ether	260	NA2	< 0.74	< 0.59	< 1.0	< 0.62	< 0.62

Notes:

µg/m³ - micrograms per cubic meter

Bold - indicates detections

R - rejected after data validation

< - indicates not detected at or above the indicated value

NA1 - no criteria given in the EPA RSL Calculator

J - indicates sample result is estimated

NA2 - NYSDOH did not include this compound in the guidance document[2]

[1] Target Screening Levels for site-specific compounds of interest provided in Bethpage Ambient Air Monitoring Plan and are based on a one-year exposure duration (B&B Engineers & Geologists of New York, P.C., May 2020)

[2] NYSDOH Outdoor Air Background Values from Appendix C (Table C1) of Guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006)

[3] Target Screening Levels for other compounds calculated using the EPA RSL calculator with the same inputs as described in the Bethpage Ambient Air Monitoring Plan

Table 3: Ambient Air Laboratory Results (2020-12-18 through 2020-12-23)

Analyte	Target Screening Level (µg/m³)[1,3]	95% of Concentration Distribution NYSDOH Background Air (µg/m³)[2]	Ambient Air Concentration (µg/m³)				
			Sample Location				
			AMP-01	AMP-02	AMP-03	AMP-04*	AMP-02-DUP
Site-specific Compounds of Interest[1]							
1,1,1-Trichloroethane	520	0.7	< 0.24	< 0.24	< 0.22	< 0.14 J	< 0.24
1,1-Dichloroethane	45	< 0.25	< 0.18	< 0.18	< 0.17	< 0.1 J	< 0.18
1,1-Dichloroethene	8	<0.25	< 0.086	< 0.086	< 0.082	< 0.051 J	< 0.086
1,2-Dichloroethane	3	< 0.25	< 0.18	< 0.18	< 0.17	< 0.1 J	< 0.18
Benzene	8	5.8	**1.3**	**1.3**	**1.2**	**0.99 J**	**1.2**
Ethyl-benzene	29	1.9	**0.34**	**0.34**	**0.36**	**0.23 J**	**0.33**
m,p-Xylene	10	3.1	**0.96**	**0.97**	**1.1**	**0.66 J**	**0.94**
o-Xylene	10	2.3	**0.42**	**0.38**	**0.48**	**0.29 J**	**0.37**
Tetrachloroethene	30	1.6	**0.32**	**0.32**	**0.3**	**0.21 J**	**0.33**
Toluene	521	21	**2.1**	**2**	**2.1**	**1.4 J**	**2.1**
trans-1,2-Dichloroethene	82	NA2	< 0.86	< 0.86	< 0.82	< 0.51 J	< 0.86
Trichloroethene	2	0.5	< 0.23	< 0.23	< 0.22	< 0.14 J	< 0.23
Vinyl Chloride	8	< 0.25	< 0.055	< 0.055	< 0.053	< 0.033 J	< 0.055
Other Compounds[3]							
1,1,2,2-Tetrachloroethane	1.3	< 0.25	< 0.3	< 0.3	< 0.28	< 0.18 J	< 0.3
1,1,2-Trichloroethane	0.21	< 0.25	< 0.24	< 0.24	< 0.22	< 0.14 J	< 0.24
1,2-Dibromoethane (EDB)	0.12	< 0.25	< 0.33	< 0.33	< 0.32	< 0.2 J	< 0.33
1,4-Dichlorobenzene	7	0.8	< 0.26	< 0.26	< 0.25	< 0.16 J	< 0.26
Carbon Tetrachloride	12	1	**0.55**	**0.53**	**0.54**	**0.57 J**	**0.54**
Chloroethane	417	0.4	< 0.29	< 0.29	< 0.27	< 0.17 J	< 0.29
Chloroform	3	0.5	< 0.21	< 0.21	< 0.2	< 0.12 J	< 0.21
Chloromethane	310	4.6	< 2.2 J	< 2.2 J	< 2.1 J	< 1.3 J	< 2.2 J
cis-1,2-Dichloroethene	NA1	< 0.25	< 0.17	< 0.17	< 0.16	< 0.1 J	< 0.17
Freon 114	NA1	1.3	< 0.3	< 0.3	< 0.29	< 0.18 J	< 0.3
Freon 12	100	11	**2.3**	**2.3**	**2.3**	**2.4 J**	**2.3**
Methyl tert-butyl ether	260	NA2	< 0.78	< 0.78	< 0.74	< 0.46 J	< 0.78

Notes:

µg/m³ - micrograms per cubic meter

< - indicates not detected at or above the indicated value

J - indicates sample result is estimated

Bold - indicates detections

R - rejected after data validation

NA1 - no criteria given in the EPA RSL Calculator

NA2 - NYSDOH did not include this compound in the guidance document[2]

