NORTHROP GRUMMAN

ISTR Operations Monthly Progress Report

Reporting Period: February 2022

Operable Unit 3 VOC Source Area Remedy
Former Grumman Settling Ponds, Bethpage, NY
NYSDEC Site No. 130003A
March 28, 2022

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. Data Tables

Remedy Progress / Performance Monitoring February 2022

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ISTR Operations Summary

- Vapor treatment system air emissions are shown on slide 7.
- Site-wide air emissions will be reported in the next OM&M reports for the OU3 SGCS and GWCS and compared to the emissions limits specified in the 8/12/21 “Proposed Modifications to the OU3 SGCS.”
- No liquid discharges to the OU3 GWCS.

Reporting Period: February 2022

System Startup	8/26/2020
Days of Operation Since Startup	552
Estimated cumulative TVOC Mass Removed before Crossover to OU3 SGCS (10/18/21), lbs	1,366
Estimated cumulative TVOC Mass Removed after Crossover to OU3 SGCS (10/18/21), lbs	8.7
Average TVOC Mass Recovery Rate for Reporting Period, lb/day	0.05

Remedy Progress / Performance Monitoring
February 2022

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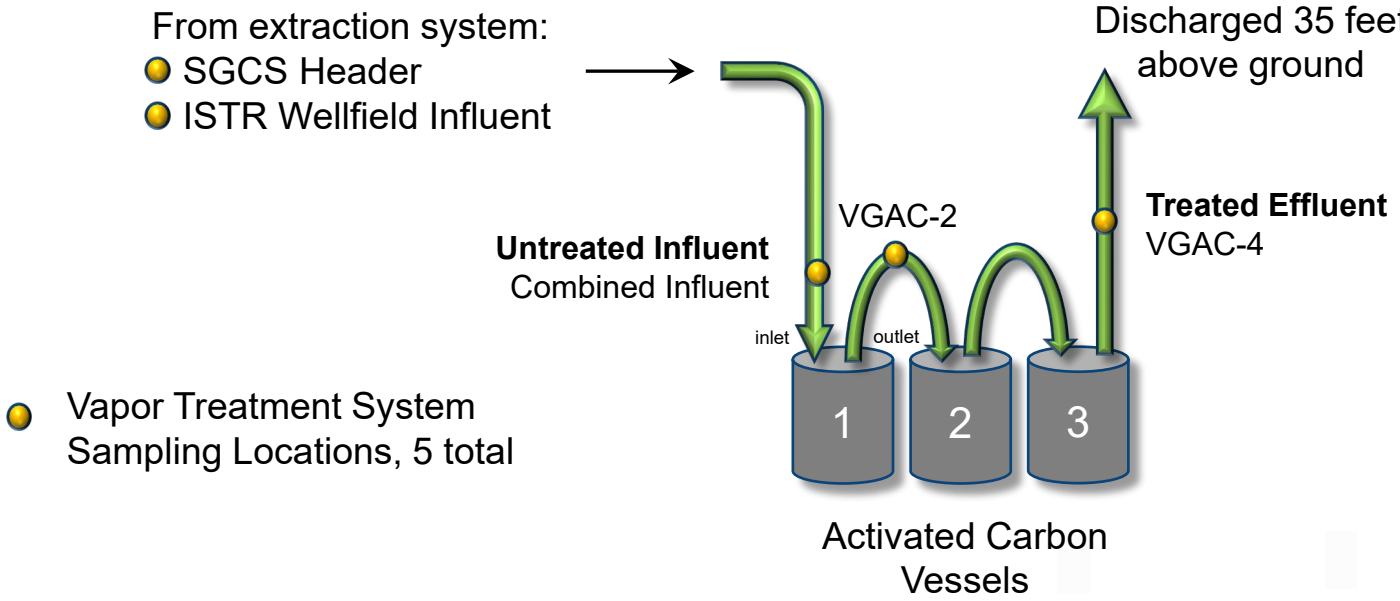
Vapor Treatment System following Crossover



Remedy Progress / Performance Monitoring
February 2022

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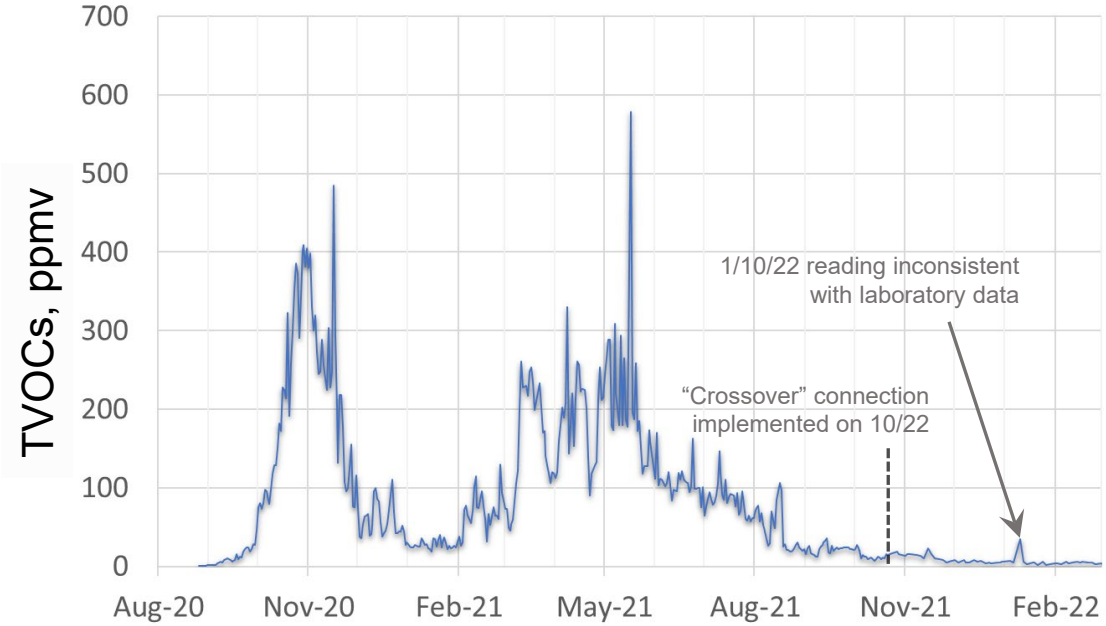
Vapor Treatment System Influent (PID)



Influent TVOC concentration (PID) on February 28*:

- 3.9 ppmv

Maximum influent TVOC concentration (PID) during February reporting period:

- 5.9 ppmv (February 14)

** Influent concentration for ISTR wellfield vapor stream only*

Remedy Progress / Performance Monitoring February 2022

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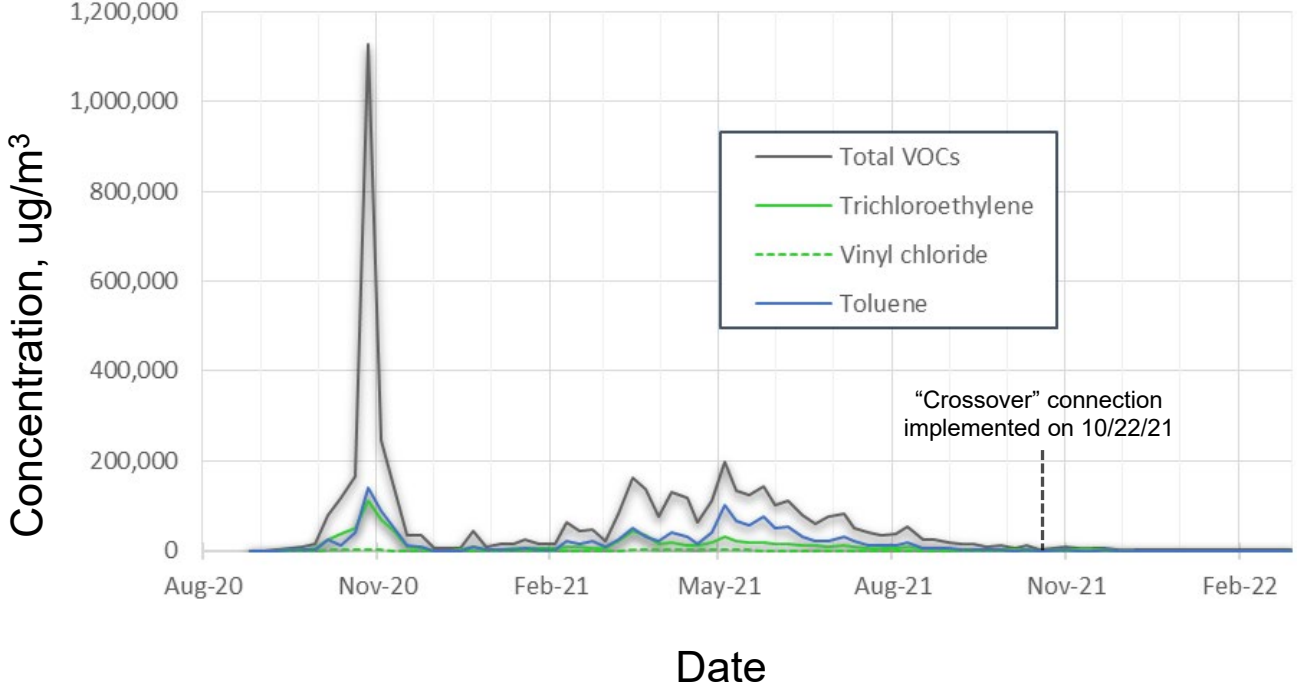
Vapor Treatment System Influent (Summa)



Influent concentrations (Summa) on 2/28*:

- TVOCs = 1,260 ug/m^3
- TCE = 386 ug/m^3
- Vinyl chloride = 33 ug/m^3

* *Influent sample collected from the "Wellfield Influent" sampling location starting 11/1/21*