* - Sample collected over a 5-day period because of low vacuum

[1] Target Screening Levels for site-specific compounds of interest provided in Bethpage Ambient Air Monitoring Plan and are based on a one-year exposure duration (B&B Engineers & Geologists of New York, P.C., May 2020)

[2] NYSDOH Outdoor Air Background Values from Appendix C (Table C1) of Guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006)

[3] Target Screening Levels for other compounds calculated using the EPA RSL calculator with the same inputs as described in the Bethpage Ambient Air Monitoring Plan

Table 3: Ambient Air Laboratory Results (2020-12-23 through 2020-12-29)

Analyte	Target Screening Level (µg/m³)[1,3]	95% of Concentration Distribution NYSDOH Background Air (µg/m³)[2]	Ambient Air Concentration (µg/m³)				
			Sample Location				
			AMP-01	AMP-02	AMP-03	AMP-04	AMP-02-DUP
Site-specific Compounds of Interest[1]							
1,1,1-Trichloroethane	520	0.7	< 0.88	< 0.2	< 0.14 J	< 0.8	< 0.2
1,1-Dichloroethane	45	< 0.25	< 0.65	< 0.15	< 0.1 J	< 0.59	< 0.14
1,1-Dichloroethene	8	<0.25	< 0.32	< 0.072	< 0.052 J	< 0.29	< 0.071
1,2-Dichloroethane	3	< 0.25	< 0.65	< 0.15	< 0.1 J	< 0.59	< 0.14
Benzene	8	5.8	< 1.3	**0.68**	**0.39 J**	< 1.2	**0.67**
Ethyl-benzene	29	1.9	< 0.7	**0.16**	< 0.11 J	< 0.63	< 0.16
m,p-Xylene	10	3.1	< 1.4	**0.51**	**0.23 J**	< 1.3	**0.45**
o-Xylene	10	2.3	< 0.7	**0.22**	< 0.11 J	< 0.63	**0.17**
Tetrachloroethene	30	1.6	< 1.1	< 0.25	< 0.18 J	< 0.99	< 0.24
Toluene	521	21	< 1.5	**2.3**	**0.35 J**	< 1.4	**2**
trans-1,2-Dichloroethene	82	NA2	< 3.2	< 0.72	< 0.52 J	< 2.9	< 0.71
Trichloroethene	2	0.5	< 0.86	< 0.2	< 0.14 J	< 0.78	< 0.19
Vinyl Chloride	8	< 0.25	< 0.2	< 0.047	< 0.033 J	< 0.19	< 0.046
Other Compounds[3]							
1,1,2,2-Tetrachloroethane	1.3	< 0.25	< 1.1	< 0.25	< 0.18 J	< 1	< 0.24
1,1,2-Trichloroethane	0.21	< 0.25	< 0.88	< 0.2	< 0.14 J	< 0.8	< 0.2
1,2-Dibromoethane (EDB)	0.12	< 0.25	< 1.2	< 0.28	< 0.2 J	< 1.1	< 0.28
1,4-Dichlorobenzene	7	0.8	< 0.97	< 0.22	< 0.16 J	< 0.88	< 0.22
Carbon Tetrachloride	12	1	< 1 J	**3.5**	**0.5 J**	< 0.92 J	**0.48 J**
Chloroethane	417	0.4	< 1.1	< 0.24	< 0.17 J	< 0.96	< 0.24
Chloroform	3	0.5	< 0.78	< 0.18	< 0.13 J	< 0.71	< 0.17
Chloromethane	310	4.6	< 8.3	< 1.9	< 1.3 J	< 7.5	< 1.8
cis-1,2-Dichloroethene	NA1	< 0.25	< 0.64	< 0.14	< 0.1 J	< 0.58	< 0.14
Freon 114	NA1	1.3	< 1.1	< 0.26	< 0.18 J	< 1	< 0.25
Freon 12	100	11	**2.4**	**2.6**	**2.7 J**	**2.5**	**2.5**
Methyl tert-butyl ether	260	NA2	< 2.9	< 0.66	< 0.47 J	< 2.6	< 0.64

Notes:

µg/m³ - micrograms per cubic meter

Bold - indicates detections

R - rejected after data validation

< - indicates not detected at or above the indicated value

NA1 - no criteria given in the EPA RSL Calculator

J - indicates sample result is estimated

NA2 - NYSDOH did not include this compound in the guidance document[2]

[1] Target Screening Levels for site-specific compounds of interest provided in Bethpage Ambient Air Monitoring Plan and are based on a one-year exposure duration (B&B Engineers & Geologists of New York, P.C., May 2020)

[2] NYSDOH Outdoor Air Background Values from Appendix C (Table C1) of Guidance for Evaluating Soil Vapor Intrusion in the State of New York (2006)

[3] Target Screening Levels for other compounds calculated using the EPA RSL calculator with the same inputs as described in the Bethpage Ambient Air Monitoring Plan