Vapor treatment system analytical results for February provided in Table 1

Remedy Progress / Performance Monitoring February 2022

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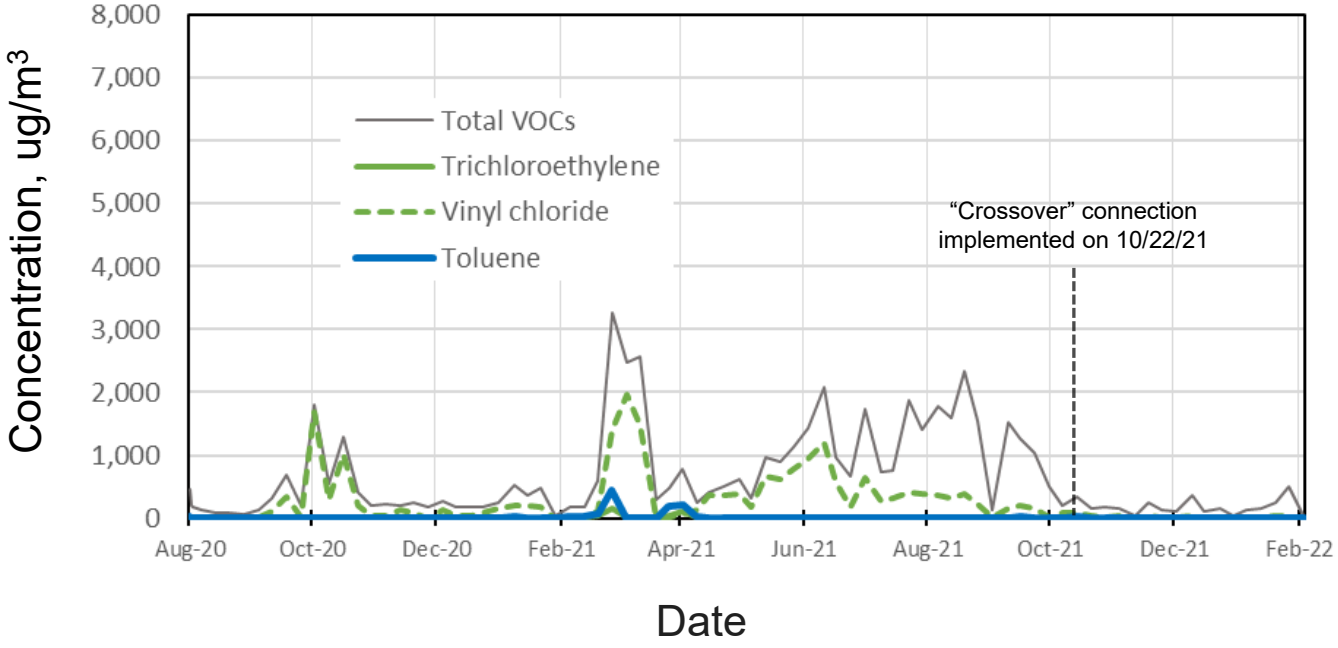
Vapor Treatment System Effluent (Summa)



Effluent concentrations (Summa) on 2/28*:

- TVOCs = 37 ug/m^3
- TCE = <1 ug/m^3
- Vinyl chloride = 1.9 ug/m^3

* *Effluent sample collected from the "VGAC-4" sampling location starting 11/1/21*

Vapor treatment system analytical results for February provided in Table 1

Remedy Progress / Performance Monitoring
February 2022

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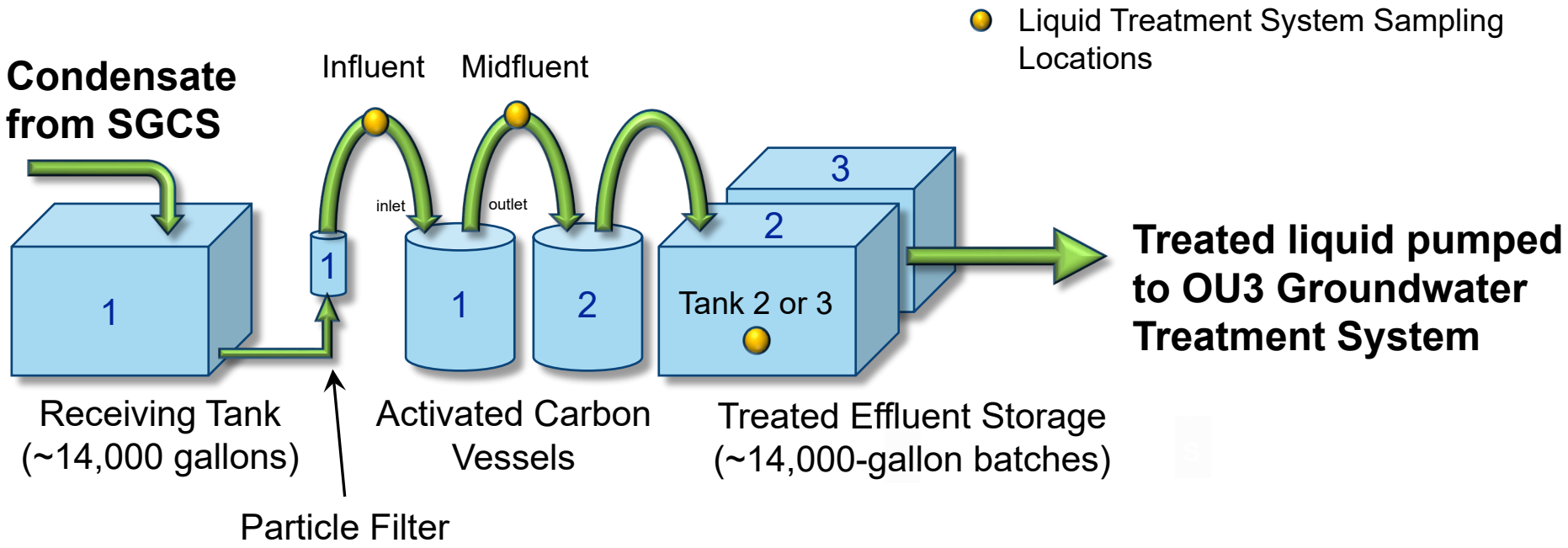
Liquid Treatment System



Remedy Progress / Performance Monitoring
February 2022

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Cumulative Liquid Produced

- No treated effluent discharged to OU3 groundwater treatment system during reporting period.
- Cumulative total volume extracted and treated to date: ~268,704 gallons.

Significant Activities
February 2022

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Major equipment repairs and significant downtime:

- None.

Other significant activities:

- Continued to purge water from shallow VEWs.

Planned Significant Activities During Next Two Months

- Maintain vapor extraction and treatment system operation, monitoring, and maintenance at the modified OU3 SGCS in preparation for system shutdown.
- Continue purging water from shallow VEWs.

Schedule

Activity	RAWP Schedule	Current Status
Remedial System Operation	Q3/20 – Q1/21	Q3/20 – Q1/22
Post-Treatment Confirmation Sampling	Q1/21	Complete
Remedy Cool-down	Q1/21-Q2-21	Q1/21 – Q2/22
Equipment Removal & Site Restoration	Q2/21	Q2/22

ISTR vapor extraction and treatment continues to operate in the modified OU3 SGCS.

Pending RAWP Modifications

None

Table 1. Vapor Treatment System Air Sampling Results
Routine Monitoring
Modified OU3 Soil Gas Containment System

Compound (ug/m^3) / Sample ID:	WELLFIELD INFLUENT A	COMBINED INFLUENT	VGAC-2	VGAC-4	DUPLICATE (VGAC-4)
Lab Sample ID:	JD39255-1	JD39255-2	JD39255-3	JD39255-4	JD39255-6
Date Sampled:	2/7/2022	2/7/2022	2/7/2022	2/7/2022	2/7/2022
1,1,1-Trichloroethane	< 0.82	1.7 J	3.5	< 0.82	< 0.82
1,1,2,2-Tetrachloroethane	< 1.3	< 1.3	< 1.3	< 1.3	< 1.3
1,1,2-Trichloroethane	< 0.82	< 0.82	< 0.82	< 0.82	< 0.82
1,1-Dichloroethane	7.7	6.9	8.1	7.7	15
1,1-Dichloroethylene	4.0	2.5	2.0	2.6	5.2
1,2,4-Trichlorobenzene	< 3.6	< 3.6	< 3.6	< 3.6	< 3.6
1,2,4-Trimethylbenzene	2.9 J	< 1.7	< 1.7	< 1.7	< 1.7
1,2-Dibromoethane (EDB)	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
1,2-Dichloropropane	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
1,3,5-Trimethylbenzene	2.4 J	< 1.6	< 1.6	< 1.6	< 1.6
1,3-Butadiene	< 0.75	< 0.75	< 0.75	< 0.75	< 0.75
1,4-Dioxane	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
2,2,4-Trimethylpentane	14	6.5	< 1.8	< 1.8	< 1.8
2-Chlorotoluene	< 1.5	< 1.5	< 1.5	< 1.5	< 1.5
2-Hexanone	14	< 2.4	< 2.4	< 2.4	< 2.4
3-Chloropropene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Ethyltoluene	2.8 J	< 1.9	< 1.9	< 1.9	< 1.9
Acetone (2-Propanone)	359	171	109	10	13
Benzene	5.4	1.5 J	< 0.80	< 0.80	< 0.80
Benzyl Chloride	< 0.77	< 0.77	< 0.77	< 0.77	< 0.77
Bromodichloromethane	< 0.80	< 0.80	< 0.80	< 0.80	< 0.80
Bromoethene	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromoform	< 2.9	< 2.9	< 2.9	< 2.9	< 2.9
Bromomethane	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
Carbon disulfide	21	10	10	6.5	13
Carbon tetrachloride	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Chloroethane	< 0.71	< 0.71	< 0.71	< 0.71	< 0.71
Chloroform	2.5 J	19	35	8.3	18
Chloromethane	2.1	1.6 J	1.5 J	< 0.74	1.6 J
cis-1,2-Dichloroethylene	289	226	468	27	57.5
cis-1,3-Dichloropropene	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
Cyclohexane	< 1.5	2.3 J	2.3 J	< 1.5	< 1.5
Dibromochloromethane	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Dichlorodifluoromethane	1.9 J	2.1 J	1.9 J	2.1 J	2.1 J
Ethanol	46.4	26.9	17	28.1	79.9
Ethyl Acetate	14	1.8 J	< 1.5	< 1.5	4.0
Ethylbenzene	33	17	< 1.0	< 1.0	< 1.0
Freon 113	< 0.92	15	< 0.92	< 0.92	< 0.92
Freon 114	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
Heptane	19	8.6	< 1.5	< 1.5	< 1.5
Hexachlorobutadiene	< 2.7	< 2.7	< 2.7	< 2.7	< 2.7
Hexane	12	2.6 J	< 1.6	< 1.6	< 1.6
Isopropyl Alcohol	24	38.6	24	29.0	37.9
m,p-Xylene	84.7	43	< 2.4	< 2.4	< 2.4
m-Dichlorobenzene	< 0.96	< 0.96	< 0.96	< 0.96	< 0.96
Methyl ethyl ketone	97.0	43.9	4.7	< 1.3	< 1.3
Methyl Isobutyl Ketone	6.1	2.4 J	< 1.2	< 1.2	< 1.2
Methyl Tert Butyl Ether	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Methylene chloride	3.5	< 0.76	< 0.76	< 0.76	< 0.76
Methylmethacrylate	< 1.1	< 1.1	< 1.1	< 1.1	< 1.1
o-Dichlorobenzene	< 3.7	< 3.7	< 3.7	< 3.7	< 3.7
o-Xylene	25	13	< 1.3	< 1.3	< 1.3
p-Dichlorobenzene	< 0.90	< 0.90	< 0.90	< 0.90	< 0.90
Propylene	37.6	19.6	18.7	12	19.8
Styrene	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Tertiary Butyl Alcohol	5.8	2.4 J	1.9 J	< 1.1	< 1.1
Tetrachloroethylene	4.2	5.7	< 0.38	2.2	4.1
Tetrahydrofuran	< 1.1	< 1.1	1.9 J	< 1.1	< 1.1
Toluene	392	193	4.5	< 0.87	< 0.87
trans-1,2-Dichloroethylene	13	7.5	12	1.5 J	3.1 J
trans-1,3-Dichloropropene	< 1.8	< 1.8	< 1.8	< 1.8	< 1.8
Trichloroethylene	709	500	196	< 0.41	< 0.41
Trichlorofluoromethane	< 0.79	< 0.79	< 0.79	< 0.79	< 0.79
Vinyl Acetate	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
Vinyl chloride	34.8	17	16	9.7	17
Xylenes (total)	110	56.0	< 1.3	< 1.3	< 1.3
Total (TO-15)	2,290	1,409	938	146.7	291.2

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

Table 1. Vapor Treatment System Air Sampling Results
Routine Monitoring
Modified OU3 Soil Gas Containment System

Compound (ug/m^3)	Sample ID:	WELLFIELD INFLUENT A	COMBINED INFLUENT	VGAC-2	VGAC-4
	Lab Sample ID:	JD39707-1	JD39707-2	JD39707-3	JD39707-5
	Date Sampled:	2/14/2022	2/14/2022	2/14/2022	2/14/2022
1,1,1-Trichloroethane		< 0.82	< 0.82	**2.2**	< 0.82
1,1,2,2-Tetrachloroethane		< 1.3	< 1.3	< 1.3	< 1.3
1,1,2-Trichloroethane		< 0.82	< 0.82	< 0.82	< 0.82
1,1-Dichloroethane		**4.9**	**5.7**	**7.7**	**4.5**
1,1-Dichloroethylene		**5.2**	**3.4**	**4.0**	**3.4**
1,2,4-Trichlorobenzene		< 3.6	< 3.6	< 3.6	< 3.6
1,2,4-Trimethylbenzene		< 1.7	**2.5** J	< 1.7	< 1.7
1,2-Dibromoethane (EDB)		< 3.0	< 3.0	< 3.0	< 3.0
1,2-Dichloroethane		< 1.1	< 1.1	< 1.1	< 1.1
1,2-Dichloropropane		< 1.2	< 1.2	< 1.2	< 1.2
1,3,5-Trimethylbenzene		< 1.6	< 1.6	< 1.6	< 1.6
1,3-Butadiene		< 0.75	< 0.75	< 0.75	< 0.75
1,4-Dioxane		< 1.7	< 1.7	< 1.7	< 1.7
2,2,4-Trimethylpentane		**9.8**	< 1.8	< 1.8	< 1.8
2-Chlorotoluene		< 1.5	< 1.5	< 1.5	< 1.5
2-Hexanone		**6.5**	< 2.4	< 2.4	< 2.4
3-Chloropropene		< 1.0	< 1.0	< 1.0	< 1.0
4-Ethyltoluene		< 1.9	< 1.9	< 1.9	< 1.9
Acetone (2-Propanone)		**406**	**230**	**147**	**35.6**
Benzene		**2.2** J	**1.3** J	< 0.80	< 0.80
Benzyl Chloride		< 0.77	< 0.77	< 0.77	< 0.77
Bromodichloromethane		< 0.80	< 0.80	< 0.80	< 0.80
Bromoethene		< 1.0	< 1.0	< 1.0	< 1.0
Bromoform		< 2.9	< 2.9	< 2.9	< 2.9
Bromomethane		< 1.1	< 1.1	< 1.1	< 1.1
Carbon disulfide		**7.2**	**4.4**	**6.9**	**8.4**
Carbon tetrachloride		< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene		< 1.4	< 1.4	< 1.4	< 1.4
Chloroethane		< 0.71	< 0.71	**1.2** J	< 0.71
Chloroform		< 0.73	**14**	**22**	**5.9**
Chloromethane		**2.3**	**2.3**	**2.5**	**3.1**
cis-1,2-Dichloroethylene		**187**	**183**	**292**	**24**
cis-1,3-Dichloropropene		< 1.1	< 1.1	< 1.1	< 1.1
Cyclohexane		< 1.5	< 1.5	< 1.5	< 1.5
Dibromochloromethane		< 1.8	< 1.8	< 1.8	< 1.8
Dichlorodifluoromethane		**2.3** J	**3.6** J	**3.4** J	**4.5**
Ethanol		**41.8**	**96.3**	**68.2**	**10**
Ethyl Acetate		< 1.5	< 1.5	**7.2**	**83.1**
Ethylbenzene		**19**	**16**	< 1.0	< 1.0
Freon 113		< 0.92	< 0.92	< 0.92	< 0.92
Freon 114		< 1.4	< 1.4	< 1.4	< 1.4
Heptane		**9.8**	**6.1**	< 1.5	< 1.5
Hexachlorobutadiene		< 2.7	< 2.7	< 2.7	< 2.7
Hexane		< 1.6	< 1.6	< 1.6	< 1.6
Isopropyl Alcohol		**13**	**9.3**	**28.3**	**6.1**
m,p-Xylene		**45.2**	**39**	< 2.4	< 2.4
m-Dichlorobenzene		< 0.96	< 0.96	< 0.96	< 0.96
Methyl ethyl ketone		**58.7**	**24**	**2.4**	< 1.3
Methyl Isobutyl Ketone		**3.4**	< 1.2	< 1.2	< 1.2
Methyl Tert Butyl Ether		< 1.2	< 1.2	< 1.2	< 1.2
Methylene chloride		**2.8**	**4.9**	**2.7** J	**4.5**
Methylmethacrylate		< 1.1	< 1.1	< 1.1	< 1.1
o-Dichlorobenzene		< 3.7	< 3.7	< 3.7	< 3.7
o-Xylene		**15**	**13**	< 1.3	< 1.3
p-Dichlorobenzene		< 0.90	< 0.90	< 0.90	< 0.90
Propylene		**18.6**	**11**	**14**	**18.4**
Styrene		< 2.0	< 2.0	< 2.0	< 2.0
Tertiary Butyl Alcohol		**6.4**	**1.8** J	**2.4** J	< 1.1
Tetrachloroethylene		**8.8**	**3.6**	< 0.38	< 0.38
Tetrahydrofuran		< 1.1	< 1.1	< 1.1	< 1.1
Toluene		**311**	**182**	< 0.87	< 0.87
trans-1,2-Dichloroethylene		**7.5**	**5.6**	**7.5**	< 1.1
trans-1,3-Dichloropropene		< 1.8	< 1.8	< 1.8	< 1.8
Trichloroethylene		**521**	**456**	**110**	< 0.41
Trichlorofluoromethane		< 0.79	**2.7**	**3.2**	< 0.79
Vinyl Acetate		**4.2**	< 1.6	< 1.6	< 1.6
Vinyl chloride		**48.3**	**25**	**39.4**	**43.5**
Xylenes (total)		**59.9**	**51.3**	< 1.3	< 1.3
Total (TO-15)		**1,768**	**1,346**	**774**	**255.0**

Footnotes:

ug/mg3 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

Table 1. Vapor Treatment System Air Sampling Results
Routine Monitoring
Modified OU3 Soil Gas Containment System

Compound (ug/m^3)	Sample ID:	WELLFIELD INFLUENT A		COMBINED INFLUENT		VGAC-4	
	Lab Sample ID:	JD40057-1		JD40057-4		JD40057-3	
	Date Sampled:	2/21/2022		2/21/2022		2/21/2022	
1,1,1-Trichloroethane		< 0.82		< 0.82		< 0.82	
1,1,2,2-Tetrachloroethane		< 1.3		< 1.3		< 1.3	
1,1,2-Trichloroethane		< 0.82		< 0.82		< 0.82	
1,1-Dichloroethane		**7.3**		**6.9**		**18**	
1,1-Dichloroethylene		**4.0**		**2.3**		**6.3**	
1,2,4-Trichlorobenzene		< 3.6		< 3.6		< 3.6	
1,2,4-Trimethylbenzene		**2.5**	J	< 1.7		< 1.7	
1,2-Dibromoethane (EDB)		< 3.0		< 3.0		< 3.0	
1,2-Dichloroethane		< 1.1		< 1.1		< 1.1	
1,2-Dichloropropane		< 1.2		< 1.2		< 1.2	
1,3,5-Trimethylbenzene		**2.1**	J	< 1.6		< 1.6	
1,3-Butadiene		< 0.75		< 0.75		< 0.75	
1,4-Dioxane		< 1.7		< 1.7		< 1.7	
2,2,4-Trimethylpentane		**12**		**7.0**		< 1.8	
2-Chlorotoluene		< 1.5		< 1.5		< 1.5	
2-Hexanone		**13**		**9.8**		< 2.4	
3-Chloropropene		< 1.0		< 1.0		< 1.0	
4-Ethyltoluene		**2.6**	J	< 1.9		< 1.9	
Acetone (2-Propanone)		**449**		**228**		**75.5**	
Benzene		**5.4**		**1.2**	J	< 0.80	
Benzyl Chloride		< 0.77		< 0.77		< 0.77	
Bromodichloromethane		< 0.80		< 0.80		< 0.80	
Bromoethene		< 1.0		< 1.0		< 1.0	
Bromoform		< 2.9		< 2.9		< 2.9	
Bromomethane		< 1.1		< 1.1		< 1.1	
Carbon disulfide		**6.9**		**3.0**		**16**	
Carbon tetrachloride		< 1.0		< 1.0		< 1.0	
Chlorobenzene		< 1.4		< 1.4		< 1.4	
Chloroethane		< 0.71		< 0.71		< 0.71	
Chloroform		**2.3**	J	**15**		**27**	
Chloromethane		**2.1**		**1.9**		**2.5**	
cis-1,2-Dichloroethylene		**299**		**255**		**99.5**	
cis-1,3-Dichloropropene		< 1.1		< 1.1		< 1.1	
Cyclohexane		**4.1**		**2.2**	J	< 1.5	
Dibromochloromethane		< 1.8		< 1.8		< 1.8	
Dichlorodifluoromethane		**2.3**	J	**2.0**	J	**2.7**	J
Ethanol		**25.1**		**16**		**18**	
Ethyl Acetate		**5.4**		**7.2**		**64.4**	
Ethylbenzene		**31**		**15**		< 1.0	
Freon 113		< 0.92		< 0.92		< 0.92	
Freon 114		< 1.4		< 1.4		< 1.4	
Heptane		**16**		**8.2**		< 1.5	
Hexachlorobutadiene		< 2.7		< 2.7		< 2.7	
Hexane		< 1.6		< 1.6		< 1.6	
Isopropyl Alcohol		**24**		**20**		**90.0**	
m,p-Xylene		**70.4**		**35**		< 2.4	
m-Dichlorobenzene		< 0.96		< 0.96		< 0.96	
Methyl ethyl ketone		**114**		**56.6**		**12**	
Methyl Isobutyl Ketone		**5.7**		**3.1**	J	< 1.2	
Methyl Tert Butyl Ether		< 1.2		< 1.2		< 1.2	
Methylene chloride		**4.2**		**3.4**		**3.3**	
Methylmethacrylate		< 1.1		< 1.1		< 1.1	
o-Dichlorobenzene		< 3.7		< 3.7		< 3.7	
o-Xylene		**23**		**13**		< 1.3	
p-Dichlorobenzene		< 0.90		< 0.90		< 0.90	
Propylene		**26.3**		**14**		**18.0**	
Styrene		< 2.0		< 2.0		< 2.0	
Tertiary Butyl Alcohol		**10**		**6.7**		**6.4**	
Tetrachloroethylene		**3.7**		**3.0**		**2.5**	
Tetrahydrofuran		< 1.1		< 1.1		< 1.1	
Toluene		**403**		**199**		**3.8**	
trans-1,2-Dichloroethylene		**12**		**7.1**		**4.4**	
trans-1,3-Dichloropropene		< 1.8		< 1.8		< 1.8	
Trichloroethylene		**693**		**450**		< 0.41	
Trichlorofluoromethane		< 0.79		< 0.79		**2.2**	
Vinyl Acetate		< 1.6		< 1.6		< 1.6	
Vinyl chloride		**49.8**		**21**		**35.5**	
Xylenes (total)		**93.0**		**46.9**		< 1.3	
Total (TO-15)		**2,331**		**1,412**		**508.0**	

Footnotes:

ug/mg3 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

Table 1. Vapor Treatment System Air Sampling Results
Routine Monitoring
Modified OU3 Soil Gas Containment System

Compound (ug/m^3)	Sample ID:	WELLFIELD INFLUENT A		COMBINED INFLUENT		VGAC-2		VGAC-4	
	Lab Sample ID:	JD40426-4		JD40426-1		JD40426-2		JD40426-3	
	Date Sampled:	2/28/2022		2/28/2022		2/28/2022		2/28/2022	
1,1,1-Trichloroethane		< 0.82		< 0.82		**2.6**		< 0.82	
1,1,2,2-Tetrachloroethane		< 1.3		< 1.3		< 1.3		< 1.3	
1,1,2-Trichloroethane		< 0.82		< 0.82		< 0.82		< 0.82	
1,1-Dichloroethane		**4.9**		**2.5**	J	**7.7**		< 0.93	
1,1-Dichloroethylene		**2.5**		< 0.95		**2.4**		< 0.95	
1,2,4-Trichlorobenzene		< 3.6		< 3.6		< 3.6		< 3.6	
1,2,4-Trimethylbenzene		< 1.7		< 1.7		< 1.7		< 1.7	
1,2-Dibromoethane (EDB)		< 3.0		< 3.0		< 3.0		< 3.0	
1,2-Dichloroethane		< 1.1		< 1.1		< 1.1		< 1.1	
1,2-Dichloropropane		< 1.2		< 1.2		< 1.2		< 1.2	
1,3,5-Trimethylbenzene		< 1.6		< 1.6		< 1.6		< 1.6	
1,3-Butadiene		< 0.75		< 0.75		< 0.75		< 0.75	
1,4-Dioxane		< 1.7		< 1.7		< 1.7		< 1.7	
2,2,4-Trimethylpentane		**6.5**		**2.2**	J	< 1.8		< 1.8	
2-Chlorotoluene		< 1.5		< 1.5		< 1.5		< 1.5	
2-Hexanone		**4.9**		< 2.4		< 2.4		< 2.4	
3-Chloropropene		< 1.0		< 1.0		< 1.0		< 1.0	
4-Ethyltoluene		< 1.9		< 1.9		< 1.9		< 1.9	
Acetone (2-Propanone)		**210**		**54.6**		**109**		**9.5**	
Benzene		**3.5**		< 0.80		< 0.80		**1.5**	J
Benzyl Chloride		< 2.6		< 0.77		< 0.77		< 0.77	
Bromodichloromethane		< 0.80		< 0.80		**3.0**		< 0.80	
Bromoethene		< 1.0		< 1.0		< 1.0		< 1.0	
Bromoform		< 2.9		< 2.9		< 2.9		< 2.9	
Bromomethane		< 1.1		< 1.1		< 1.1		< 1.1	
Carbon disulfide		**3.1**		< 0.56		**3.7**		< 0.56	
Carbon tetrachloride		< 1.0		< 1.0		< 1.0		< 1.0	
Chlorobenzene		< 1.4		< 1.4		< 1.4		< 1.4	
Chloroethane		< 0.71		< 0.71		< 0.71		< 0.71	
Chloroform		< 0.73		**5.4**		**21**		< 0.73	
Chloromethane		**1.7**		**1.4**	J	< 0.74		**1.4**	J
cis-1,2-Dichloroethylene		**205**		**86.8**		**323**		**3.4**	
cis-1,3-Dichloropropene		< 1.1		< 1.1		< 1.1		< 1.1	
Cyclohexane		**2.4**	J	< 1.5		**2.0**	J	< 1.5	
Dibromochloromethane		< 1.8		< 1.8		< 1.8		< 1.8	
Dichlorodifluoromethane		**2.0**	J	**2.1**	J	**2.1**	J	**2.3**	J
Ethanol		**17**		**18**		**15**		**7.0**	
Ethyl Acetate		**26**		< 1.5		< 1.5		< 1.5	
Ethylbenzene		**10**		**3.9**		< 1.0		< 1.0	
Freon 113		< 0.92		< 0.92		< 0.92		< 0.92	
Freon 114		< 1.4		< 1.4		< 1.4		< 1.4	
Heptane		**7.4**		**2.6**	J	< 1.5		< 1.5	
Hexachlorobutadiene		< 2.7		< 2.7		< 2.7		< 2.7	
Hexane		**1.6**	J	< 1.6		< 1.6		< 1.6	
Isopropyl Alcohol		**17**		**25.6**		**17**		**4.9**	
m,p-Xylene		**21**		**9.1**		< 2.4		< 2.4	
m-Dichlorobenzene		< 0.96		< 0.96		< 0.96		< 0.96	
Methyl ethyl ketone		**54.6**		**7.4**		**4.1**		< 1.3	
Methyl Isobutyl Ketone		**2.6**	J	< 1.2		< 1.2		< 1.2	
Methyl Tert Butyl Ether		< 1.2		< 1.2		< 1.2		< 1.2	
Methylene chloride		**3.8**		**3.8**		**3.5**		**3.4**	
Methylmethacrylate		< 1.1		< 1.1		< 1.1		< 1.1	
o-Dichlorobenzene		< 3.7		< 3.7		< 3.7		< 3.7	
o-Xylene		**6.5**		**3.2**	J	< 1.3		< 1.3	
p-Dichlorobenzene		< 4.6		< 0.90		< 0.90		< 0.90	
Propylene		**17**		< 0.98		**12**		< 0.98	
Styrene		< 2.0		< 2.0		< 2.0		< 2.0	
Tertiary Butyl Alcohol		**3.9**		< 1.1		**3.0**		< 1.1	
Tetrachloroethylene		**3.0**		**1.9**		< 0.38		< 0.38	
Tetrahydrofuran		< 1.1		< 1.1		< 1.1		< 1.1	
Toluene		**196**		**61.4**		**2.1**	J	< 0.87	
trans-1,2-Dichloroethylene		**7.9**		**2.4**	J	**9.5**		< 1.1	
trans-1,3-Dichloropropene		< 1.8		< 1.8		< 1.8		< 1.8	
Trichloroethylene		**386**		**155**		**291**		< 0.41	
Trichlorofluoromethane		< 0.79		< 0.79		< 0.79		< 0.79	
Vinyl Acetate		< 1.6		< 1.6		**6.3**		< 1.6	
Vinyl chloride		**33.2**		**8.9**		**27.1**		**1.9**	
Xylenes (total)		**27**		**13**		< 1.3		**2.1**	J
Total (TO-15)		**1,260**		**459**		**867**		**37.4**	

Footnotes:

ug/mg3 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


NORTHROP
GRUMMAN